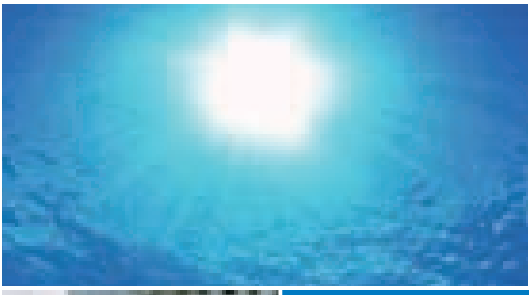
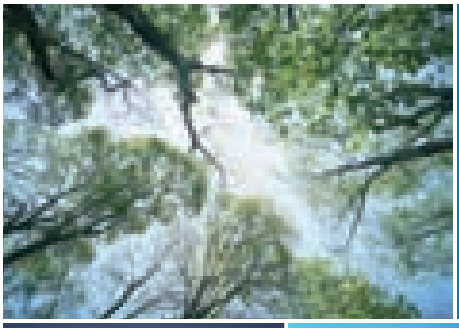
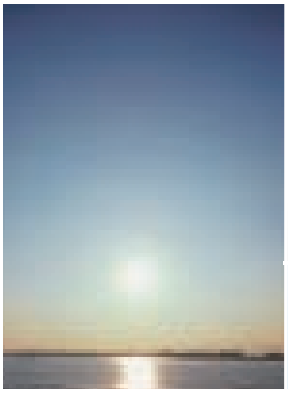
SHI
Sumitomo Heavy Industries

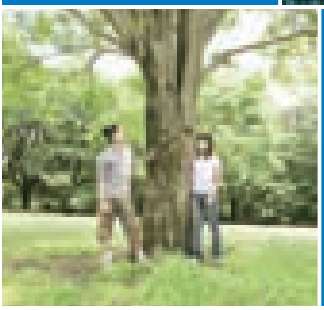
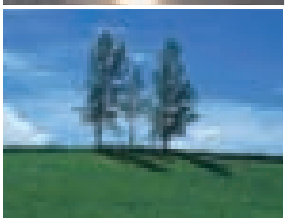


Sumitomo Heavy Industries Group

Environmental Sustainability Report 2009


Sumitomo Heavy Industries, Ltd.

Sumitomo Heavy Industries Group aims to Contribute to the sustainable development of society.

Our mission is to help build a society based on sustainable development, with environmental problems among the important issues to resolve. Above all, to aid in the fight against global warming—one of several environmental problems of particular gravity—the Group has been introducing initiatives to prevent global warming in stages since FY2005:

- Reduce the consumption of electricity since FY2005
- Reduce the use of paper since FY2006
- Promote green logistics
  (reduce CO_2 emissions associated with transportation) since FY2007
- Reduce CO_2 emissions
  (electricity and fuel consumption) since FY2008

These activities not only rely on capital investment; we have also placed the highest priority on encouraging all employees of all group companies to participate in the measures and promoting the "visualization" of the measures. I often visit the manufacturing floors to see for myself the progress being made with these initiatives. As a result of the efforts of all employees, we have been able to eliminate waste and improve operations not only on the manufacturing floors but also in our offices, and we have met the FY2008 targets for all activities.

Sumitomo Heavy Industries Group has also committed as part of its corporate mission to reduce its environmental footprint through product development and production activities to help protect the global environment. In our development activities, we are creating products that consume less energy, and that are lighter in weight and

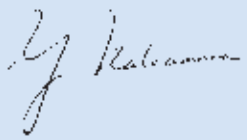
smaller in size. We seek to achieve compatibility between the environment and technology in a range of fields, and we strive to provide high-performance, high-quality products that meet the demands of society. To provide excellent products and services to our customers worldwide, the Group is very much focused on product development and production innovation.

As well as activities to prevent global warming, Sumitomo Heavy Industries Group aims to promote and improve recycling and waste minimization, while reducing and ultimately eliminating the presence of harmful substances.

In addition, the Group deals with a range of environmental risks through collaboration and cooperation with the local communities of which it is a part.

In order to earn the understanding and trust of stakeholders, Sumitomo Heavy Industries Group is determined to fulfill its social responsibilities to protect the environment and prevent global warming. We appreciate your opinions and advice, which will help us with our ongoing efforts.

Yoshinobu Nakamura
President and CEO



Contents

Editorial Policy

The Sumitomo Heavy Industries Group (Sumitomo Heavy Industries, Ltd. and its group companies) issued its first Environmental Report in 2001. In 2005, we expanded the scope of the report to include social aspects, and changed its name to Environmental Sustainability Report.
To convey to a wide audience our engagement with environmental and social activities, which we view as our duty to society, we have sought to make the report accessible by reducing the volume of text and making frequent use of graphs, illustrations and photographs.

Scope of the Report
Sumitomo Heavy Industries, Ltd. and its group companies

Period Covered by this Report
April 1, 2008 — March 31, 2009

Previous issue
October 2008

Current issue
November 2009

The next issue planned to be published in:
September 2010

Disclaimer

This report contains not only facts relating to the past and present of Sumitomo Heavy Industries Group but also projections based on plans and forecasts, business plans and business policy at the date of publication. These plans, forecasts and projections are assumptions and judgments based on available information at the time of writing, and results or matters pertaining to future business activities could differ materially from the descriptions due to changing conditions.

Outline of Sumitomo Heavy Industries Group

Since its foundation as a repair shop for the Besshi Copper Mine in 1888, the history of Sumitomo Heavy Industries Group has moved in step with social and industrial development. With a manufacturing technology nurtured by a tradition spanning more than 100 years, we make use of proven technologies that “actuate and control” the things from the world of nanotechnology to gigantic structures to realize original ideas and dreams.

Company Profile

Company Name: Sumitomo Heavy Industries, Ltd.

Founded:	November 20, 1888	**Employees:**	14,984 (Consolidated) 3,032 (Non-consolidated)
Incorporated:	November 1, 1934	**Net Sales:**	JPY 642,918 million (Consolidated)
Head Office:	1-1, Osaki 2-chome, Shinagawa-ku, Tokyo		JPY 241,482 million (Non-consolidated)
Capital:	JPY 30,871,650,000		

*Net sales figures are current as of the fiscal year ended March 2009 while the figures for capital and employees are current as of March 31, 2009.

Mass-produced Machinery

This product group encompasses products of a set basic structure with mass production potential, and sophisticated technologies for the IT industry. Flagship products include power transmission equipment for controlling motor revolutions and plastic injection molding machines for manufacturing plastic goods.

Main Products Power Transmission Equipment, Plastic Injection Molding Machines, Cyclotrons for Medical Use, Ion Accelerators, Plasma Coating System for FPDs (Flat Panel Displays), Laser Processing Systems, Cryogenic Equipment, XY Stages, Transfer Molding Press Machines, Precision Forgings

Environmental Protection Facilities, Plants & Others

This is a group of products for environmental infrastructure such as power generation and water treatment systems. Flagship products include boilers for private power generation that can run on biomass fuel, water and sewage treatment systems and effluent treatment systems for the private sector.

Main Products Power Generation Systems, Industrial Wastewater Treatment Systems, Water and Sewage Treatment Systems, Landfill Leachate Treatment Systems, Air Pollution Control Plants, Chemical Process Equipment for Chemical Plants, Food Processing Machines, Software

Ship, Steel Structure, and Other Specialized Equipment

This product group includes ships and oil refinery equipment. In shipbuilding, we specialize in medium-size tankers. As for oil refinery equipment, our main product is equipment for extracting value-added light oil from heavy oil after the primary refining process. Others include equipment related to chemical processes.

Main Products Steel Structures, Pressure Vessels, Mixing Reactors, Ships, Marine Structures, Marine Equipment, Coke Ovens Machines

Industrial Machinery

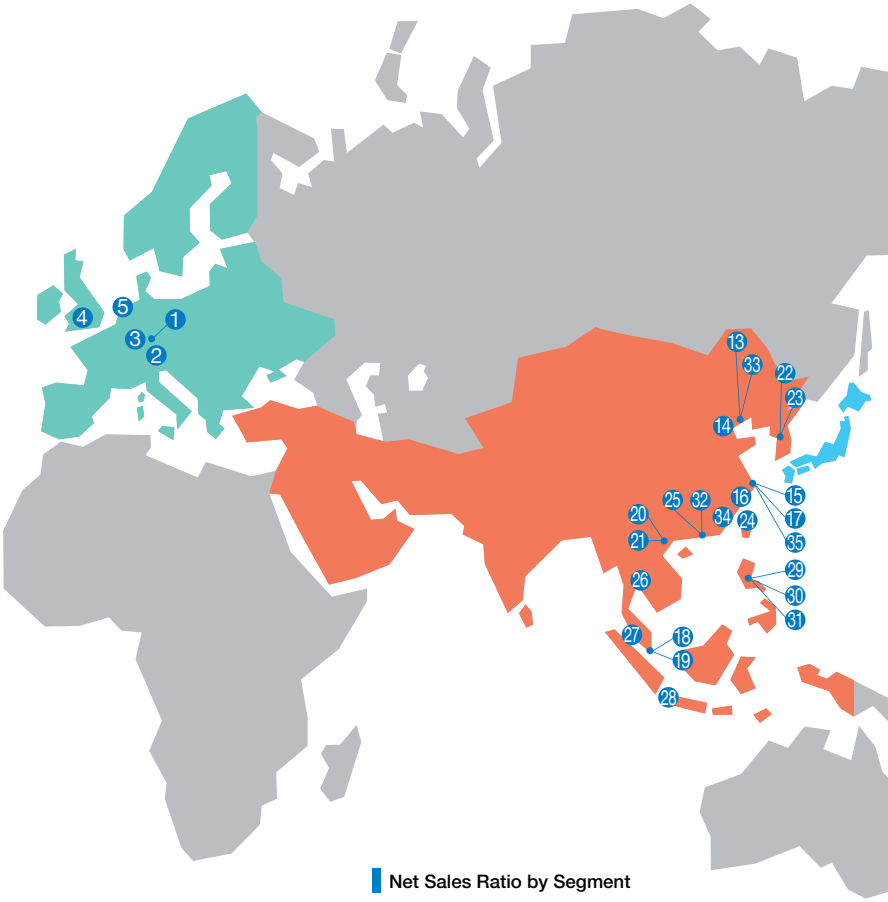
This group of products includes so-called heavy machinery. The flagship products are large cranes and other transportation handling systems, steam turbines for private power generation, and forging presses.

