Sumitomo Heavy Industries, Ltd.

Environmental Initiatives

Environmental Activity Report

CONTENTS

Scope: This report covers Sumitomo Heavy Industries, Ltd. as well as its consolidated subsidiaries and equity-method affiliates both in Japan and overseas. Context changes are duly noted in the report.
Timeline: January 1, 2022 to December 31, 2022
Guidelines referenced: Environmental Reporting Guidelines 2018, Ministry of the Environment
Environmental Accounting Guidelines 2005, Ministry of the Environment

Cautionary Note Concerning Forward-Looking Statements:
This report includes forward-looking statements regarding the future performance of Sumitomo Heavy Industries, Ltd. These forward-looking statements are based on information currently available to the Company and determined subjectively. All information contained herein is subject to changes in actual business performance.

Document Hierarchy

6th Medium-Term Environmental Plan

Through products and services, Sumitomo Heavy Industries Group (“SHI Group”) has promoted the 6th Medium-Term Environmental Plan (FY2020 to 2023) since FY2020 in the aim of helping to resolve social issues, enhance corporate value, and contribute to realizing a sustainable society. With a focus on the following four key issues in our 6th Medium-Term Environmental Plan, we have been working to reduce total CO_2 emissions during product manufacturing processes to help mitigate climate change, as well as expanding our range of Sustainability Plus Products (to reduce CO_2 emissions during product use) as a part of our overall CO_2 emission-cutting activities.

(1) Strengthen environmental risk management

We will strive to prevent environmental incidents and continuously improve and invigorate our environmental management system.

(2) Reduce CO_2 emissions in a consciousness response to climate change

Of “the burdens that the product life cycle places on the environment”, we will endeavor to “reduce CO_2 emissions” during both product manufacturing and use, which comprise some of the highest environmental loads.

SHI Group has set the following medium- and long-term targets.

- Aim to achieve carbon-neutral (net zero CO_2 emissions) throughout the entire SHI Group by 2050
- CO_2 emissions during product manufacturing (Scopes 1 and 2[*1]): 50% reduction by 2030 (compared to FY2019)
- CO_2 emissions during product use (Scope 3[*1], Category 11[*1, 2]): 30% reduction by 2030 (compared to FY2019)

In line with these targets, SHI Group is taking a more proactive approach that includes adopting renewable energies and installing solar power generation systems in addition to our regular activities.

(3) Reduce the environmental loads of business activities

Of “the burdens that the product life cycle places on the environment”, we will work to “reduce the environmental footprint” associated with business activities other than “CO_2 emissions” through such efforts as contributing to solutions for marine plastic pollution and implementing the 3R principle for waste and product packing materials.

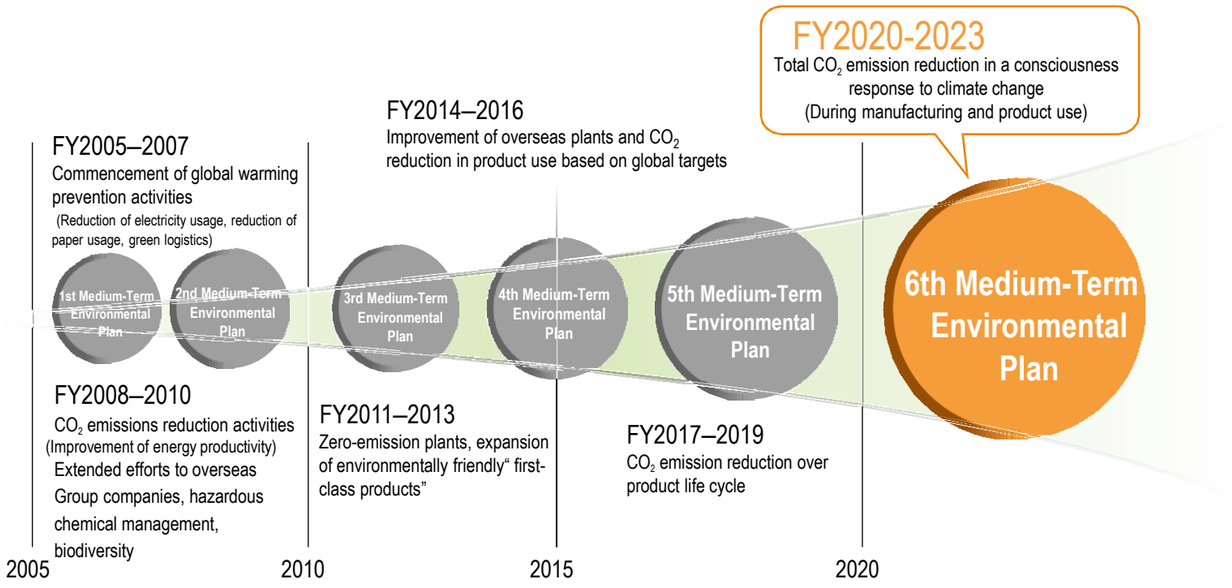
(4) Conservation of biodiversity

We will strive to help preserve biodiversity through social contribution focusing on Sustainability Plus Products.

*1 Calculated based on the GHG Protocol.

*2 SHI Group is conducting a review with the goal of setting Scope 3 emission targets over and above Category 11 once a better understanding of actual conditions is acquired.

Transition of SHI Group's Environmental Management Activities (2005-2022)



Environmental Targets and Achievements

FY2022 Targets and Achievements

With the exception of environmental incidents and total CO_2 emissions (Japan), SHI Group achieved 13 of our 15 targets in FY2022 as set out in the 6th Medium-Term Environmental Plan.

Environmental incidents: Although no severe environmental incidents occurred, six environmental incidents did occur. So, we did not achieve this medium-term goal.

- Of those incidents involving oil, chemical substance, wastewater, or other leaks from equipment, many were the result of physical factors such as equipment failure. Therefore, along with ensuring regular maintenance and patrols, planned repairs, and other efforts to keep equipment efficient and reliable, we have reassessed our environmental training, work procedures, as well as revised and implemented environmental risk assessments.

Other environmental incidents have also occurred due to paint dust scattering outside sites and damaging vehicles, in addition to filing incomplete notifications following revisions to relevant laws and regulations. We are continuing to strengthen systems at sites where incidents have occurred to perform more thorough checks, expand these procedures to other sites, and thoroughly and continually implement measures to prevent any recurrence of such incidents.

- Total CO_2 emissions (Japan): Our business units implemented measures to reduce CO_2 emissions and we achieved a 4% reduction compared to FY2019 levels, but overall emissions fell only 2.3% compared to FY2019 due to further operational increases, utilization of new plant building capacity, and other factors.

Information about other items is given on p.5 and after.

Benchmark	Item	FY2022 Target	FY2022 Results
Environmental management	Major environmental incidents	Zero	0
	Environmental incidents	No more than 3 incidents	6 incidents
Climate change adaptation	Total CO_2 emissions (in Japan, market standard)	Reduce by 3% compared to FY2019	2.3% reduction
	During manufacturing / Energy productivity (in Japan)	Improve by 3% compared to FY2019	9.2% improvement
	During manufacturing / Energy productivity (Overseas)	Improve by 3% compared to FY2019	17.3% improvement
	During transportation / Green logistics (in Japan)	Maintain at or below FY2019 level	5.9% reduction
	Expansion of Sustainability Plus Products	Certification of 23 products	27 products certified
Promotion of recycling to conserve resources	Reduction in basic waste emissions unit (in Japan) *Including hazardous waste	Maintain at or below FY2017 to 2019 average	24.0% reduction
	Reduction in basic waste emissions unit (Overseas) *Including hazardous waste	Reduce by 3% compared to FY2019	18.5% reduction
	Zero-emission landfill rate (in Japan)	Less than 0.5%	0.1%
	Reduction in product packing materials (basic unit in Japan)	Maintain at or below FY2017 to 2019 average	1.4% reduction
	Reduction of water consumption (in Japan)	Maintain at or below FY2017 to 2019 average	3.9% reduction
	Reduction in basic water consumption unit (Overseas)	Maintain at or below FY2019 level	13.1% reduction
Prevention of environmental pollution	VOC reduction (in Japan)	Maintain at or below FY2019 level	9.1% reduction
	VOC reduction (basic unit in Japan)	Maintain at or below FY2019 level	18.8% reduction

Environmental Targets and Achievements

Overview of Environmental Loads in FY2022 (SHI Group companies in Japan)

INPUT

- Energy input
  - Crude oil equivalent: 49,785kℓ
- Water resource input: 1,149,000m³
- Amount of steel purchased: 172,000t
- Amount of chemicals handled
  - PRTR*1 substances: 1,000t

Sumitomo Heavy Industries Group

OUTPUT

- CO_2 emissions: 105,000t
- Chemical transfers and emissions
  - PRTR*1 substances: 777t
- Air pollutant emissions
  - VOC *2: 525t
  - NOx: 4.7t
  - SOx: 0.2t
  - Particulates: 0.0012t
- Amount discharged into water systems
  - COD: 1.5t
  - T-N: 5.6t
  - T-P: 0.5t
- Amount of waste generated
  - Total emissions: 25,909t
  - Amount recycled: 24,431t

*1 PRTR: Pollutant Release and Transfer Register
*2 VOC: Volatile Organic Compounds

Environmental Management

Sumitomo Heavy Industries Group Environmental Policy

Basic Concept

Recognizing that it is crucial to act globally to address environmental conservation and climate change to realize a sustainable society, the Sumitomo Heavy Industries Group is striving to reduce our environmental footprint in all business activities, including over the entire product life cycle, in line with our fundamental sustainability policy.