Main Products Logistics & Handling Systems, Parking Systems, Forging Presses, Material Handling Systems, Turbines, Pumps

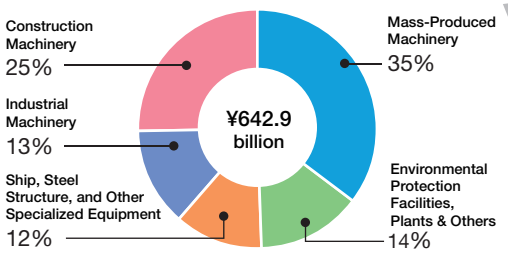
Construction Machinery

Our flagship products include hydraulic excavators and mobile cranes. We also have road construction machinery for spreading asphalt etc.

Main Products Hydraulic Excavators, Mobile Cranes, Road Machinery



Net Sales Ratio by Segment



Europe

Mass-Produced Machinery

1	Sumitomo (SHI) Demag Plastics Machinery GmbH	Germany
2	Sumitomo (SHI) Cyclo Drive Germany GmbH	Germany
3	Sumitomo (SHI) Cryogenics of Europe GmbH	Germany
4	Sumitomo (SHI) Cryogenics of Europe, Ltd.	United Kingdom
5	SHI Plastics Machinery (Europe) B.V.	Netherlands

North America

Mass-Produced Machinery

6	Sumitomo Machinery Corporation of America	United States
7	SHI Plastics Machinery, Inc. of America	United States
8	Sumitomo (SHI) Plastics Machinery (America) , LLC	United States
9	Sumitomo (SHI) Cryogenics of America, Inc.	United States
10	SM-Cyclo of Canada, Ltd.	Canada

Construction Machinery

11	Link-Belt Construction Equipment Company	United States
12	LBX Company LLC	United States

Asia

Mass-Produced Machinery

13	Sumitomo Heavy Industries (Tangshan), Ltd.	China
14	Sumitomo (SHI) Cyclo Drive China, Ltd.	China
15	Sumitomo (SHI) Cyclo Drive Logistics, Ltd.	China
16	Ningbo Sumiju Machinery, Ltd.	China
17	SHI Plastics Machinery (Shanghai) Co., LTD.	China
18	Sumitomo (SHI) Cyclo Drive Asia Pacific Pte. Ltd.	Singapore
19	SHI Plastics Machinery (S) Pte. Ltd.	Singapore
20	Sumitomo Heavy Industries (Vietnam) Co.,Ltd.	Vietnam
21	SHI Plastics Machinery (Vietnam) Ltd.	Vietnam
22	Sumitomo (SHI) Cyclo Drive Korea, Ltd.	Korea
23	SHI Plastics Machinery (Korea) Co., Ltd.	Korea
24	SHI Plastics Machinery (Taiwan) Inc.	Taiwan
25	SHI Plastics Machinery (Hong Kong) Ltd.	Hong Kong
26	SHI Plastics Machinery (Thailand) Ltd.	Thailand
27	SHI Plastics Machinery (Malaysia) Sdn. Bhd.	Malaysia
28	PT. SHI Plastics Machinery (Indonesia)	Indonesia
29	SHI Plastics Machinery (Phils.) Inc.	Philippines
30	SHI Manufacturing & Services (Philippines) , Inc.	Philippines

Environmental Protection Facilities, Plants & Others

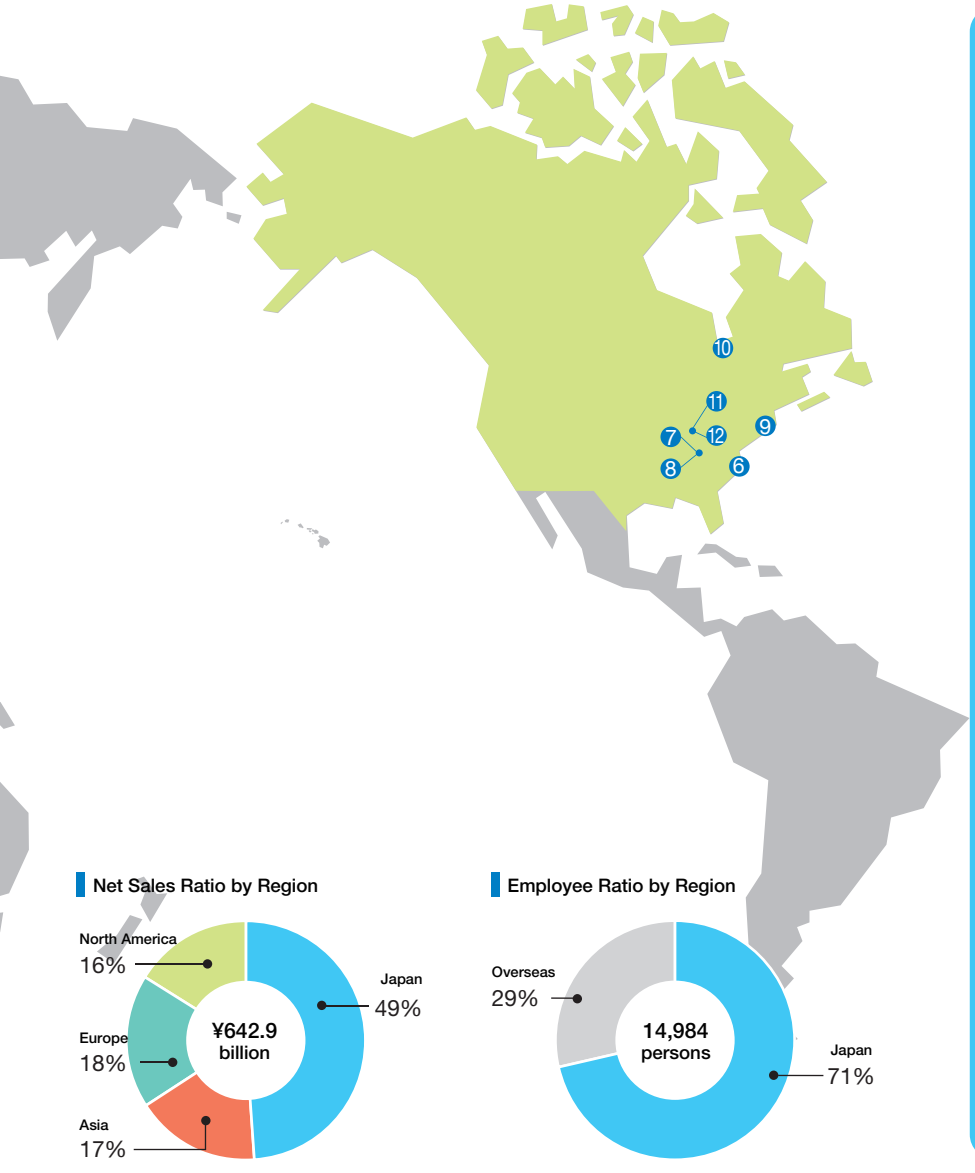
31	SHI Designing & Manufacturing, Inc.	Philippines

Industrial Machinery

32	SHI Machinery Service (Hong Kong) Ltd.	Hong Kong

Construction Machinery

33	Sumitomo (S.H.I.) Construction Machinery (Tangshan) Co., Ltd.	China
34	Sumiju SCE (Xiamen) Construction Machinery Co., Ltd.	China
35	Sumitomo Heavy Industries (Shanghai) Ltd.	China



Japan

Mass-Produced Machinery

Sumitomo NACCO Materials Handling Co., Ltd.
Seisa Gear, Ltd.
SEN Corporation
Sumitomo Heavy Industries HIMATEX Co., Ltd.
Sumitomo Heavy Industries Finetech, Ltd.
Sumiju Precision Forging Co., Ltd.
Sumitomo Heavy Industries PTC Sales Company
Sumitomo Heavy Industries Mechatronics, Ltd.
Sumitomo Heavy Industries Modern, Ltd.
S.H.I. Examination & Inspection, Ltd.
Japan Electron Beam Irradiation Service Co., Ltd.
Sumiju Business, Ltd.
Sumiju Tomida Machinery Co., Ltd.
SHI Accelerator Service, Ltd.
Sumiju Tokki Service Co., Ltd.
Sumiju Platec Co., Ltd.
Sumiju Logitech Co., Ltd.
Sumiju Technos Co., Ltd.

Environmental Protection Facilities, Plants & Others

Sumitomo Heavy Industries Environment Co., Ltd.
Lightwell Co., Ltd.
Sumiju Environmental Engineering Inc.
Izumi Support Co., Ltd.
Izumi Food Machinery Co., Ltd.
Sumiju Environmental Technology Co., Ltd.
SHI Financial Services Co., Ltd.
Sumiju Plant Engineering Co., Ltd.
Sumiju Kansai Facility Management Co., Ltd.
Nihon Spindle Mfg. Co., Ltd.