Environmental Policy

1. Strive to prevent environmental contamination while working to conserve the global environment.
2. Work on activities to reduce our environmental burden, such as reduction of CO_2 emissions and wastes, reuse and recycle of resources, and efficiently using energy with the aim of achieving a decarbonized and sound material-cycle society.
3. Consider the impact of our business operations on natural and ecosystems, and seek to preserve biodiversity.
4. Enhance our environmental management framework, and continue to operate and improve environmental management systems.
5. In addition to compliance with relevant environmental laws and regulations, establish, administer and evaluate voluntary standards as necessary.
6. Improve the environmental awareness of all personnel involved in our business activities through ongoing environmental education and awareness-raising activities.
7. Share, communicate, and make publish this Environmental Policy to all stakeholders.

Sumitomo Heavy Industries, Ltd.
December 1, 2021

Environmental Management System

Management of environmental activities across our entire Group is carried out by the Administration Division General Manager and the Environmental Management Department under the supervision of the Director responsible for General Administration Group Affairs designated by the President. The Sumitomo Heavy Industries Group's Environmental Policy is approved and determined by the President as the person with ultimate responsibility.

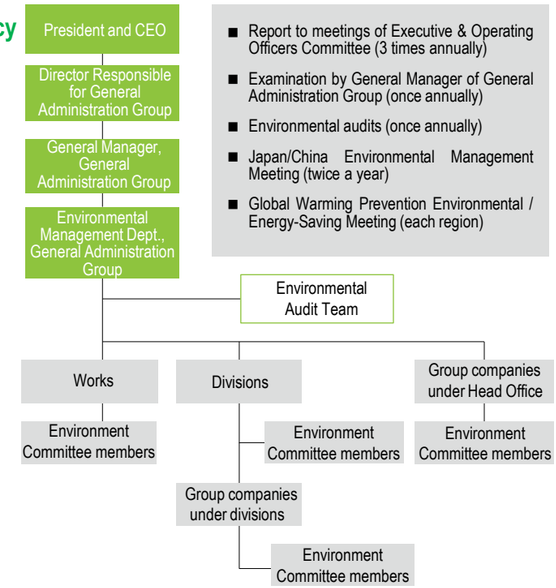
Environmental audits are conducted to check management status against the local situation at each manufacturing site, including affiliated companies. Reported results of activities and problems are shared at Environmental Management Meetings.

The SHI Group's Environmental Policy, targets, initiatives, and other efforts have been communicated to employees during environmental education.

<Details of Activities>

・Environmental audits (once annually)

Environmental audits are conducted at manufacturing sites in Japan, China, and Southeast Asia to assess overall environmental management from the perspectives of environmental incident prevention, legal and regulatory compliance, and global warming prevention.



To improve the level of environmental management, audit results are evaluated on a five-point scale for each department based on our own criteria. The results are reported at Executive & Operating Officers Committee meetings.

・Examination by General Manager, General Administration Group (as required)

In conjunction with environmental audits, the General Manager of the General Administration Group conducts a separate examination and provides guidance to departments at the General Manager's discretion (such as departments that, in the previous fiscal year, experienced an environmental incident, those whose performance was far below targets, and other necessary circumstances).

・Environmental management meeting (biannual)

Environmental Management Meetings are held for works and affiliated companies in Japan to report activity results and share problems. China Environmental Management Meetings are also held for affiliated companies in China, with the aim of raising the level of environmental activities engaged in at those companies.

Environmental Risk Assessments

SHI Group regularly conducts environmental risk assessments to preempt environmental incidents.
Additionally, if an environmental incident occurs, we take appropriate action and conduct a thorough analysis of the incident as part of our efforts to prevent any recurrence as well as similar incidents involving comparable equipment or substances at other sites.
SHI Group operates in a way that bolsters prevention of potential environmental incidents, which are events that may someday trigger an environmental incident even though the event itself is not classified as an environmental incident.

Climate Change Adaptation

Among our strategies for reducing our environmental footprint across all business activities including product life cycle, the top priority for the SHI Group has been to reduce CO_2 emissions.

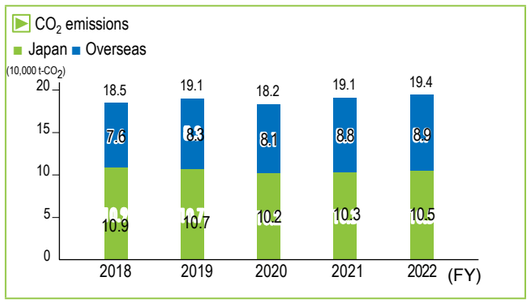
Promotion of Environmental Management

The SHI Group recognizes that responding to climate change is a key challenge in our environmental management. The Environmental Management Group conducts monthly supervision of results produced by each business division and provides feedback to those in charge. In addition, the results are reported to management three times a year at meetings of the Executive & Operating Officers Committee. SHI Group divisions promote climate change adaptation by mobilizing all personnel in their efforts, making sure their activities are visible, and implementing activities to improve various processes so as to more efficiently utilize energy.

Reduction of CO_2 Emissions During Product Manufacture

SHI Group's CO_2 emissions in Japan during product manufacture in FY2022 were 2.3% lower than in FY2019, meaning that we did not achieve this target. We have been promoting energy-saving activities, converting to LED lighting, updating antiquated equipment, and increasing energy productivity. However, we were unable to reach our target due to the impact of new plant operations and other expansion of our business.

In FY2023, we will continue to update to more energy efficient equipment, improve our energy productivity, and engage in other activities that will reduce CO_2 emissions. In addition, we will take a more proactive approach, reviewing once again CO_2 reduction measures and adopting renewable energies.



* Used a Japan conversion factor of 0.462 g-CO_2/kWh as a fixed value.

Receipt of Agency for Natural Resources and Energy Director-General's Award

In FY2022, we received the Agency for Natural Resources and Energy Director-General's Award, which is part of the Energy Conservation Awards sponsored by the Energy Conservation Center Japan, for Sumitomo Heavy Industries Himatex's heat treating furnace energy intensity and CO_2 reduction efforts.

Promoting fuel conversion from heavy oil to LNG for all heat-treating furnaces used in the process of producing rolls for metal rolling improved energy intensity by 15% compared to FY2017 when this initiative had not begun. This fuel conversion also reduced CO_2 emissions by 27%, significantly contributing to the reduction in emissions during product manufacture.

Renewable Energy Adoption

SHI Group has promoted adoption of renewable energies. Since 2020, we have proceeded to install solar power generation systems on new roofs of SHI Group plants. In FY2022, an additional 2,200 kWh became available for a cumulative capacity equivalent to 3,600 kWh. We are continuing to actively install systems both in Japan and around the world to achieve our intermediate benchmark of a 50% reduction by 2030 in comparison to FY2019.

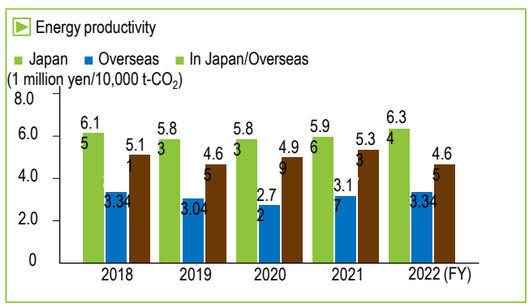
We have also planned purchases of renewable energies and reviewed these plans with a view toward expanding the scale of these purchases. Along with CO_2 emission reductions of 1% annually through a variety of energy-saving measures, we are endeavoring to introduce solar power generation systems chiefly for new buildings, striving to increase the scale of our renewable energy purchases, and promoting CO_2 emission reductions with the aim of realizing carbon-neutral by 2050.

Improvements in Energy Productivity

The SHI Group has set and managed indices for emissions as well as energy productivity (sales/CO_2 emissions) as part of our efforts to enhance production efficiency and carry out activities aimed at reducing CO_2 emissions. For FY2022, we raised our target to a 3% improvement over the FY2019 level for our activities, which we achieved with a 9.2% improvement in Japan and a 9.6% improvement overseas.

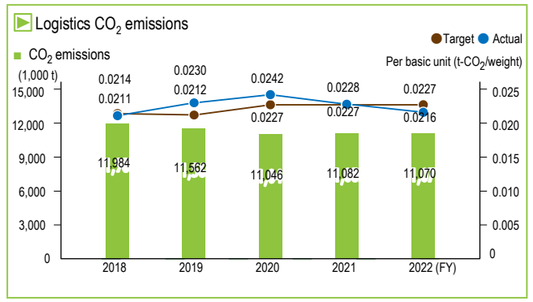
We will continue to promote the following measures.

❶ Setting up and practicing of non-operating days
❷ Reducing standby power of equipment or facilities
❸ Operating equipment and facilities more efficiently
❹ Cutting energy consumption by reducing production lead time



Promotion of Green Logistics

The SHI Group is endeavoring to eliminate waste and enhance efficiency in product transport in order to reduce CO_2 emissions. In FY2022, we achieved our domestic target, achieving a 5.9% reduce vis-à-vis our target of maintaining a level no greater than that in FY2019 per basic unit of shipping (t-CO_2/weight). We will continue to improve and optimize load factors, effectively utilize modal mixes, and engage in other efforts to reach our target.



Reduction of CO_2 Emissions During Product Use and Over Product Lifecycle

In FY2022, lifecycle CO_2 emissions amounted to 80,756,000 tons. CO_2 emissions during product use accounted for 99.0% of these emissions or 79,947,000 tons. To reduce these emissions during product use, SHI Group is actively improving our products, developing applicable technologies, and making other efforts so that we may offer even more products delivering outstanding resource and energy savings. We recognize that increasing the provision of such products is an important business challenge for us in addressing climate change, so we are promoting such initiatives.

Sustainability Plus Products

SHI Group assesses products using an 11-item standard to determine their environmental and social performance with additional points given for outside awards. Products scoring 80 or higher points are certified as Sustainability Plus Products and those scoring 90 points or higher as Super Sustainability Plus Products.

In FY2022, we surpassed our target of 23 certifications to have 27 products certified as Sustainability Plus Products, of which four of these were awarded 90 or more points, earning the Super Sustainability Plus Product certification. The number of products presented for certification as well as the number certified has continued to increase annually.

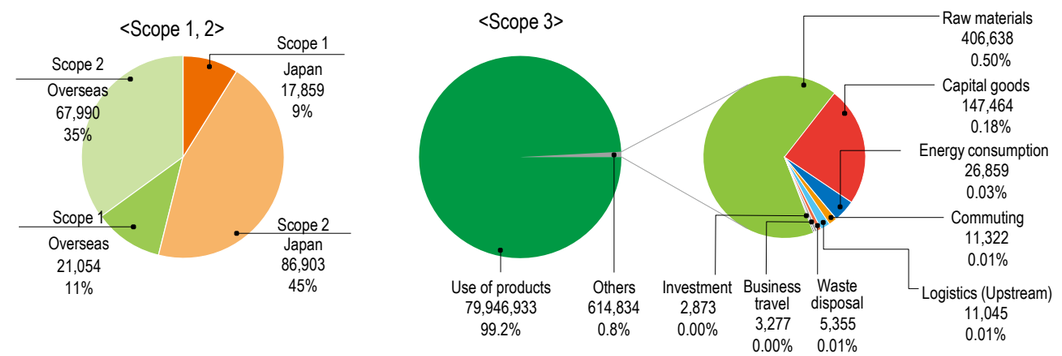
The ratio of sales of Sustainability Plus Products to all products across the entire SHI Group is 23%.

To help reduce environmental load across the entire Sustainability Plus Product lifecycle, we have been working to enhance the safety of those performing the work by equipping shovels, cranes and other construction equipment with field view monitors as well as preparing and providing customers with manuals on device disposal. In addition, we have also been providing systems and making other intangible efforts to contribute to enhancing the efficiency of our customers operations and reducing labor inputs.

Evaluation Items for Sustainability Plus Products

Product status				Improvement of product quality to first-class level	
				Differentiation	
Environment	Resource circulation	1. Resource saving	Environment	Global Warming Countermeasures	7. Energy-saving measures during use
		2. Improvement of recycling at time of disposal (Simplification of sorting processes)		Environmental risk	8. Environmental conservation
		3. Extension of service life		Others	9. LCA (Life cycle assessment)
		4. Packaging / packing			
		5. Information provision	Society	—	10. Safety
		6. Resource-saving measures during product use			11. Automatization / Labor-saving

FY2022 Life cycle CO_2 emissions (t-CO_2)



*Percentage of Scope 1 and 2 overall.

*Percentage of Scope 3 overall.

Scope 1＋2	193,806
Scope 3	80,561,766
CO_2 emissions (t-CO_2) across entire lifecycle	80,755,572

Climate Change Adaptation

List of Registered Sustainability Plus Products

Registration category	Division	Segment	Product	Evaluation items			
				Environment			Society
				Resource circulation	Global warming countermeasures	Environmental risk	Safety & energy savings
Super Sustainability Plus Product	Sumitomo Construction Machinery Co., Ltd.	L&C	Hydraulic excavators	◎	○	◎	○
	Sumitomo Construction Machinery Co., Ltd.	L&C	Asphalt finisher	◎	◎	◎	○
	Energy & Environment Group	E&L	Compact CFB boiler (25t)	○	○	◎	◎
	Sumitomo Heavy Industries Environment Co., Ltd.	E&L	Grit jet pump	○	◎	△	△
Sustainability Plus Products	Power Transmission & Controls Group	Mechatronics	High-efficiency motor	△	◎	◎	△
	Sumitomo Heavy Industries Gearbox Co., Ltd.	Mechatronics	PARAMAX reducer	○	○	◎	△
	Plastics Machinery Division	IM	Full-electric injection molding machine	△	○	◎	○
	Industrial Equipment Division	IM	Forging servo press	△	◎	◎	△
	Sumitomo Heavy Industries Himatex Co., Ltd.	IM	Rolls for metal rolling	○	◎	◎	X
	Sumitomo Heavy Industries Ion Technology Co., Ltd.	IM	SAion-300 ion implantation devices	△	◎	◎	△
	Sumitomo Heavy Industries Ion Technology Co., Ltd.	IM	MC3-II/GP ion implantation devices	△	◎	◎	△
	Sumitomo Heavy Industries Ion Technology Co., Ltd.	IM	S-UHE14 ion implantation devices	△	◎	◎	△
	Sumitomo Heavy Industries Ion Technology Co., Ltd.	IM	SS-UHE II ion implantation devices	○	◎	◎	△
	Nihon Spindle Mfg. Co., Ltd.	IM	Electric furnace dust collector	△	◎	△	○
	Sumitomo Heavy Industries Modern, Ltd.	IM	Smart flipper	△	○	◎	◎
	Sumitomo Heavy Industries Material Handling Systems Co., Ltd.	L&C	Automated warehousing system	△	◎	○	△
	Sumitomo NACCO Forklift Co., Ltd.	L&C	Electric forklift	△	◎	◎	×
	Energy & Environment Group	E&L	CFB biomass boiler	△	○	◎	◎
	Energy & Environment Group	E&L	Evaporator	△	◎	◎	△
	Energy & Environment Group	E&L	Electrostatic precipitator	△	◎	◎	△
	Sumitomo Heavy Industries Environment Co., Ltd.	E&L	Vertical screw-type dust collector	△	◎	△	○
	Shin Nippon Machinery Co., Ltd.	E&L	Long-blade high-efficiency steam turbine	○	○	△	△
	Shin Nippon Machinery Co., Ltd.	E&L	Optimized reaction blade-row steam turbine	○	○	△	△
	Izumi Food Machinery Co., Ltd.	E&L	Multipurpose extractor	○	◎	◎	○
	Izumi Food Machinery Co., Ltd.	E&L	Functional tanks	△	◎	◎	△
	Lightwell Co., Ltd.	Others	Automatic screening system	○	○	X	△
	Lightwell Co., Ltd.	Others	Personal credit data inquiry system	△	◎	◎	○

* Mechatronics: Mechatronics Segment; IM: Industrial Machinery Segment; L&C: Logistics & Construction Segment; E&L: Energy & Lifeline Segment

90% or higher - ◎, 70–90% - ○, 30–70% - △, less than 30% - X

CFB Biomass Boiler
(Circulating Fluidized Bed Boiler)

Hydraulic Excavator (ex. SH250-7)

Sumijetter II of grit jet pump

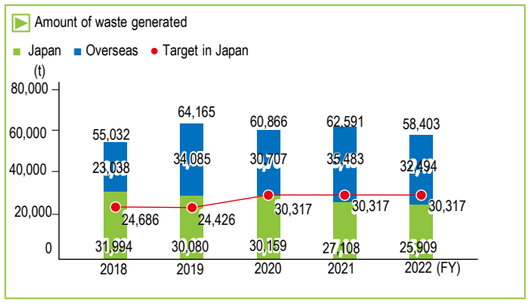
Sound Material-Cycle Society

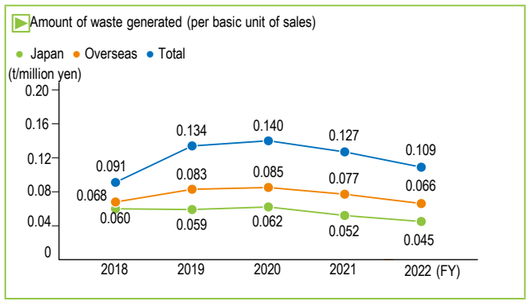
To realize a sound material-cycle society, the SHI Group is striving to curb waste and other emissions discharged in our business operations as well as to recycle and effectively utilize resources as part of our work to reduce our environmental footprint.

Curbing Waste Emissions

In striving to reach our target of keeping the amount of waste (including hazardous waste) generated per basic sales unit in FY2022 at or below the average for the FY2017-2019 period, we achieved an 24.0% reduction. Converting shot blast chip refuse, which used to be disposed of as industrial waste, into a marketable disposal, reusing filtered test-run oil, and implementing other innovations led to a reduction in emissions. In the future as well, we will promote waste reduction with a particular awareness of the 3R principle, including carefully separating waste and recyclable items.

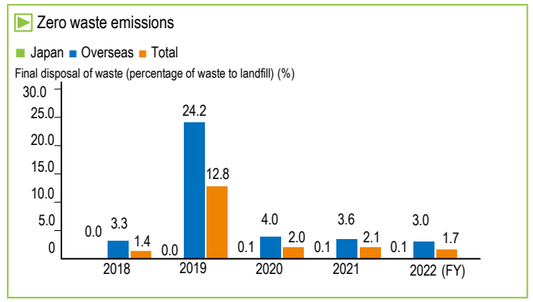
Overseas, our activities advanced having set a 3% reduction below the FY2019 level as the basic target unit, and we achieved a 18.6% reduction in FY2022.





Zero-Emissions (Landfill Rate Reduction)

The SHI Group defines a zero-emission plant in Japan as one for which the ratio of landfill disposal volume (landfill rate) to waste discharge volume is less than 0.5%. Since FY2005, we have been promoting efforts to reduce the landfill rate. In FY2022, the landfill rate for all domestic works (6 works and 7 plants) and group businesses other than works (9 companies) was 0.1%. We have consistently achieved zero emissions since FY2011. Overseas, where business activities are carried out with a non-landfill target rate of at least 95%, the target of 3% was achieved in FY2022, resulting in a combined domestic and overseas waste landfill rate of 1.7%. Recycling by separating waste is key to achieving zero emissions. In the future as well so that we may maintain zero emissions, we will meticulously separate waste as part of our aim to have our plants contribute to a sound material-cycle society.