Ship, Steel Structure, and Other Specialized Equipment

Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
SHI Mechanical & Equipment Inc.
Sumiju Yokosuka Kogyo Co., Ltd.

Industrial Machinery

Shin Nippon Machinery. Co., Ltd.
Sumitomo Heavy Industries Engineering & Services Co., Ltd.
Sumitomo Heavy Industries Techno-Fort Co., Ltd.

Construction Machinery

Sumitomo (S.H.I.) Construction Machinery Co., Ltd.
Sumitomo (S.H.I.) Construction Machinery Sales Co., Ltd.
Hitachi Sumitomo Heavy Industries Construction Crane Co., Ltd.

Net Sales Ratio by Region

Employee Ratio by Region

Relationship between Sumitomo Heavy Industries Group and Society

The Sumitomo Heavy Industries Group is helping to build a more prosperous society with its products and technologies.

For the Household

1 Useful for manufacturing liquid crystal and semiconductor components that demand accuracy

Semiconductor and Liquid Production Equipment

At Automobile Factories

2 Supporting automobile manufacturing with noise reduction

Forging Presses

At Automobile Factories

3 Contributing to production through a range of transportation tasks

Material Handling Systems

At Factories

4 Supporting industry with vanguard technologies

Laser Processing Systems

At Hospitals

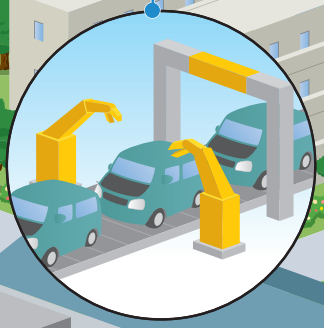
5 Contributing to cancer diagnostics

Cyclotrons for PET

At Underground Parking Lots

20 Contributing to space-saving by storing automobiles underground

Mechanical Parking Garage



At Hospitals

6 Contributing to cutting-edge medical care

Cryogenic Equipment (Cryocoolers) for MRI Systems

At Water-related Plants

7 Contributing to daily life with efficient water purification

Diffusers

Tankers

8 Helping to meet energy demand

Aframax Tankers

For our products that contribute to environmental preservation, see "Contributing to Environmental Protection through Products" on pages 19 to 22.

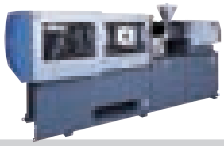
At Construction Sites

19 Helping to build the social infrastructure

Hydraulic Excavators

For Mobile Phones, DVDs and CDs

18 Supporting an affluent lifestyle by precision forming of plastics



Plastic Injection Molding Machines

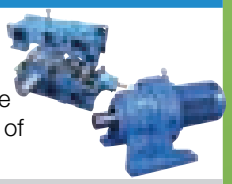
At Oil Refineries

17 Contributing to the effective use of resources by extracting high quality oil from low quality oil

Coke Drums

For Elevators and Escalators

16 Helping society save energy by converting a little power into a lot of power



Speed Reducers • Conveyor Gear Boxes

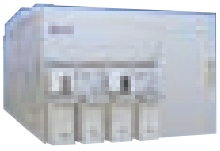
At Semiconductor Factories

15 Helping companies save energy by maintaining clean room temperatures at low power levels

Air Conditioning Equipment

At Semiconductor Factories

14 Making lives more convenient through silicon wafer manufacturing



Ion Implantation System

At the Warehouse

13 Contributing to cargo handling

Forklifts

At the Warehouse

12 Contributing to automation and labor savings in storing and transporting goods at warehouses

Automated Warehouses System

At Shipbuilding Yards

9 Contributing to shipbuilding

Goliath Cranes

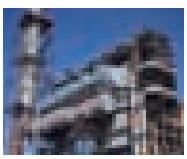
For Power Generating Facilities

10 Supporting affluent lifestyles through highly efficient and stable combustion to generate power

Circulating Fluidized Bed (CFB) Boilers and Steam Turbines

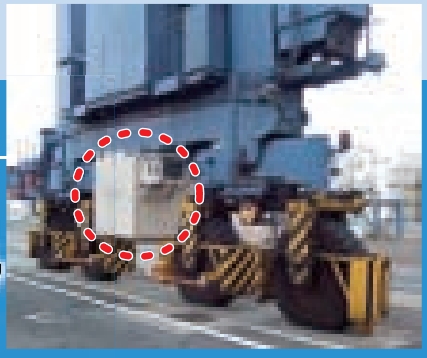
For Power Generating Facilities

11 Contributing to the global environment by treating emissions without water



Dry-type Desulphurization-Denitrification System

CLOSE UP2008



Sumitomo Heavy Industries Engineering Services Co., Ltd.

Recipient of the 29th Award for Excellence in Energy-Saving Machines, the "Chairman's Award" (2008)

Excellence in Energy-Saving Machines

The Sybrid System® hybrid power supply system for transfer cranes has been awarded the 29th Award for Excellence in Energy-Saving Machines, the "Chairman's Award."

Transfer cranes are self-propelled cranes that stack and organize containers at container terminals in harbors and other facilities. The Sybrid System® supports the engine power generator of the crane, using the electricity that is stored when lowering containers for hoisting. As a manufacturer of transportation equipment, we have used technology honed over many years for a product that demonstrates stellar performance for a transfer crane. We have reduced fuel consumption by approximately 60%, while also controlling emission gases and black smoke, markedly improving the environmental performance of container terminals.

The Functions Underlying the Approx. 60% Reduction in Fuel Consumption

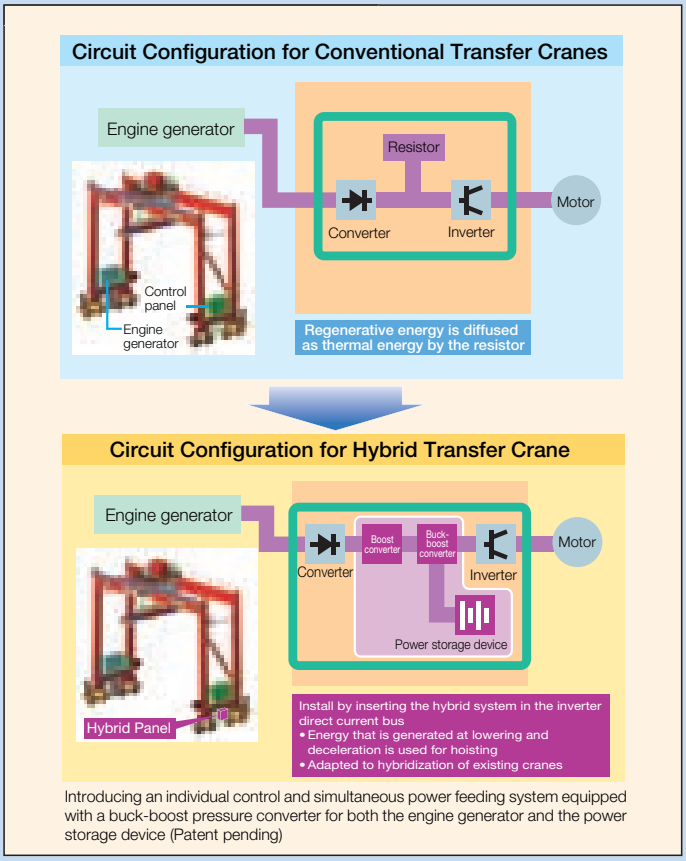
In the past, energy that was generated as a motor resistance when lowering a container was converted to heat by a resistor and diffused.

The Sybrid System® uses the motor as a power generator when lowering containers, storing the generated electricity in lithium-ion batteries. By supplying the energy when hoisting containers, it ensures the job is completed effectively.

This has enabled a reduction in the size of the engine generator, which supplies power to the motor, to one third of the conventional size. As a result, we have reduced fuel consumption by approximately 60% and also slashed emissions.

In addition, a boost converter controls the current that is supplied from the engine generator for accurate control of the current even when there are sudden changes in the load. This has led to substantial reductions in black smoke emissions.

The compact design also allows the system to be mounted on existing cranes made by other manufacturers.



Introducing an individual control and simultaneous power feeding system equipped with a buck-boost pressure converter for both the engine generator and the power storage device (Patent pending)

Contributing to environmental protectio using the One-SHI Synergy Model

In developing our products, the Group uses the synergies between individual departments to achieve harmony between our technologies and environmental protection and to provide top-quality, world-class products.