Compliance with Act on Promotion of Resource Recycling Related to Plastics

SHI Group manages waste plastic using metrics measuring group-wide emissions and the amount of waste generated per basic unit of sales.

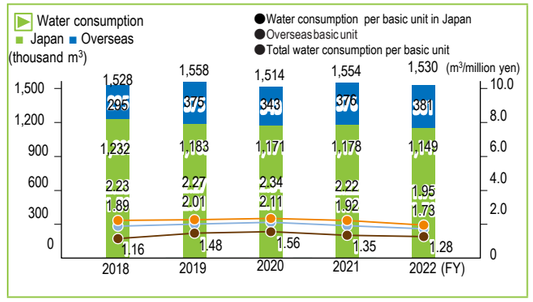
Plastic waste emissions for Sumitomo Heavy Industries on a non-consolidated basis in FY2022 totaled 1,310 tons.

SHI Group will continue efforts to manage and reduce waste plastic across the entire group. We will promote the 3Rs (Reduce, Reuse, Recycle) plus Renewable for plastic packaging materials and consider more in-depth actions that even look at product components in our aim to engage in operations with a full awareness of the supply chain.

Reducing Water Consumption

Since unnecessary water consumption was judged to have been almost eliminated as a result of ongoing water consumption cuts, SHI Group has continued to set a target of maintaining average water consumption below the level of the previous Medium-Term Plan (2018 to 2019) in the 6th Medium-Term Environmental Plan as well.

Our target was achieved in FY2022 of a 3.9% reduction compared to the level set. We accomplished this by preventing leakage with the use of monitoring devices, and reducing water consumption by using circulating water in test devices. We will continue to set our sights on achieving our target by working to eliminate waste. We also achieved our target overseas with an 13.1% reduction in the basic sales unit as compared to our target of maintaining water consumption at or below the FY2019 level.



Prevention of Environmental Pollution

We manage chemical substances to prevent environmental contamination.

Complete Elimination of Organochlorine Chemical Use

Continuing to strive for completely elimination

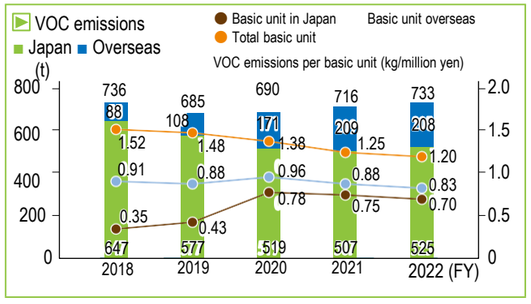
We have continued to strive to completely phase out the use of dichloromethane, tetrachloroethylene, and trichloroethylene, organic chemicals subject to the Soil Contamination Countermeasures Act.

We have completely eliminated and banned the use of ozone-depleting substances HCFC-225 and HCFC141b since FY2008 and FY2010, respectively. We have been promoting the scheduled replacement of R-22, production of which was discontinued in FY2020.

Control of VOC Substance Emissions

Toluene, xylene, and ethyl benzene contained in paint solvents account for at least 90% of VOC substances used by the SHI Group in Japan. The 6th Medium-Term Environmental Plan has set a target for these emissions to be maintained at or below the FY2019 level. In FY2022 also, we achieved a 9.1% reduction below the FY2019 level. This was accomplished by adopting powder coatings, employing low-solvent paints and VOC-free cleaning agents, as well as improving painting efficiency to reduce paint consumption. In addition, we also achieved a 18.8% reduction in the basic sales unit. We will continue to reduce emissions by expanding the scope applicable for low-solvent paints and VOC-free cleaning agents as well as powder coating, and cutting paint consumption through further improvements in painting efficiency.

Additionally, our overseas activities to control VOC substance emissions began in FY2012. Under the 6th Medium-Term Environmental Plan, a target has been set for our overseas companies of maintaining the basic emissions unit at or below the FY2019 level.



PRTR Substance Emissions and Transfer Volume

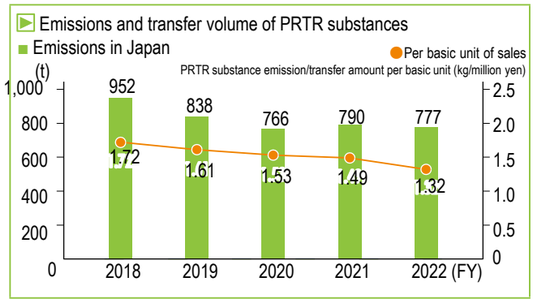
The paint solvents toluene, xylene, and ethyl benzene comprise 90% or more of all PRTR substances. The 6th Medium-Term Environmental Plan has set a target for emissions and emissions per basic unit to be maintained at or below the FY2019 level. In FY2022, we achieved a 7.2% reduction compared to FY2019. In addition, we also achieved a significant reduction of 18.1% per basic unit of sales. While maintaining quality, we will expand the application of low-solvent paints and establish and expand solvent recovery and removal equipment as part of our efforts to reduce emissions and transfer volume.

Emissions and Transfer Volume of Class I Designated Chemical Substances under PRTR Law in FY2022

(Substances Subject to Reporting) (Unit: kg)

Substance No.	Substance designation	Emissions + transfer volume				
		FY2018	FY2019	FY2020	FY2021	FY2022
53	Ethylbenzene	218,658	221,964	233,310	230,021	235,686
80	Xylene	498,744	392,357	342,269	361,802	365,152
240	Styrene	2,050	1,561	975	1,647	2,008
296	1,2,4-Trimethylbenzene	16,901	18,843	17,915	21,058	22,023
297	1,3,5-Trimethylbenzene	5,559	5,389	4,594	6,072	6,127
300	Toluene	156,262	141,755	122,357	122,457	103,517
374	Hydrogen fluoride and water-soluble salts	17,555	22,381	12,017	11,683	12,552
384	1-Bromopropane	11,122	11,474	7,934	13,714	10,701
392	n-Hexane	866	321	105	158	110
405	Boron and its compounds	1,618	1,155	1,778	1,439	1,586
412	Manganese and its compounds	12,366	12,011	10,743	12,020	10,493
420	Methyl methacrylate	1,366	564	232	256	250

* Volume of emissions + transfers is the total amount for SHI and all Group companies combined.



PCB Management and Complete Elimination of Equipment Using PCBs

All devices containing high concentrations of PCBs were registered early on with the waste-disposal company the Japan Environmental Storage & Safety Corporation. These devices have been systematically detoxified pursuant to the Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes. Transformers containing PCBs and stabilizers for lighting equipment containing PCB have been replaced or updated sequentially. Some Works and affiliated companies have completed all such disposal. Additionally, we have completed our survey to identify equipment containing low concentrations of PCBs, and have been working to detoxify such equipment in sequence by the deadline.

Biodiversity

Tanashi Hasso-no-Mori (Forest of Ideas)

Tanashi Works has preserved the Musashino Forest, which occupies approximately 30% of the site's area. A section of this forest, which is home to over 4,500 trees of some 40 species, has been named Hasso-no-Mori or the Forest of Ideas and opened to the general public. This is a place where people may come and relax. The space serves many functions, including a community disaster prevention base and the object of academic research into biodiversity.

Hasso-no-Mori (Forest of Ideas) within Tanashi Works

SHI Group Participation in the Mt. Fuji Reforestation Project

The SHI Group has joined OISCA Japan, through which we are participating in the Mt. Fuji Reforestation Project. The aim of this project is to revitalize the man-made forest of Mt. Fuji, which has sustained considerable damage from insects, and turn it into a biodiversity-rich forest. We have provided donations and SHI Group employees are also participating in the reforestation activities.

SHI Group Participation in the Mt. Fuji Reforestation Project

Initiative Endorsements

Endorsement of Keidanren Initiative for Biodiversity Conservation

In the aim of realizing a sustainable society, the SHI Group endorsed the Keidanren Initiative for Biodiversity Conservation, which indicates the intent and action guidelines from the standpoint of companies to address the issue of biodiversity conservation.

Our main activities have been to reduce wood in packaging, address the issue of marine plastics, and promote green spaces and tree planting around production plants.

Endorsement of Japan Climate Initiative

SHI Group has endorsed the message of the Japan Climate Initiative: "Now is the time to accelerate renewable energy deployment: Calling for stronger climate change action in the midst of the fossil energy crisis." So that we may be a world leader in striving to achieve the 1.5°C target, we will accelerate our own activities to increase energy efficiency and renewable energy use as well as strengthen collaboration with non-state actors domestically and internationally as part of our efforts to bolster initiatives that contribute to achieving net zero CO_2 emissions by 2050.

External Assessments

Acquisition of ISO 14001 certification

SHI Group has been engaged in environmental activities under SHI Group Environmental Policy, and working to obtain certification at each of our factories in Japan since 1998.

In 2018, we obtained unified certification as SHI Group to unify environmental management operation rules and improve the efficiency of maintaining certification. Currently, we have 43 sites that have received unified certification.

In addition, all our affiliated companies in Japan and overseas that are not included in the unified certification have acquired certification individually, and we are making every effort to ensure appropriate environmental management.

See SHI website for more information about certified sites.

Third-Party Certification of Environmental Load Data

To enhance the reliability of our environmental impact data, SHI Group has obtained third-party certification from Bureau Veritas Japan Co., Ltd. for environmental impact data associated with our business activities.