Lifting Magnets

Circulating Fluidized Bed Boilers

Steam Turbine Electric Generators

Large Speed Reducers for Turbines

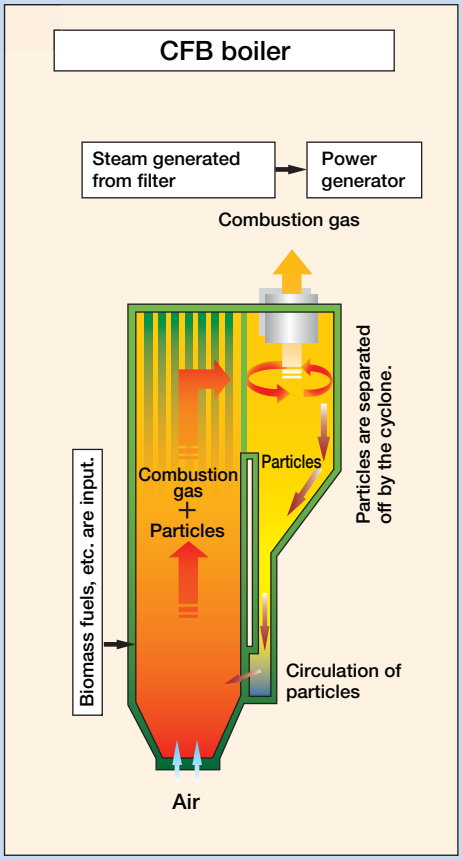
Turbine Blades

Energy & Environment Group

Biomass Power Generators Using Wood Chips and Other Fuels

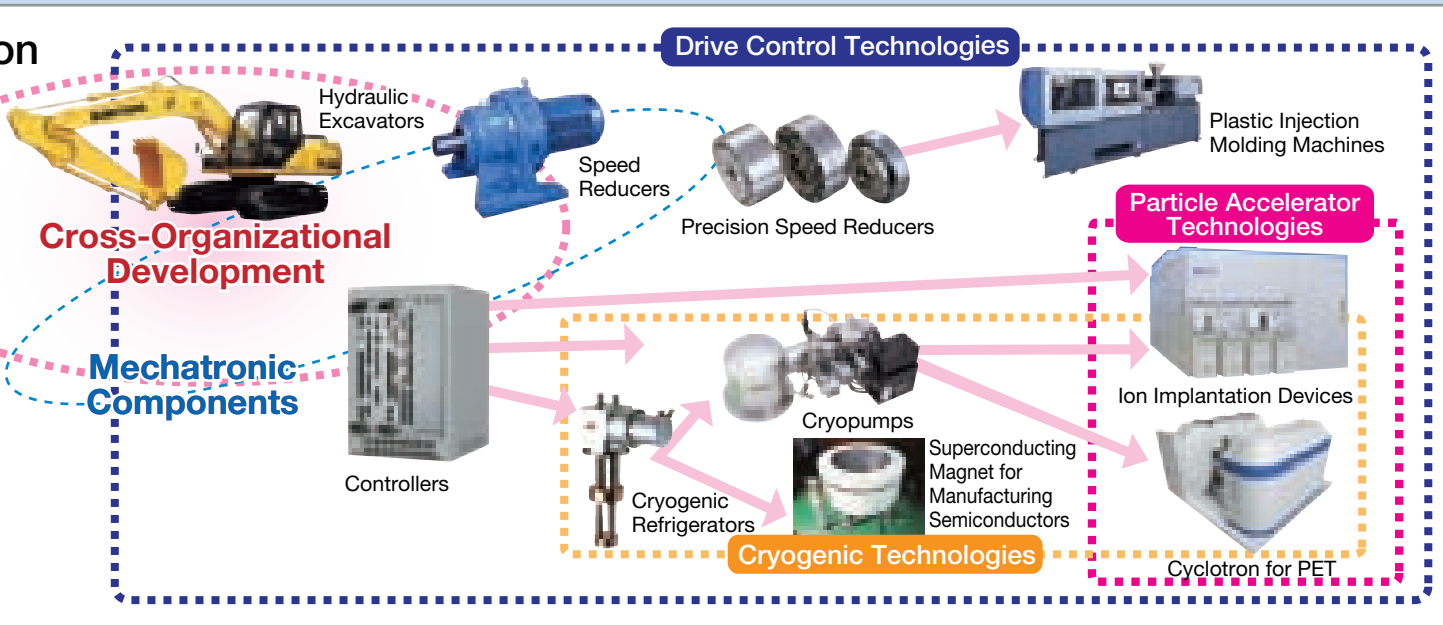
The Circulating Fluidized Bed Boiler Also Adapted to Waste Fuel

Since biomass power generation facilities do not use any coal or other fossil fuels at all, they help by clean power generation to lower CO_2 emissions with the goal of preventing global warming. The Circulating Fluidized Bed (CFB) boiler, the main device, facilitates use of biomass fuels, which in the past presented challenges in terms of efficient and stable combustion. In addition, the boiler is also adapted to burn waste tires and other waste materials instead of fossil fuel, contributing to measures to counter global warming and the effective use of resources.



Mechanism of the combustion

The CFB boiler admits air blown in from the bottom, and combusts a variety of fuels efficiently by homogenously mixing high-temperature particles (consisting of the ash contained in the fuel) with the fuel while they are suspended. In addition, it uses a cyclone to separate off the fuel particles that convect upward with the combustion gas and returns them to the bottom of the boiler, thereby improving combustion efficiency. We have a technical affiliation with Foster Wheeler in the United States, which has the largest market share and the most advanced boiler technology in the world. We apply our own ingenuity to ensure consistent particle circulation and combustion ash discharge.



At Sumitomo Heavy Industries Group, we have been promoting environmental management with awareness that business corporations have social responsibilities for protecting the global environment, for preserving the local environment, and for engaging in economic activities that are oriented toward recycling.

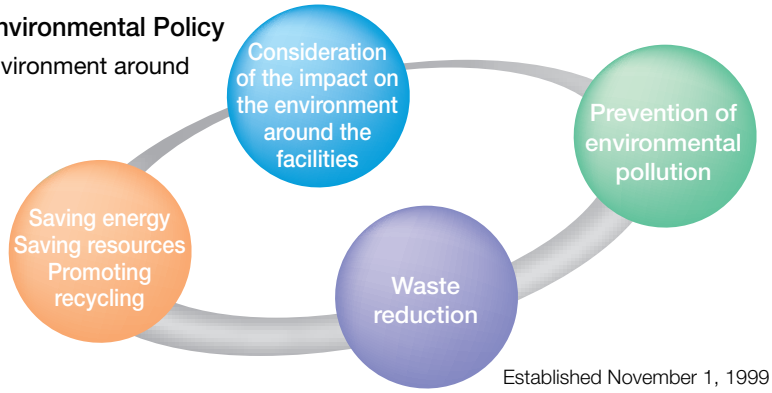
Sumitomo Heavy Industries Group Environmental Policy

The entire Group will take action for environmental preservation to achieve the same objective.

We established the Sumitomo Heavy Industries Environmental Policy in September 1997 as an expansion of the traditional risk management focused on compliance and environmental protection at the community level, thereby making clear our basic policies, including consideration of the environmental impact of our businesses. In addition, in November 1999, we established the Sumitomo Heavy Industries Group Environmental Policy with the entire Group working as one to promote environmental activities and environmental management.

Sumitomo Heavy Industries Group Environmental Policy

- Consideration of the impact on the environment around the facilities
- Prevention of environmental pollution
- Waste reduction
- Saving energy / Saving resources / Promoting recycling



Established November 1, 1999

Environmental Management

We apply issues and goals regarding our products and manufacturing activities to our environmental programs.

The general manager of every works (including Group companies within the works) and the heads of Group companies elsewhere establish environmental policies to gain the trust of each local community, undertaking environmental management that conforms to the ISO14001 standard. Specifically, any and all elements that have potential environmental impact are listed. Then their environmental impacts are evaluated and any applicable legal restrictions are clearly identified. Then we start up the PDCA cycle of setting the goals for environmental activities, planning, enacting, auditing and evaluating environmental programs, and improving management systems. In order to reduce the environmental burden through the products and production activities, and to contribute to environmental protection, we apply the issues and goals about our products and manufacturing activities to the environmental programs to put them into practice. To ensure that our management system is being fully implemented and to facilitate continuous improvement, the Environmental Management Division of the company conducts internal audits, and an external auditing organization conducts audits, once a year, respectively.

At overseas Group companies, we are also trying to reduce the risks to the environment by having the Environmental Management Division carrying out documentation checks and on-site internal environmental audits. In 2008, we carried out internal environmental audits in China, the Philippines and Vietnam.

At present, all principal plants in Japan as well as four overseas plants have obtained the ISO14001 certification. We are pushing for ISO14001 certification at sites overseas in the future.

TOPICS

Environmental Measures Overseas

Sumitomo (SHI) Cyclo Drive Germany GmbH

Albert Hörmann

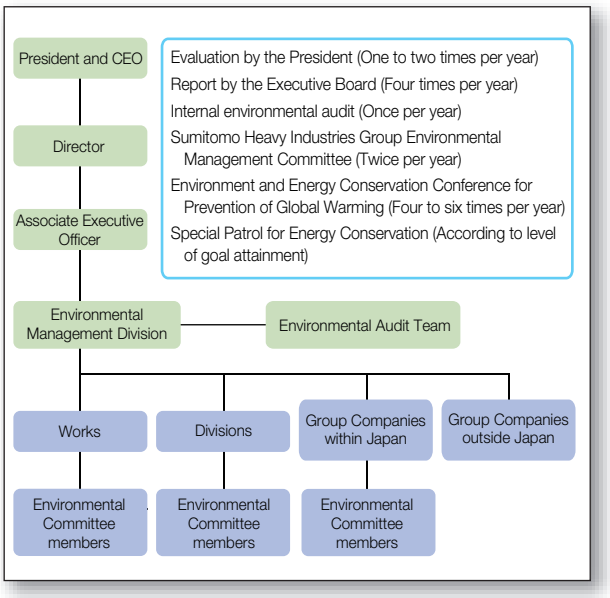
Group Leader, Electrical Maintenance, Manufacturing Division

We obtained the ISO14001 certification in March 2006 and are working to protect the environment. In the past two years, I have worked on two projects for environmental protection. The first one was to reduce the electricity consumed by lighting. We reviewed the areas where lighting is installed, the number of lights and the hours, and reduced the consumption of electricity by approximately 30%. The second task was to reduce the volume of waste by improving product packaging. By using returnable boxes, we reduced the waste volume by 15%. We are also taking other proactive measures such as using environmentally friendly ingredients for detergents. I am proud to be undertaking work that is linked to conserving resources and improving the work environment.