Since FY2022, we have expanded the scope to include overseas affiliates and acquired certification also for indirect CO_2 emissions (Scope 3) relating to raw material procurement, production, logistics, sales, disposal, and other business activities. *1

[Scope]

28 sites in Japan and 42 sites overseas

Scope 1, 2, 3 Cat. 1, 2, 3, 4, 5, 6, 7, 11

<Target Data>

FY2022 energy usage (crude oil equivalent) *2

FY2022 Energy-derived CO_2 emissions *3

*1 Excluding Tanashi Works which has been certified under the Tokyo Cap-and-Trade Program.

*2 Energy consumption (crude oil equivalent): Electric power, city gas, LPG, heavy fuel oil A, gasoline, light oil, kerosene, warm/cold water

*3 Energy-derived CO_2 emissions: CO_2 emissions derived from *2 energy for in-house use.

Non-Financial Data List

[Scope]

The scope of non-financial data provided covers Sumitomo Heavy Industries Ltd., consolidated subsidiaries, and equity method affiliates. Context changes are duly noted in the report.

■ Response to Climate Change

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
CO_2 emissions	Scope 1＋Scope 2 (Market)	Domestic	10,000 t-CO_2	10.9	10.7	10.2	10.3	10.5	
		Overseas	10,000 t-CO_2	7.6	8.3	8.1	8.8	8.9	
		Total	10,000 t-CO_2	18.5	19.1	18.2	19.1	19.4	
	Scope 1	Japan	t-CO_2	17,866	17,784	16,510	16,593	17,859	
		Overseas	t-CO_2	19,807	22,417	20,519	21,287	21,054	
		Total	t-CO_2	37,674	40,200	37,028	37,880	38,913	
	Data coverage rate		%	80.1	85.9	85.9	92.6	91.1	
	Scope 2 (Location)	Japan	t-CO_2	82,918	84,624	73,144	72,604	75,761	
		Overseas	t-CO_2	56,174	60,927	60,091	66,575	69,045	
		Total	t-CO_2	139,093	145,551	133,236	139,180	144,805	
	Scope 2 (Market)	Japan	t-CO_2	91,521	89,451	84,997	86,449	86,903	
		Overseas	t-CO_2	56,174	60,927	60,091	66,575	67,990	
		Total	t-CO_2	147,695	150,378	145,088	153,024	154,892	
	Data coverage rate		%	80.1	85.9	85.9	92.6	91.1	
	Scope 1＋2	Location	t-CO_2	176,767	185,751	170,264	177,059	183,719	
		Market	t-CO_2	185,369	190,579	182,117	190,904	193,806	
	Data coverage rate		%	80.1	85.9	85.9	92.6	91.1	
	Scope 3	Total	t-CO_2	496,016	226,077,535	123,561,961	137,175,145	80,561,766	
	Data coverage rate		%	91.5	97.9	96.8	96.5	94.6	Cat-11 only
	Cat-01 Raw materials		t-CO_2	312,242	313,670	356,805	351,365	406,638	Only some in Japan
	Cat-02 Capital goods		t-CO_2	143,234	165,751	128,805	154,343	147,464	
	Cat-03 Energy consumption		t-CO_2	9,949	20,162	20,280	21,349	26,859	
	Cat-04 Logistics (Upstream)		t-CO_2	11,984	11,562	11,046	11,082	11,045	Excluding overseas
	Cat-05 Waste disposal		t-CO_2	8,679	6,958	5,767	5,578	5,355	Excluding overseas
	Cat-06 Business travel		t-CO_2	1,962	2,120	2,171	3,761	3,277	
	Cat-07 Commuting		t-CO_2	5,723	6,006	6,179	11,138	11,322	
	Cat-08 Lease asset (Upstream)		t-CO_2	0	0	0	0	0	Calculated according to Scope 1 & 2
	Cat-09 Logistics (Downstream)		t-CO_2	—	—	—	—	—	Included in Cat-04, exempt
	Processing of Cat-10 Products		t-CO_2	—	—	—	—	—	Exempt as processing form unable to be identified
	Use of Cat-11 Products		t-CO_2	—	225,549,245	123,029,056	136,614,107	79,946,933	
	Disposal of Cat-12 Products		t-CO_2	—	—	—	—	—	Calculation method currently under review
	Cat-13 Lease asset (Downstream)		t-CO_2	—	—	—	—	—	Calculation method currently under review
	Cat-14 Franchises		t-CO_2	—	—	—	—	—	Not covered
	Cat-15 Investments		t-CO_2	2,244	2,060	1,852	2,422	2,873	Third-party assurances not covered
CO_2 emissions per basic unit			Million yen/CO_2-t	5.0	4.6	4.9	5.3	4.8	
Energy productivity		Japan	Million yen/CO_2-t	6.1	5.8	5.8	6.0	6.3	
		Overseas	Million yen/CO_2-t	3.3	3.0	2.7	3.2	3.3	
Energy consumption	Fuel consumption	Japan	MWh	87,744	87,797	82,512	83,942	89,667	
		Overseas	MWh	106,655	120,824	110,345	111,781	109,637	
		Total	MWh	194,399	208,620	192,857	195,722	199,304	
	Electric power consumption	Japan	MWh	166,762	166,135	161,081	167,290	164,323	
		Overseas	MWh	124,509	131,085	129,930	141,583	133,536	
		Total	MWh	291,271	297,220	291,011	308,872	297,859	
	Cold/warm water	Japan	MWh	1,357	1,203	1,197	1,113	1,159	
		Overseas	MWh	9,836	5,379	8,110	9,136	8,147	
		Total	MWh	11,193	6,582	9,307	10,249	9,306	
	Total		MWh	496,863	512,422	493,175	514,843	503,343	
	Data coverage rate		%	80.1	85.9	85.9	92.6	91.1	
Renewable energy consumption		Japan	MWh	336	323	1,223	1,298	11,000	
		Overseas	MWh	0	0	0	0	3,502	
		Total	MWh	336	323	1,223	1,298	14,203	
	Energy recycling rate	Japan	%	0.20	0.19	0.76	0.78	6.69	
		Overseas	%	0.0	0.0	0.0	0.0	2.62	
		Overall	%	0.12	0.11	0.42	0.42	4.87	
	Data coverage rate		%	80.1	85.9	85.9	92.6	91.1	
Other major GHG	Total amount	Japan	t-CO_2	45.9	51.0	54.2	29.7	36.5	
	Methane (CH_4)	Japan	t-CO_2	34.7	41.3	46.7	25.8	35.1	
	Dinitrogen monoxide (N_2O)	Japan	t-CO_2	11.2	9.8	7.5	3.8	1.5	

Non-Financial Data List

■ Waste Management

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
Amount of waste generated		Japan	t	31,994	30,080	30,159	27,108	25,909	
		Overseas	t	23,038	34,085	30,707	35,483	32,494	
		Total	t	55,032	64,165	60,866	62,591	58,403	
	Data coverage rate		%	83.6	85.6	85.5	84.2	84.5	
	Amount recycled (Total weight of collected recyclable waste)	Japan	t	31,905	24,860	29,686	25,843	24,431	Amount recycled, valuable resources
	Amount of waste incinerated with energy recovered	Japan	t	3,986	4,048	2,497	2,702	2,506	
	Amount of waste incinerated without recovering energy	Japan	t	17	1,904	290	224	386	
	Final disposal amount	Japan	t	10	1	16	27	33	
		Overseas	t	750	8,233	1,219	1,268	971	
		Total	t	760	8,234	1,235	1,294	1,004	
Amount of hazardous waste generated	Emissions	Japan	t	4,079	303	818	708	693	Specially controlled industrial waste
	Amount of waste incinerated with energy recovered	Japan	t	—	—	235	222	209	
	Amount of waste incinerated without recovering energy	Japan	t	—	—	168	118	46	

■ Disclosure under new Plastic Act

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
Emissions	Emissions	Japan	t	1,038	1,009	1,505	1,419	1,310	(non-consolidated)
	Amount of waste incinerated with energy recovered	Japan	t	401	427	509	435	437	(non-consolidated)

■ Water Resource Conservation

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
Water Consumption		Japan	(thousand m³)	1,232	1,183	1,171	1,178	1,149	
		Overseas	(thousand m³)	295	375	343	376	381	All service water
		Total	(thousand m³)	1,527	1,558	1,514	1,554	1,530	
	Data coverage rate		%	79.9	80.6	77.1	76.5	80.2	
	Service water	Japan	(thousand m³)	420	385	382	362	355	
	Industrial water	Japan	(thousand m³)	622	622	610	618	613	
	Surface water	Japan	(thousand m³)	—	0	0	0	0	
	Underground water	Japan	(thousand m³)	191	176	179	198	181	
Effluent			(thousand m³)	468	454	478	460	448	
	Data coverage rate		%	50.9	51.3	51.6	47.5	43.6	
Amount discharged into water systems	COD		t	1.7	1.8	1.6	1.5	1.5	
	T-N		t	5.7	6.8	6.6	6.2	5.6	
	T-P		t	0.5	0.5	0.5	0.5	0.5	
	Data coverage rate		%	—	51.3	51.6	47.5	43.6	

■ Chemical Substances

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
VOC	Total amount	Japan	t	647	577	519	507	525	
		Overseas	t	88	108	171	209	208	
		Total	t	736	685	690	716	733	
	Data coverage rate		%	87.4	87.8	88.6	86.0	87.2	
	Ethylbenzene	Japan	t	167	155	158	149	154	
	Xylene	Japan	t	351	301	262	258	280	
	Toluene	Japan	t	129	122	99	100	91	

■ Environmental Management

Evaluation items (subcategories)			Unit	2018	2019	2020	2021	2022	Remarks
Number of major environmental incidents		Group-wide	Number of cases	0	0	1	0	0	9-month period
Number of major environmental law/regulation violations		Group-wide	Number of cases	0	0	0	0	0	9-month period
Number of penalties, fines, etc. paid		Japan	Number of cases	0	0	0	0	0	Cases where a ¥1 million or greater penalty or fine paid
		Overseas	Number of cases	0	0	1	0	0	Cases where US$10,00 or greater penalty charge or fine paid
Environment/energy-saving capital investment	Environment-related	Group-wide	1,000,000 yen	416	826	573	490	547	
	Energy-saving related	Group-wide	1,000,000 yen	2,057	3,706	1,287	2,610	1,967	
	Total	Group-wide	1,000,000 yen	2,473	4,532	1,860	3,100	2,513	
External assessments	CDP	Climate change	—	B–	B	B–	B–	B	
		Water security	—	B–	B–	C	B–	C	
	Buna-no-Mori (Beech forest)		—	B	B	A	B	A	
	Assessment under Act on Rationalizing Energy		—	S	S	S	S	S	
	Energy saving assessment for specific tenants by Tokyo metropolitan government		—	AA	AA	AA	AAA	AA	
Acquisition of ISO 14001 certification		Japan	Number of cases	37	37	37	37	35	
		Overseas	Number of cases	18	19	21	21	22	
		Total	Number of cases	55	56	58	58	57	
	Acquisition rate		%	80.0	80.1	80.6	79.4	75.2	

Environmental Accounting in FY2022

The SHI Group uses the Environmental Accounting Guidelines 2005 issued by the Ministry of Environment as the benchmark for our environmental accounting to measure investments, costs and their effects as relates to environmental conservation.

Environmental Conservation Costs and Effects (Classified According to Business Activity)

(Unit: Million yen)

Classification		Principal initiatives	Environmental conservation costs: Investment FY2020	FY2021	FY2022	Cost FY2020	FY2021	FY2022	Environmental conservation effects: Economic effect FY2020	FY2021	FY2022	Key points
(1) Costs within business segment		Maintenance/depreciation of equipment reducing environmental load	1,241	808	768	840	1,010	1,209	225	381	501	
Itemization	(1)-1 Pollution prevention costs	Maintenance and management of equipment to prevent air and water pollution, and measurement of equipment noise and vibration	689	207	71	245	253	189	0	0	0	
	(1)-2 Global environmental conservation costs	Investment in energy-saving measures (power consumption monitoring, energy-saving devices, replacement of lighting, etc.)	515	593	682	40	112	110	25	93	170	Reduction in expenses due to energy/resource savings and 3Rs
	(1)-3 Resource recycling costs	Waste reduction, recycling investment (recycling, use of recycled resources)	37	8	15	554	645	911	200	287	331	Reduction in expenses due to waste reduction Sales of valuable resources
(2) Upstream/downstream costs		Product packaging material reduction, home appliance recycling, and use of both sides of paper	0	1	1	0	2	2	0	0	0	
(3) Management activity costs		ISO14001 standard maintenance and administration, and green space expansion	1,352	13	16	125	155	132	—	—	—	Economic effect (substantive effect) achieved with environmental conservation measures shown in an appended table.
(4) Research & development costs		R&D for reducing environmental product footprint, and environmental equipment R&D	3,057	3,306	1,442	102	222	1,303	—	—	—	
(5) Social activity costs		Regional environmental conservation and greening activities	1	2	1	1	19	2	0	0	0	
(6) Environmental damage compliance costs		Imposition on air pollution load, and charges for green belts and pollution compensation	—	—	—	0	1	0	0	0	0	
		Total	5,651	4,129	2,228	1,068	1,408	2,648	225	381	501	

Table Showing Change in Environmental Conservation Costs During Last Three Years

(Unit: Million yen)

Description of effects	FY2020	FY2021	FY2022
Total environmental conservation costs	6,719	5,537	4,876
Total investment	5,651	4,129	2,228
Total costs	1,068	1,408	2,648
Total research & development costs	3,159	3,528	2,744

Economic Effects Related to Environmental Conservation Measures (Substantial Effect)

(Unit: Million yen)

Description of effects		FY2020	FY2021	FY2022
Revenues	Business revenues obtained by recycling waste or used products	200	287	331
Cost savings	Reduction in energy costs (electric power and fuel costs) from energy savings	25	93	170
	Reduction in waste disposal costs from resource savings or recycling	1	1	0
	Reduction in costs (labor, materials, repairs and other maintenance and operation costs)	0	0	0
Total		227	381	501

Environment & Energy-Saving Capital Investment

FY2022 environmental and energy-saving capital investments for both Japan and overseas totaled ¥2,513,000,000. We have systematically and actively updated dilapidated equipment and introducing new technology from the standpoint preventing environmental incidents as well as saving and enhancing energy efficiency.

(Unit: Million yen)

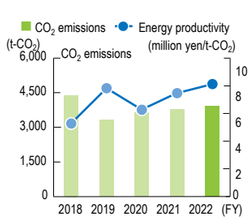
	FY2022 Environment-related capital investment		
	Environment-related	Energy-saving related	Total
Japan	470	1,808	2,278
Overseas	76	159	236
Total	547	1,967	2,513

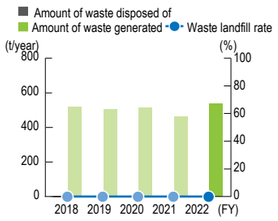
Environmental Load Data

Environmental Load Data for Each Work

Tanashi Works

■ Established in 1938
■ Building area: 14,368m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 40,706m²
■ Main products: Cryogenic equipment, defense equipment



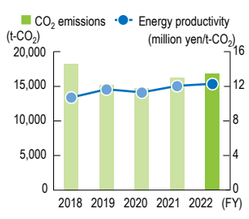


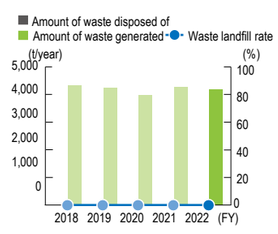
Energy consumption	
Electric power (1,000 kWh)	8,481
Gasoline (kL)	0.03
Kerosene (kL)	0.54
Light oil (kL)	1.91
Heavy fuel oil A (kL)	0.00
LPG (t)	0.00
LNG (t)	0.00
City gas (km³)	1.96
Water consumption (m³)	11,612

Atmospheric discharge	
SOx (kg)	—
NOx (kg)	—

Chiba Works

■ Established in 1965
■ Building area: 127,800m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 297,039m²
■ Main products: Plastic processing machines, metallic molds, hydraulic excavators



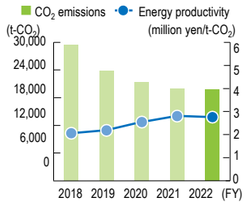


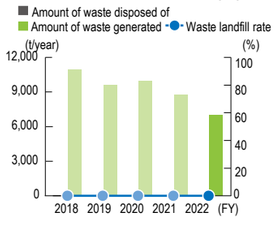
Energy consumption	
Electric power (1,000 kWh)	23,459
Gasoline (kL)	196.48
Kerosene (kL)	0.49
Light oil (kL)	755.03
Heavy fuel oil A (kL)	0.00
LPG (t)	35.81
LNG (t)	0.00
City gas (km³)	1,548.05
Water consumption (m³)	62,113

Atmospheric discharge	
SOx (kg)	—
NOx (kg)	XXX

Yokosuka Works

■ Established in 1971
■ Building area: 170,635m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 523,000m²
■ Main products: Stage systems, system controllers, laser processing systems, semiconductor manufacturing equipment (molding machines), precision forgings, ships



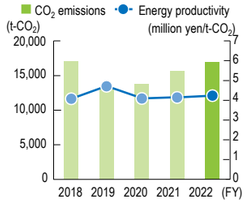


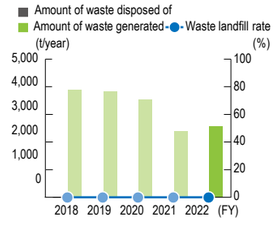
Energy consumption	
Electric power (1,000 kWh)	37,329
Gasoline (kL)	25.00
Kerosene (kL)	0.00
Light oil (kL)	181.21
Heavy fuel oil A (kL)	0.00
LPG (t)	11.32
LNG (t)	0.00
City gas (km³)	902.89
Water consumption (m³)	131,680

Atmospheric discharge	
SOx (kg)	—
NOx (kg)	451
Discharge into water catchments	
COD (kg)	374
Nitrogen (kg)	268
Phosphorus (kg)	72

Nagoya Works

■ Established in 1961
■ Building area: 90,000m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 293,000m²
■ Main products: Power transmission and controls, gear motors, inverters, construction cranes



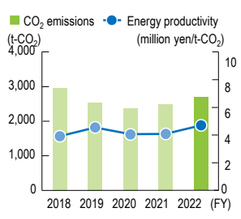


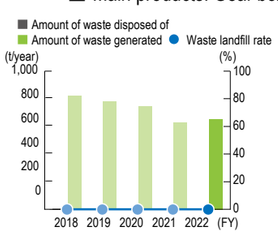
Energy consumption	
Electric power (1,000 kWh)	29,014
Gasoline (kL)	32
Kerosene (kL)	0.07
Light oil (kL)	134
Heavy fuel oil A (kL)	—
LPG (t)	6.2
LNG (t)	0.0
City gas (km³)	1,355.85
Water consumption (m³)	141,514

Atmospheric discharge	
SOx (kg)	—
NOx (kg)	30
Discharge into water catchments	
COD (kg)	364.7
Nitrogen (kg)	44.7
Phosphorus (kg)	1.1