Environmental Management Organization

Establishing the Environmental Management Division and fully expanding the medium-term plan for the environment to the entire group

At Sumitomo Heavy Industries Group, the Environmental Management Division, under the auspices of the General Manager of General Affairs Group, is continually planning, practicing, promoting and auditing environmental management including personnel training at every works and for the Group. In addition, the Division hosts the Environmental Management Committee in order to fully inform and roll out to the entire SHI Group the medium-term environmental plan (the current second medium-term environmental plan was authorized in FY2008). In particular, the SHI Group is positioning activities to prevent global warming as the key issue with every division playing a central role in these activities. Therefore, we support activities to prevent global warming at every division by training experts and through our Environment and Energy Conservation Conferences in every area.



Works and divisions that have received ISO14001 certification and group companies within the scope of certification

Works/Divisions	Group Companies within the Scope of Certification	Date of Certification
Tanashi Works	• Sumiju Plant Engineering Co., Ltd. • Sumiju Business, Ltd. • Sumiju Tokki Service Co., Ltd.	August 1998
Chiba Works	• Sumitomo (S.H.I.) Construction Machinery Co., Ltd. • Kenki Engineering Chiba Co., Ltd. • Hitachi Sumitomo Heavy Industries Construction Crane Co., Ltd. • Sumitomo (S.H.I.) Construction Machinery Sales Co., Ltd.	April 1999
Yokosuka Works	• Sumitomo Heavy Industries Marine & Engineering Co., Ltd. • Sumiju Precision Forging Co., Ltd. • Sumiju Yokosuka Kogyo Co., Ltd. • Environmental Engineering Center of Sumitomo Heavy Industries Environment Co., Ltd.	February 1999
Nagoya Works	• Hitachi Sumitomo Heavy Industries Construction Crane Co., Ltd. • Sumiju Tomida Machinery Co., Ltd. • Sumiju Technos Co., Ltd.	January 1999
Okayama Works	• Sumitomo Heavy Industries Finetech, Ltd.	March 2000
Ehime Works (Niihama Factory)	• Sumitomo Heavy Industries Techno-Fort Co., Ltd. • Sumitomo Heavy Industries Engineering & Services Co., Ltd. • Sumitomo Heavy Industries Himatex Co., Ltd. • Sumiju Plant Engineering Co., Ltd. • Sumiju Techno Craft Co., Ltd.	November 1999
Ehime Works (Saijo Factory)	• SHI Mechanical & Equipment Inc. • SHI Examination & Inspection, Ltd.	February 1999
Energy & Environment Group	• Sumiju Environmental Technology Co., Ltd.	October 2002

Group companies in Japan that have independently received the ISO14001 certification

Group Company	Date of Certification
Sumitomo NACCO Materials Handling Co., Ltd.	March 2000
Shin Nippon Machinery. Co., Ltd.	February 2002
Izumi Food Machinery Co., Ltd.	June 2002
SEN Corporation	October 2002
Sumiju Environmental Engineering Inc.	October 2002
Sumitomo Heavy Industries Environment Co., Ltd.	November 2002
Lightwell Co., Ltd.	February 2005
Nihon Spindle Mfg. Co., Ltd.	March 2006
Japan Electron Beam Irradiation Service Co., Ltd.	January 2007
Sumitomo Heavy Industries PTC Sales Company	September 2007
SFK Co., Ltd.	August 2008

Group companies outside Japan that have independently received the ISO14001 certification

Overseas Group Company	Date of Certification
Sumitomo (SHI) Demag Plastics Machinery GmbH	April 1998
Sumitomo (SHI) Cyclo Drive Germany GmbH	March 2006
Sumitomo (SHI) Cryogenics of Europe, Ltd.	June 2008
Ningbo Sumiju Machinery, Ltd.	September 2008

The Sumitomo Heavy Industries Group has drafted the second medium-term plan that specifies the targets to be achieved by the end of FY2010 and has been continuing with its efforts to reduce the burden on the environment.

Entire View of the Burden on the Environment (Sumitomo Heavy Industries Group)

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

Environmental Accounting for FY2008

We make effective use of environmental accounting for measuring environmental activities as well as a tool for promoting such activities.

Environmental accounting is positioned as one of the tools for measuring environmental activities. Sumitomo Heavy Industries has conducted environmental accounting in accordance with the Environmental Accounting Guidelines, 2005, issued by the Ministry of the Environment. The total cost of environmental protection in FY2008, which includes investment and other costs, reached 2,507 million yen. In addition, FY2008 marked the first time we calculated the economic effect for the Group, which totaled 448 million yen. We will continue to utilize environmental accounting to understand progress in our environmental activities and whether or not advances have been made in research and development of excellent products and services for environmental protection.

Cost of Environmental Protection (Accounting Base: Sumitomo Heavy Industries Group)

Unit: million yen

Category		Details of the main activities and the effects	Investment amount	Costs	Economic effect	Main content
1 Costs within Business Areas (Sites)		Handling or processing water, air, noise, vibration, chemical substances, and waste materials; reducing energy and resource consumption; and recycling materials	739	518	448	
Breakdown	(1) Costs for Preventing Pollution	Renovation of wastewater treatment facilities; implementing measures to collect dust, for handling substances containing volatile organic compounds (VOC), and for removing asbestos; inspections for detecting extremely small PCB content; operation control of water treatment facilities; measuring and analyzing water quality, exhaust gas, noise and vibration; and ensuring compliance with the values stipulated in regulations.	198	248	131	Reducing cost of wastewater treatment
	(2) Costs for Global Environment Protection	Power monitoring, equipment to conserve energy, updated lighting, energy conservation investment, temperature control	539	39	299	Cost reduction with introduction of energy conservation, natural energy
	(3) Resource Recycling Costs	Recycling waste products, including wood, plastic, used paper, oil waste and raw garbage; creating waste yards; regenerating thinner; collection, transportation, processing, and disposal of waste; and implementing steps to reduce the volumes of waste	2	231	18	Reducing landfill by separating rubbish, cost reduction by cutting back on waste
2 Upstream and Downstream Costs		Powder coating; and replacing wooden packages with wire mesh containers (for repeated use)	0	1		
3 Management Activity Costs		Administering and maintaining ISO14001 standards; providing training (general, specialized, screening panel, for internal auditing); monitoring the implementation of action plans; receiving regular screening; expansion and maintenance of green areas; confirmation of PRTR; and measurement of VOC	48	134		
4 Research and Development Costs		Trial design for compact new energy CFB, commercial development of pretreatment facility for tropical biomass, development of high-performance, low-cost, energy-saving water treatment unit, high-efficiency cyclo-reducers, environmental responses, development of energy-saving products	148	919		
5 Environmental Damage Control Costs		Tax levied according to the amount of emissions resulting in air pollution; and cost for creating green areas and compensation for pollution to be assumed by corporations in the respective regions	0	0		
		Total	935	1,572	448	

Unit: million yen

Item	Description	Amount
Total amount of investment made in the period	Renovations of wastewater treatment facilities; installation of dust collection systems; installation of facilities for treating VOC (volatile organic compounds); and investing in energy conservation measures	935
Total cost assumed in the period	Recycling, collecting, transporting, processing and disposing of waste products; inspections for detecting extremely small PCB content; operation control of wastewater treatment facilities; measuring and analyzing water quality, exhaust gas, noise and vibration; administering and maintaining ISO14001 standards; providing training; monitoring the implementation of action plans; and receiving regular screenings	1,572
Total inclusive cost of research and development in the period	Trial design for compact new energy CFB, commercial development of pretreatment facility for tropical biomass, development of high-performance, low-cost, energy-saving water treatment unit, high-efficiency cyclo-reducers, environmental responses, development of energy-saving products	(1,067)
Total cost of environmental protection activities during the period		2,507

Activities in FY2008 — General Overview

We are continually engaging with every aspect of activities to reduce the environmental burden aiming to attain the targets in the second medium-term plan.

We have established the second medium-term plan, which runs from FY2008 and specifies the targets to be achieved by FY2010, and we are promoting activities to reduce the burden on the environment. In particular, in order to contribute to the prevention of global warming, we have set a policy of reducing total CO_2 emissions by 15% from the FY2004 level, achieving our goal of an 11% reduction in FY2008.

In addition to reducing CO_2 emissions, the targets to be achieved include promoting green logistics, reducing the amount of discharged waste, achieving zero emissions, reducing paper usage, reducing water usage, emission controls for organochlorine chemicals (ozone-depleting substances), completely abolishing equipment that uses PCB (polychlorinated biphenyl), increasing the number of ISO14001 certificates maintained, renewed and obtained, and expanding the scope of Consolidated Environmental Management.

Areas where we achieved 70% or more include emission controls of organochlorine chemicals (designated harmful chemical substances under the Soil Contamination Countermeasures Law) and green procurement measures.

Areas where we achieved less than 70% are in reducing the amount of discharged waste and emission controls for VOC designated substances. The Group will work as one to achieve the targets for FY2009.