Okayama Works

■ Established in 1948
■ Building area: 78,000m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 425,000m²
■ Main products: Gear boxes, machine tools, coolant systems



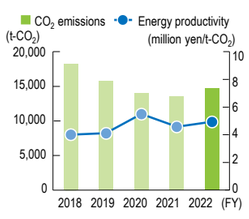


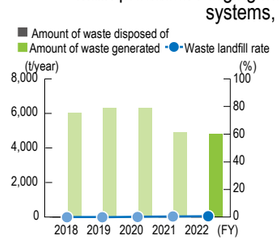
Energy consumption	
Electric power (1,000 kWh)	5,029
Gasoline (kL)	2.73
Kerosene (kL)	0.00
Light oil (kL)	5.33
Heavy fuel oil A (kL)	0.00
LPG (t)	114.27
LNG (t)	0.00
City gas (km³)	0.00
Water consumption (m³)	14,194

Atmospheric discharge	
SOx (kg)	—
NOx (kg)	639
Discharge into water catchments	
COD (kg)	—
Nitrogen (kg)	—
Phosphorus (kg)	—

Ehime Works (Niihama plant)

■ Established in 1888
■ Building area: 203,000m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 418,000 m²
■ Main products: Forging machinery, medical accelerators, transport machinery, mechanical parking systems, mill rolls



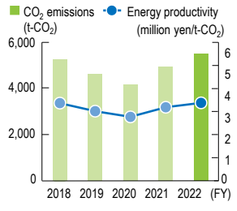


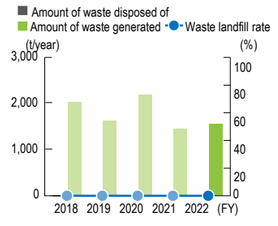
Energy consumption	
Electric power (1,000 kWh)	25,024
Gasoline (kL)	5.99
Kerosene (kL)	10.57
Light oil (kL)	85.71
Heavy fuel oil A (kL)	56.00
LPG (t)	484.61
LNG (t)	451.16
City gas (km³)	0.00
Water consumption (m³)	638,442

Atmospheric discharge	
SOx (kg)	75
NOx (kg)	459
Discharge into water catchments	
COD (kg)	113.0
Nitrogen (kg)	463.0
Phosphorus (kg)	7.0

Ehime Works (Saijo plant)

■ Established in 1973
■ Building area: 82,222m²
■ ISO 14001 (obtained in Aug. 1998) ■ Site area: 535,036m²
■ Main products: Pressure vessels, mixing and blending vessels, coke oven machines, steel structures





Energy consumption	
Electric power (1,000 kWh)	10,177
Gasoline (kL)	9.20
Kerosene (kL)	0.00
Light oil (kL)	42.65
Heavy fuel oil A (kL)	4.50
LPG (t)	220.18
LNG (t)	0.00
City gas (km³)	0.00
Water consumption (m³)	73,237

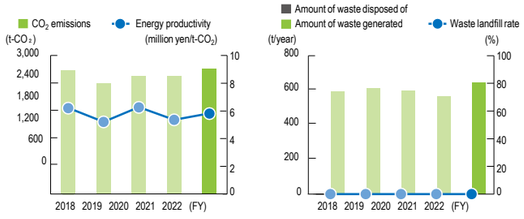
Atmospheric discharge	
SOx (kg)	76
NOx (kg)	289
Discharge into water catchments	
COD (kg)	674.3
Nitrogen (kg)	863.7
Phosphorus (kg)	104.5

Environmental Load Data

Environmental Load Data for Group Companies in Japan (Other than Works)

Shin Nippon Machinery Co., Ltd.

Main products: Turbines, pumps

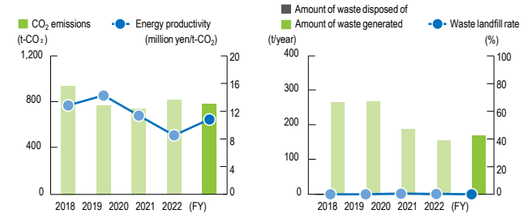


Energy consumption	
Electric power (1,000 kWh)	4,178.9
Gasoline (kL)	0.0
Kerosene (kL)	303.5
Light oil (kL)	4.2
Heavy fuel oil A (kL)	0.0
LPG (t)	5.5
City gas (km^3)	0.1
Water consumption (m^3)	17,311

Atmospheric discharge	
Sox (kg)	73
Nox (kg)	774
Discharge into water catchments	
COD (kg)	—
Nitrogen (kg)	—
Phosphorus (kg)	—

Nihon Spindle Mfg. Co., Ltd.

Main products: Industrial and environmental machinery

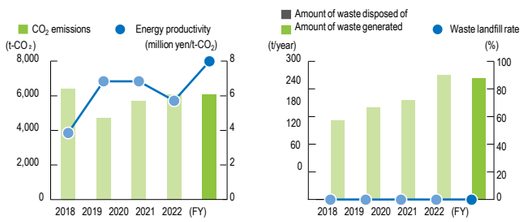


Energy consumption	
Electric power (1,000 kWh)	1,513.4
Gasoline (kL)	0.4
Kerosene (kL)	0.5
Light oil (kL)	0.1
Heavy fuel oil A (kL)	1.8
LPG (t)	0.1
City gas (km^3)	32.5
Water consumption (m^3)	11,034

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—

Sumitomo Heavy Industries Ion Technology Co., Ltd.

Main products: Ion implantation devices

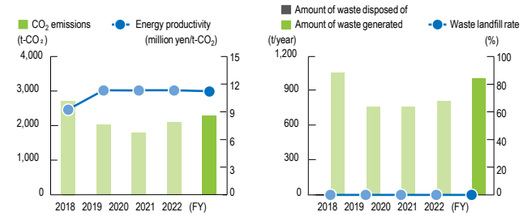


Energy consumption	
Electric power (1,000 kWh)	13,123.9
Gasoline (kL)	0.0
Kerosene (kL)	0.8
Light oil (kL)	0.0
Heavy fuel oil A (kL)	0.0
LPG (t)	0.0
City gas (km^3)	0.1
Water consumption (m^3)	20,688

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—

Sumitomo NACCO Forklift Co., Ltd.

Main products: Forklifts

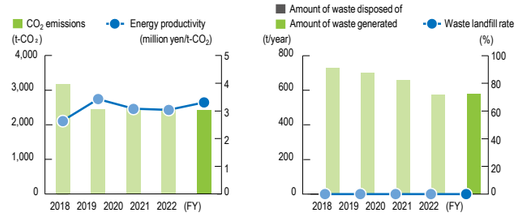


Energy consumption	
Electric power (1,000 kWh)	3,526.0
Gasoline (kL)	6.2
Kerosene (kL)	0.0
Light oil (kL)	7.6
Heavy fuel oil A (kL)	0.0
LPG (t)	5.7
City gas (km^3)	271.1
Water consumption (m^3)	9,755

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—

Sumitomo Heavy Industries Gearbox Co., Ltd.

■ Main products: Drive units ■ ISO 14001 (obtained in Aug. 1998)

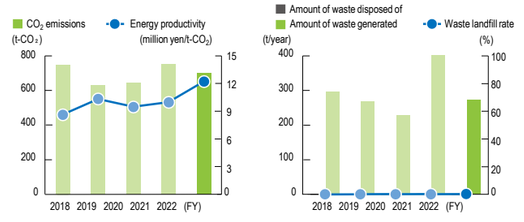


Energy consumption	
Electric power (1,000 kWh)	4,583.5
Gasoline (kL)	0.8
Kerosene (kL)	0.4
Light oil (kL)	1.6
Heavy fuel oil A (kL)	0.0
LPG (t)	7.8
City gas (km^3)	127.7
Water consumption (m^3)	8,322

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	210

Sumitomo Heavy Industries Modern, Ltd.

Main products: Plastic extruding and molding machines

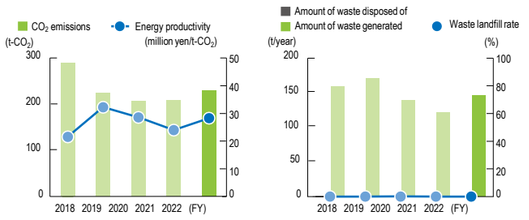


Energy consumption	
Electric power (1,000 kWh)	1,383.4
Gasoline (kL)	0.0
Kerosene (kL)	0.0
Light oil (kL)	21.1
Heavy fuel oil A (kL)	0.0
LPG (t)	1.8
City gas (km^3)	0.0
Water consumption (m^3)	2,258

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—

Izumi Food Machinery Co., Ltd.

Main products: Food processing machinery

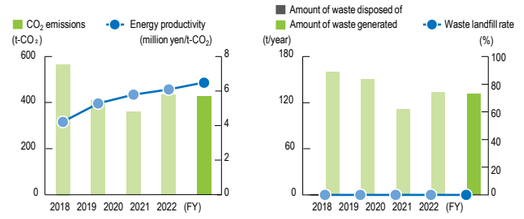


Energy consumption	
Electric power (1,000 kWh)	471.7
Gasoline (kL)	0.0
Kerosene (kL)	0.0
Light oil (kL)	0.0
Heavy fuel oil A (kL)	0.4
LPG (t)	0.0
City gas (km^3)	4.3
Water consumption (m^3)	3,730

Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—

SFK Co., Ltd.