Index	Item	Second Medium-Term Plan	Plans for FY2008	Achievements in FY2008	Evaluation	Plans for FY2009
Prevention of Global Warming	(1) Reduction in CO_2 emissions at works and offices	Reduction in CO_2 emissions by 15% from the FY2004 level by FY2010	Reduction in CO_2 emissions by 11% from the FY2004 level by FY2008	Reduced CO_2 emissions by 11% from the FY2004 level	◎	Reduction in CO_2 emissions by 13% from the FY2004 level by FY2009
	(2) Promotion of green logistics Reduction in CO_2 emissions in transportation	Target for FY2009: Reduction by 10% per basic unit of transportation compared with the figure for FY2006 as the benchmark.	Reduction by 6% from the FY2006 level	Reduced by 7% from the FY2006 level	◎	Against the FY2006 benchmark, a 10% reduction per basic unit of transportation in FY2009 (1% reduction specified in the Amended Energy Conservation Law)
Promotion of Resource Conservation and Recycling	(1) Reduction in volumes of waste generated and disposed of	• Amount generated in FY2010: 21,000 tons (Down 32% from the FY2001 level) • Amount of disposal: 2,000 tons (Down 77% from the FY2001 level)	• Amount generated: 24,300tons (Down 21% from the FY2001 level) • Amount of disposal: 2,300 tons (Down 74% from the FY2001 level)	• Amount generated: 34,013tons (Up 10% from the FY2001 level) • Amount disposed of: 808 tons (Down 91% from the FY2001 level)	△ ◎	• Amount generated: 24,300 tons (Down 21% from the FY2001 level) • Amount of disposal: 2,300 tons (Down 74% from the FY2001 level)
	(2) Achievement of zero emissions	Attain recycling rate of 95% or more for all divisions by FY2010. Then, aim for zero emissions	Recycling rate of 95% or more (SHI Group average)	Recycling rate of 97.6% 95% or more achieved at 9 bases (6 sites in previous year) (5 bases in previous year)	◎	Group average recycling rate of 98% or more (target exceeds medium-term plan)
	(3) Reduction in paper usage	Reduction by 40% from FY2005 level by 2010	Reduction by 30% from the FY2005 level	Reduced by 33% from the FY2005 level	◎	Reduction by 35% or more from the FY2005 level as the benchmark
	(4) Reduction in water usage	Reduction by 20% from FY2005 level by 2010	Reduction by 15% from the FY2005 level	Reduced by 16% from the FY2005 level	◎	Reduction by 17% or more from the FY2005 level
Promotion of Prevention of Environmental Pollution	(1) Emission control of organochlorine chemicals (Soil Contamination Countermeasures Law, Montreal Protocol)	• Complete abolition of the harmful chemical substances dichloromethane, tetrachloroethylene and trichloroethylene under the Soil Contamination Countermeasures Law by FY2010 • Reduction in ozone depleting substances HCFC-141b, HCFC-225 by 50% or more from the FY2006 level by FY2010	Compared with FY2005 • Dichloromethane reduced by 50%, continued complete abolition of tetrachloroethylene, trichloroethylene reduced by 50% • HCFC-141b, HCFC-225 both reduced by 30%	Compared with FY2005 • Dichloromethane reduced by 66%, tetrachloroethylene completely abolished, trichloroethylene reduced by 8.5% • HCFC-141b reduced by 44.5%, HCFC-225 completely abolished	○ ◎	• Dichloromethane, trichloroethylene reduced by 75% or more from 2005 level, continued complete abolition of tetrachloroethylene • Ozone depleting substance HCFC-141b reduced by 50% or more, continued complete abolition of HCFC-225
	(2) Emission control of substances designated as VOC (Air Pollution Control Law)	Controlled emission of painting solvents, mainly toluene, xylene, and ethylbenzen. Reduction by at least 30% from the FY2006 level to be achieved by FY2010	Reduction in emissions of 3 substances by 15% from the FY2006 level	Reduced by 7% from the FY2006 level	△	Reduction in emissions of 3 substances by 15% or more from the FY2006 level
	(3) Total abolition of equipment that uses PCB (Law Concerning Special Measures Against PCB Waste)	Total prohibition of use	• Complete early registration of equipment with high concentration of PCB • Investigation continuing for equipment with a low concentration of PCBs	• Complete early registration of equipment with high concentration of PCB • Investigation continuing for equipment with a low concentration of PCBs	◎	• Complete early registration with the Japan Environmental Safety Corporation of equipment with high concentration of PCB. Dispose of appropriately after receipt of disposal notice • For equipment that has a low concentration of PCBs, investigation will continue in accordance with the plan.
Expansion of Line-up of Environmentally Friendly Products	Promotion of measures for green procurement (purchase of raw materials and components)	Respond to customers' requests by guaranteeing that shipped products do not contain prohibited substances. Have the suppliers guarantee that the products they deliver do not contain prohibited substances.	Continue in accordance with the Green Procurement Guidelines	Continued in accordance with the Green Procurement Guidelines	○	Continue in accordance with the Green Procurement Guidelines
Environmental Management	(1) Maintenance and updating of ISO14001	Zero environmental accidents (legal violations)	Zero environmental accidents (legal violations)	Zero number of environmental accidents (legal violations)	◎	Continue zero number of environmental accidents (legal violations)
	(2) Increase in the number of ISO14001 certifications	Plan and push for obtainment by Group companies including overseas	Push preparations for obtainment by Group companies	One overseas company, one company in Japan obtained certification	◎	Plan and push for two affiliated companies in Japan to obtain certification
	(3) Expansion of the scope of the Consolidated Environmental Management	Conduct audits and research into the risk associated with the principal overseas manufacturing bases to avoid risks and to promote measures for environmental activities.	Audits at 6 principal overseas manufacturing bases (including China)	Audits at 6 principal overseas manufacturing bases (including China)	◎	Conduct audits and research into the risk associated with the principal overseas manufacturing bases, including China, to avoid risks and to promote measures for environmental activities

Evaluation: ◎ Achieved ○ Achieved by 70% or more △ Achieved by less than 70%

In its business activities, including procurement, manufacturing and logistics, Sumitomo Heavy Industries Group has been taking measures to reduce CO_2 emissions by positioning it as the most important issue.

Reduction in CO_2 emissions

2008 was the first year of the commitment period of the Kyoto Protocol. Over the five-year period from FY2008 to FY2012, Japan is committed to cutting emissions of greenhouse gases to 6% below the level for the benchmark year, FY1990.

As of FY2005, we tackled the "Sumitomo Heavy Industries Group 1st Global Warming Prevention Activities" to reduce CO_2 emissions by 10% from 2004 level by FY2007. In FY2008, we started the "Sumitomo Heavy Industries Group 2nd Global Warming Prevention Activities" with the target of reducing CO_2 emissions by 15% from 2004 level by FY2010. This target value represents a reduction of 25% compared to the level for the benchmark year of FY1990 in the Kyoto Protocol.

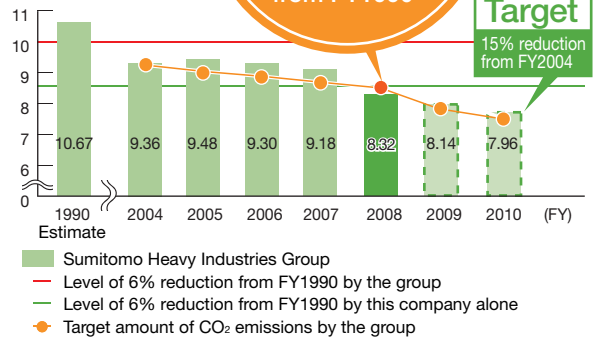
In FY 2008, the entire Sumitomo Heavy Industries Group emitted 83,200 tons of CO_2. This is an 11% reduction compared to our base year, FY2004, so we have achieved our target reduction of 11% for this fiscal year. In terms of the benchmark year of the Kyoto Protocol, FY 1990, this figure represents a reduction of 22%. We have been able to control CO_2 emissions to a degree that far exceeds Japan's 6% commitment target.

On the other hand, if we look at CO_2 emissions from the perspective of emissions from power consumption and fuel, overall emissions of CO_2 have decreased but emissions from fuel have been increasing since FY2004.

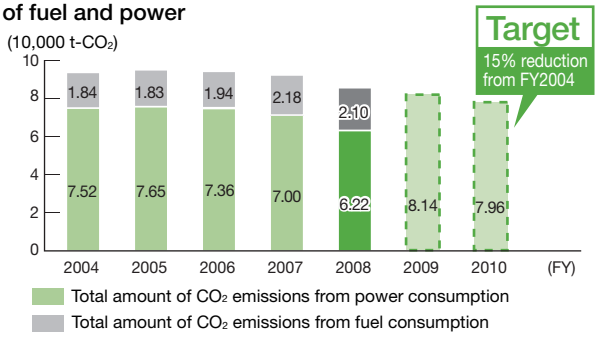
The reason is that at the time of launching activities to prevent global warming, the Group first focused on power consumption, which accounts for 80% of our energy consumption. Therefore, we have made steady reductions in power consumption by renewing facilities, undertaking investments to conserve energy, and raising awareness of the conservation of electricity among all employees across the Group. However, the reduction of fuel consumption has been turned into an increase due to the surge in operating paint drying furnace and heat-treating furnaces in step with growing production. In the future, we will make efforts to reduce the consumption of fuel by making thorough improvements to operational procedures.

22% reduction from FY1990

CO_2 emissions



CO_2 emissions through the consumption of fuel and power



Our target for FY2009 is a 13% reduction in overall amounts compared to FY2004 and to achieve the target, we are taking further measures to conserve energy.

Further, the target for the Japan Society of Industrial Machinery Manufacturers (JSIM), which participates in the Voluntary Action Plan of the Japan Federation of Economic Organization, is to reduce emissions by 12.2% from FY1997 level by FY2010. The Sumitomo Heavy Industries Group has also achieved this target value.

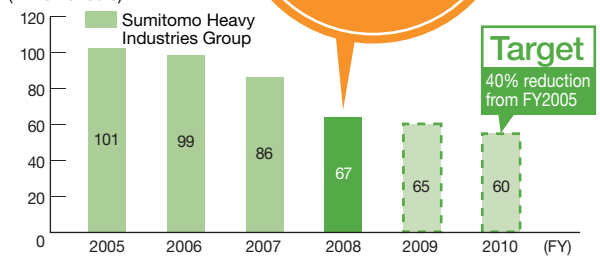
Efforts to reduce paper usage

Reducing paper use is part of the resource-saving activities and contributes to the prevention of global warming by reducing CO_2 emissions. Our group set a target of reducing paper usage by 30% from the FY2005 level by FY2008. In FY2008, we exceeded the target with a reduction of 33% from the level for FY2005.

In the second medium-term plan, we have set a 40% reduction target for FY2010 against the FY2005 level. In FY2009, we are working toward a target of 35% compared to FY2005.

33% reduction from FY2005

Paper usage (A4 paper equivalent)



Promotion of green logistics


Using ships in a modal shift

In transportation, we have been making efforts to reduce CO_2 emissions by eliminating waste and by improving efficiency. With FY2006 as the benchmark, we are currently aiming to achieve a 10% reduction in the basic unit of transportation (t-CO_2/t) in the three-year period ending FY2009. In FY2008, we achieved a reduction of 7%, exceeding the 6% reduction target compared to the FY2006 level. We are working to achieve the targets for the final year of FY2009 by strengthening countermeasures such as improved loading ratios, modal shifts and efficient transportation planning.

7% reduction from FY2006

Green logistics
(CO_2 emissions: Basic unit)

Promotion of the Lifecycle Assessment

Reduce the environmental burden at all stages from procurement to use and disposal

In order to reduce the burden on the environment through product development and production activities, the Sumitomo Heavy Industries Group is committed to making products that are lower in energy consumption, lighter in weight and smaller in size. To further reduce the burden on the environment, it is necessary to reduce the burden at every stage, from procurement to use and disposal.

We have drawn up the environmentally friendly "Sumitomo Heavy Industries Group Green Procurement Guidelines" to continue our efforts to ensure green procurement. To further reduce the environmental burden of our products, we are pushing to expand the products that are subject to Lifecycle Assessment* to lighten the impact on the environment.

*Lifecycle Assessment: A method of objective and quantitative evaluation of environmental impact throughout the lifecycle (all stages from extracting the resources to manufacturing, use, disposal and transportation) of products and services

Environmental activities in the office departments

We are also working on a range of initiatives away from the manufacturing departments

At Sumitomo Heavy Industries Group, we act to prevent global warming not only in the manufacturing departments but also at the works offices, the head office, branch offices and sales offices. We implement measures such as temperature control through Cool Biz and Warm Biz and curtail fluorescent lighting by measuring lighting intensity in some offices.

In addition, using double displays for design work is linked to increased efficiency, shorter working hours and energy savings. At the same time, this also cuts back on printing and thus reduces the amount of paper used.


Using two displays for design work

TOPICS

Yokosuka Works is awarded the Kanagawa New Energy Award

The Yokosuka Works were awarded the Kanagawa New Energy Award for the introduction of a system for generating solar power. With the goal of encouraging the introduction of new energy, this award commends individuals, corporations and organizations, who have undertaken outstanding initiatives in new energy use by utilizing solar power generation, solar heat or biomass energy in Kanagawa Prefecture. In the future, we will continue to take a proactive approach to the prevention of global warming.

TOPICS

The Niihama Factory receives the Shikoku Bureau of Economy, Trade and Industry Award

The Niihama Factory has been recognized for its outstanding energy management and given the Shikoku Bureau of Economy, Trade and Industry Award. This award is presented to factories that provide models for energy management.

The factory was highly commended for its past activities to prevent global warming. As a result, all employees at the factory are pulling together and redoubling their efforts to conserve energy.

To establish a society based on recycling, the staff at Sumitomo Heavy Industries Group recycle and make effective use of waste generated through the Group's business activities and control the volume created. We also take action to reduce the burden on the environment through our business activities.

Measures for reducing the environmental burden

Appropriate managing waste generated by business activities

Establishing a society based on recycling is essential for ensuring the sustainable development of society. We manage our waste by classification into the three categories shown at right. We aim to reduce the volume of waste generated through our business activities and put more emphasis on improving the recycling of waste. We also take action to reduce the burden on the environment by setting specific goals.

Results of our initiatives in FY2008

Control of waste generated and reduction in the volume of waste discarded

The volume of waste discarded was 34,013 tons. We sought to reduce the volume of scrap metal and other waste through more efficient production activities and the elimination of waste. However, a significant increase in production volume prevented us from achieving the target with the level of waste increasing far beyond the 24,300 tons target figure, which is 21% below the FY2001 level.

However, in terms of the volume of waste disposal, the target of a 77% reduction from the FY2001 level (2,000 tons or less) by 2010 was comfortably reached at 808 tons, a 91% decrease from the FY2001 level, and a 66% decrease from the figure of 2,381 tons of the preceding financial year. The main reasons for the success were greater efforts to separate waste and the increased recycling of waste casting sand, waste paint, sludge, waste plastic and waste alkaline that have presented difficulties in terms of recycling in the past.

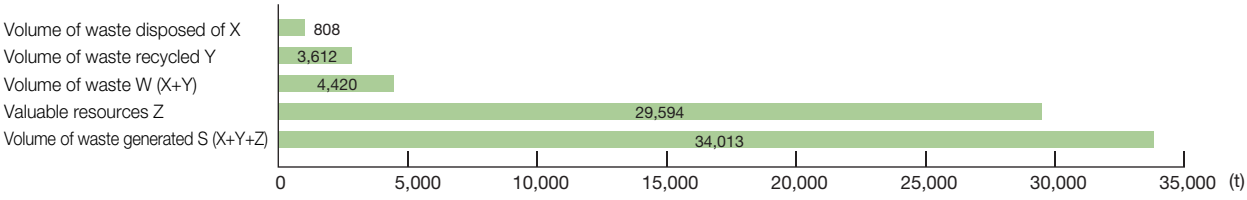
Regarding the attainment of zero emissions —improving the recycling rate

The target for recycling rates is to achieve a recycling rate of 95% across all departments by FY2010.

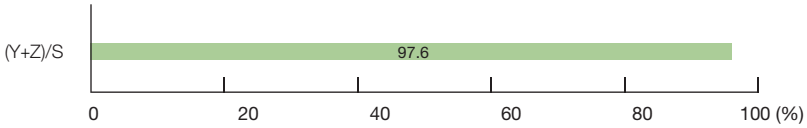
With recycling rates rising every year since FY2001, the rate of 97.6% for FY2008 was a remarkable improvement on the 93% of FY2007. The number of departments achieving a recycling rate of 95% or higher grew from six departments in FY2007 to nine departments.

Raising the target value for FY2009, we are working to achieve a recycling rate of 98% or higher across the Group as a whole. To do so, we need to press even harder for a full separation of waste. The departments that achieved a recycling rate of 95% or higher in FY2008 are also aiming to achieve zero emissions.

Volume of waste generated in FY2008

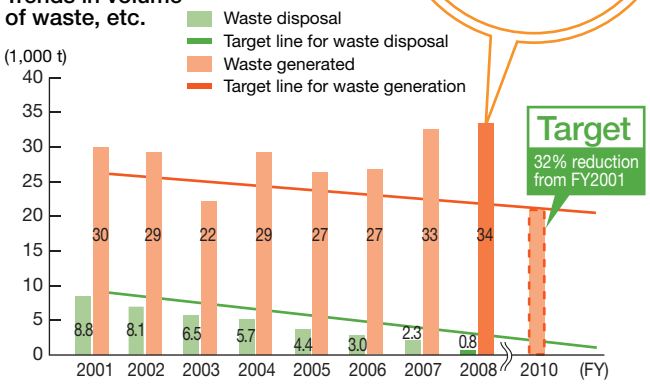


Recycling rate



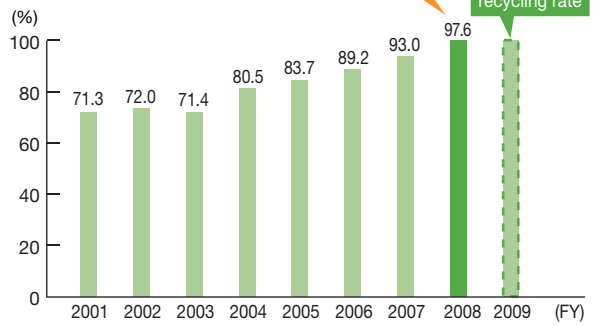
10% increase over FY2001

Trends in volume of waste, etc.



Recycling rates 97.6% achieved

Trends in the recycling rates

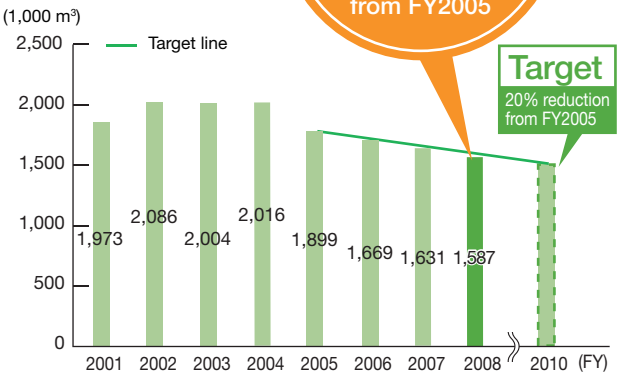


Reduction in water use

Aiming to reduce the volume of water used is not only a matter of protecting resources but it is also linked to reducing discharge into public water systems. We have set ourselves the target of achieving a 20% reduction from FY2005 level by FY2010. In FY2008, we made solid progress with the elimination of leaks that wasted water through the visual installation (aboveground installation) of water pipes. As a result, we achieved a 16% reduction from the FY2005 level and we are working toward a reduction of 17% in FY2009.