Main products: Bolts, nuts, precision screws



Energy consumption	
Electric power (1,000 kWh)	875.8
Gasoline (kL)	0.4
Kerosene (kL)	8.3
Light oil (kL)	0.0
Heavy fuel oil A (kL)	0.0
LPG (t)	0.7
City gas (km^3)	0.0
Water consumption (m^3)	640

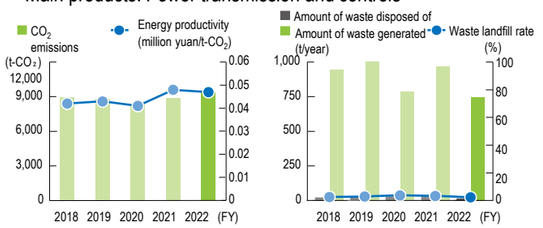
Atmospheric discharge	
Sox (kg)	—
Nox (kg)	—
Discharge into water catchments	
COD (kg)	2.3
Nitrogen (kg)	—
Phosphorus (kg)	—

Environmental Load Data

[Environmental Load Data for Principal Group Companies Overseas]

Sumitomo Heavy Industries (Tangshan), Ltd. / Country: China

Main products: Power transmission and controls

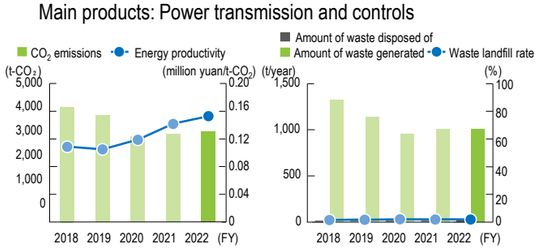


Energy consumption	
Paper (A4 1,000 sheets)	686
Electric power (1,000 kWh)	10,489
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	—
Natural gas (km³)	1,266
Water consumption (m³)	19,980

Atmospheric discharge	
VOC emissions (t/year)	0.044
SOx emissions (t/year)	0.196
NOx emissions (t/year)	1.368

Sumitomo (SHI) Cyclo Drive China, Ltd. / Country: China

Main products: Power transmission and controls

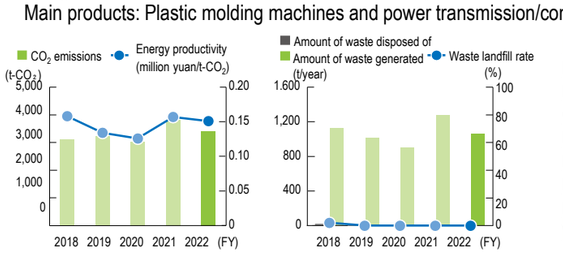


Energy consumption	
Paper (A4 1,000 sheets)	1,187
Electric power (1,000 kWh)	5,268
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	—
Natural gas (km³)	—
Water consumption (m³)	19,535

Atmospheric discharge	
VOC emissions (t/year)	0.933
SOx emissions (t/year)	—
NOx emissions (t/year)	—

Ningbo Sumiju Machinery, Ltd. / Country: China

Main products: Plastic molding machines and power transmission/controls

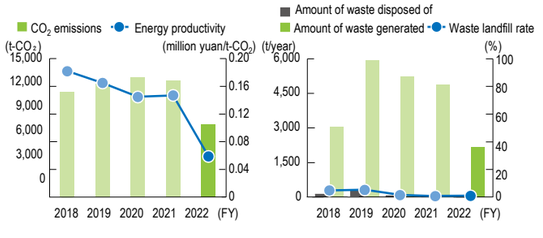


Energy consumption	
Paper (A4 1,000 sheets)	519
Electric power (1,000 kWh)	5,169
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	17
LPG (t)	—
Natural gas (km³)	—
Water consumption (m³)	17,527

Atmospheric discharge	
VOC emissions (t/year)	1.599
SOx emissions (t/year)	—
NOx emissions (t/year)	—

Sumitomo Construction Machinery (Tangshan) Co., Ltd. / Country: China

Main products: Hydraulic excavators, road machinery

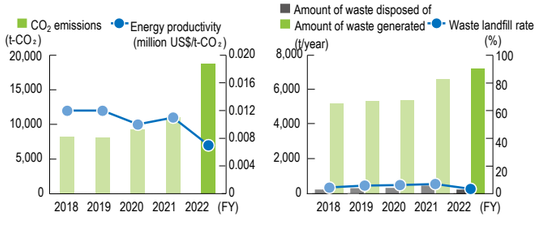


Energy consumption	
Paper (A4 1,000 sheets)	564
Electric power (1,000 kWh)	9,335
Gasoline (kL)	8
Heavy fuel oil (kL)	—
Light oil (kL)	31
LPG (t)	12
Natural gas (km³)	881
Water consumption (m³)	42,036

Atmospheric discharge	
VOC emissions (t/year)	4.722
SOx emissions (t/year)	0.403
NOx emissions (t/year)	1.123

Sumitomo Heavy Industries (Vietnam) Co., Ltd. / Country: Vietnam

Main products: Power transmission/controls, motors

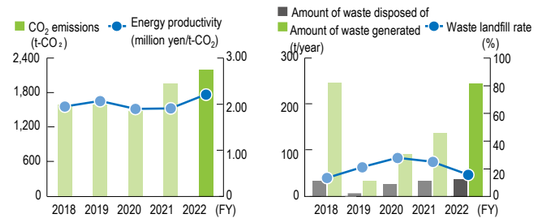


Energy consumption	
Paper (A4 1,000 sheets)	5,337
Electric power (1,000 kWh)	25,394
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	744
Natural gas (km³)	—
Water consumption (m³)	34,166

Atmospheric discharge	
VOC emissions (t/year)	1.689
SOx emissions (t/year)	—
NOx emissions (t/year)	—

SHI Manufacturing & Service (Philippines) Inc. / Country: Philippines

Main products: Precision components

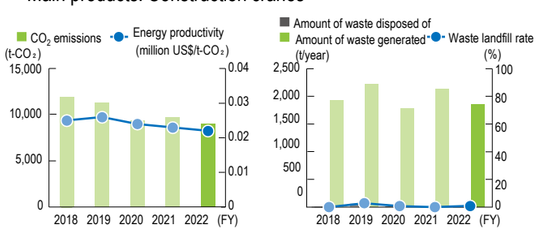


Energy consumption	
Paper (A4 1,000 sheets)	975
Electric power (1,000 kWh)	3,221
Gasoline (kL)	3
Heavy fuel oil (kL)	9
Light oil (kL)	—
LPG (t)	2
Natural gas (km³)	—
Water consumption (m³)	18,333

Atmospheric discharge	
VOC emissions (t/year)	3.273
SOx emissions (t/year)	—
NOx emissions (t/year)	—

Link-Belt Cranes, L.P., LLLP / Country: US

Main products: Construction cranes

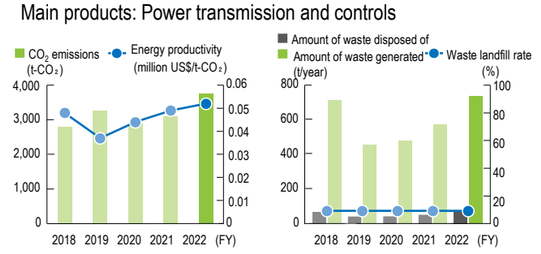


Energy consumption	
Paper (A4 1,000 sheets)	976
Electric power (1,000 kWh)	14,186
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	—
Natural gas (km³)	1,627
Water consumption (m³)	19,749

Atmospheric discharge	
VOC emissions (t/year)	18.857
SOx emissions (t/year)	0.028
NOx emissions (t/year)	2.960

Sumitomo Machinery Corporation of America / Country: US

Main products: Power transmission and controls

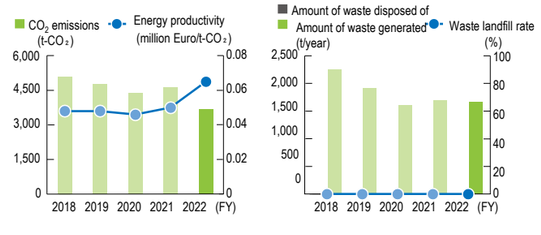


Energy consumption	
Paper (A4 1,000 sheets)	614
Electric power (1,000 kWh)	6,234
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	187
Natural gas (km³)	363
Water consumption (m³)	2,528

Atmospheric discharge	
VOC emissions (t/year)	0.972
SOx emissions (t/year)	—
NOx emissions (t/year)	—

Sumitomo (SHI) Demag Plastics Machinery GmbH / Country: Germany

Main products: Plastics molding machinery

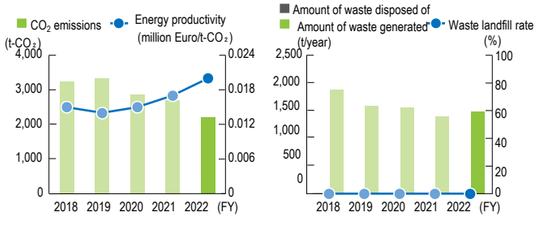


Energy consumption	
Paper (A4 1,000 sheets)	4,111
Electric power (1,000 kWh)	6,992
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	2
LPG (t)	173
Natural gas (km³)	334
Water consumption (m³)	11,501

Atmospheric discharge	
VOC emissions (t/year)	6.000
SOx emissions (t/year)	—
NOx emissions (t/year)	—

Hansen Industrial Transmissions NV/ Country: Belgium

Main products: Power transmission and controls



Energy consumption	
Paper (A4 1,000 sheets)	401
Electric power (1,000 kWh)	6,354
Gasoline (kL)	—
Heavy fuel oil (kL)	—
Light oil (kL)	—
LPG (t)	—
Natural gas (km³)	517
Water consumption (m³)	3,416

Atmospheric discharge	
VOC emissions (t/year)	3.198
SOx emissions (t/year)	0.000
NOx emissions (t/year)	0.760