16% reduction from FY2005

Trends in water use



TOPICS

Using collection boxes to improve recycling rates

At the Yokosuka Works, waste collection points have been installed at 55 locations and the number of collection boxes is as high as 550. The method of collection is based on lists of 18 broad categories with a further breakdown of approximately 80 subcategories. Metal scraps alone are classified into 10 subcategories.

Detailed separation and collection increases the resource value, which is linked to improved recycling rates. The recycling rate at the Yokosuka Works is 99.6%.

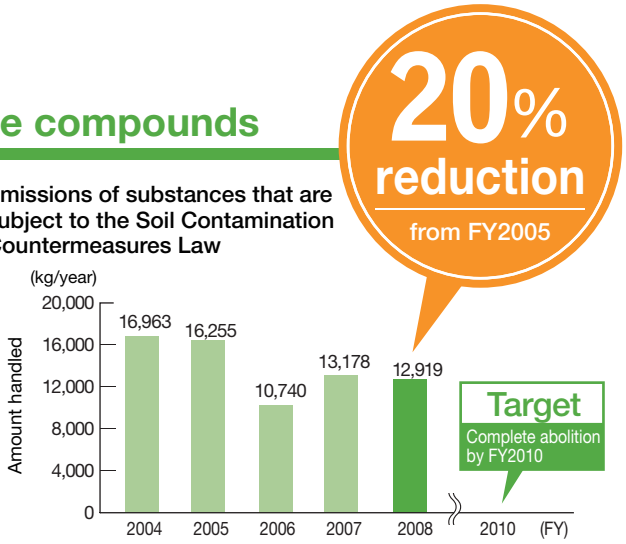
To prevent environmental pollution, we focus on the following four issues for the effective management of chemical substances.

Emission control of organic chlorine compounds

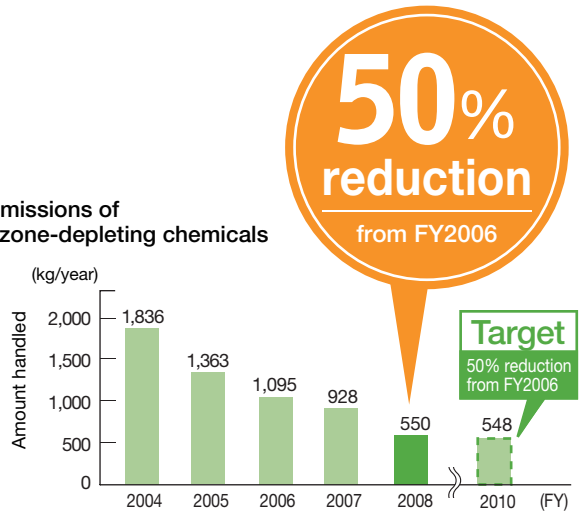
(1) We have set a goal of completely eliminating by FY2010 the use of dichloromethane, tetrachloroethylene and trichloroethylene, which are organochemical substances subject to the Soil Contamination Countermeasures Law. In FY2008, the total reduction for these three substances was 20% compared to the level in FY2005. By substance, the achievement breaks down as follows: dichloromethane was reduced by 66% from FY2005 level, surpassing the 56% reduction from FY2005 level in FY2007. The replacement of tetrachloroethylene with alternative substances remained on track and we achieved our goal of eliminating its use entirely. The 8.5% reduction in trichloroethylene was a vast improvement on the 30% increase from the FY2005 level in FY2007. Aiming to achieve our targets, we will also switch from dichloromethane and trichloroethylene to alternative substances as soon as possible.

(2) We have set a goal of reducing our emissions of the ozone-depleting chemicals, HCFC-141b and HCFC-225, by 50% by FY2010 compared to the level in FY2006 as the benchmark. In FY2008, we reduced the total for both substances by 50% from the FY2006 level, outperforming the 15% reduction over FY2006 level in FY2007. We aim for further reductions and to achieve our goals at an early stage by introducing alternative substances.

Emissions of substances that are subject to the Soil Contamination Countermeasures Law



Emissions of ozone-depleting chemicals

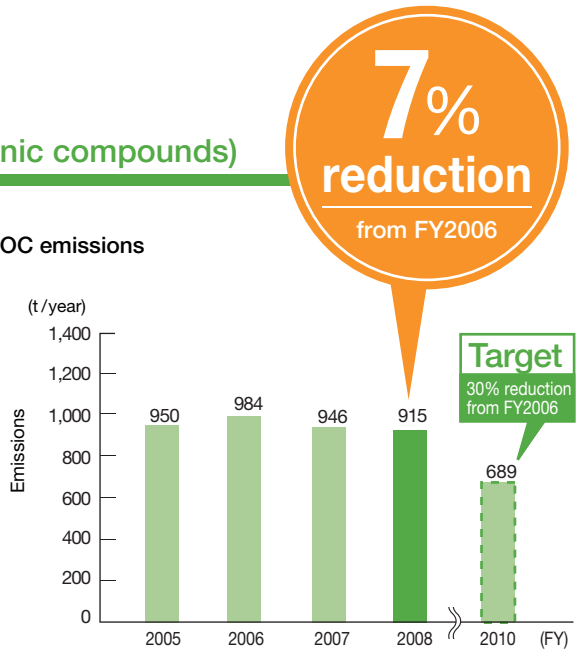


Emission control of VOC (volatile organic compounds)

Toluene, xylene and ethylbenzene in paint solvents account for close to 90% of the VOC we use. Our goal is to reduce emissions of these chemicals by at least 30% by FY2010 compared with the level in FY2006.

We have made progress with the reductions thanks to the introduction of solvent collection and removal equipment at our large-scale paint facilities, which are subject to legal controls. As a result, we saw reductions of approximately 7% compared to the level in FY2006. Measures to control VOC emissions in FY2009 continue on from FY2008 with the operation of solvent collection and removal equipment, expansion of powder paint, and the adoption of low-solvent paints to control emissions.

VOC emissions

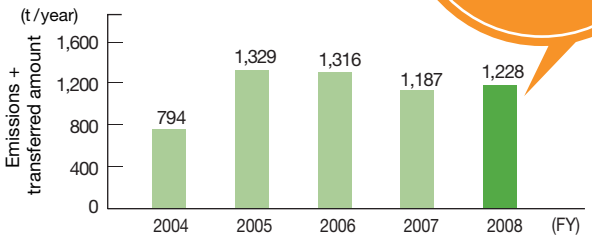


Reducing emissions and transfer of PRTR substances

7% reduction from FY2006

About 90% of the PRTR substances we use are paint (epoxy resin) and its solvents (toluene, xylene and ethylbenzene). In FY2008, we reduced these substances by 7% of the level in FY2006. We will continue to expand the use of low-solvent paint while ensuring that we maintain the quality of our products. We will also install and expand solvent collection and removal equipment to reduce the emission and transfer of PRTR substances.

PRTR substance emissions and the amount transferred



Total amount reported in FY2008

(Unit: kg)

Chemical No.	Principal chemical substances	Emissions + transferred amount
30	Bisphenol A epoxy resin	82,585
40	Ethylbenzene	238,074
43	Ethylene glycol	60,297
63	Xylene	567,632
68	Chrome and trivalent chrome compound	428
132	1,1-Dichloro-1-fluoroethane	550
145	Dichloromethane	455
177	Styrene	2,203
200	Tetrachloroethylene	1
211	Trichloroethylene	11,713
227	Toluene	229,604
230	Lead and its compounds	1,243
231	Nickel	127
304	Boron and its compounds	6,906
311	Manganese and its compounds	17,177
346	Molybdenum and its compounds	41

Management of PCB and total abolition of equipment containing PCB

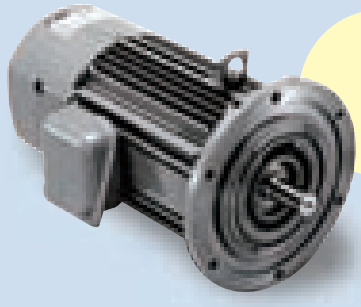
Investigations into equipment with high PCB concentrations have been completed. In FY2009, we aim to complete work for equipment with low PCB concentrations.

We have completed registration of all equipment with high PCB concentrations with the processing company, Japan Environmental Safety Corporation. We will complete investigations of equipment with low PCB concentration in FY2009 and we are taking systematic measures to be able to process them as soon as possible thereafter. We plan to abolish the use of stabilizers and transformers containing PCB for lighting equipment by FY2010.

Storing transformers containing minute amount of PCB

External view of PCB storage warehouse

Contributing to Environmental Protection through Products



Power Transmission and Control Group
Adoption of High-Grade Magnetic Steel Sheets
High-Efficiency Motor

This type of motor is widely used to drive a range of equipment, such as factory lines and industrial robots.
It reduces power consumption by making improvements to the winding design and by using high-grade magnetic steel sheets.

Energy Conservation

Power Transmission and Control Group
Adopting Environmentally Friendly Parts
Compact Gear Motors
(Hyponic Gear Motor, Altax®NEO, Prest®NEO, Astero®)

These compact motors equipped with reduction gears and used to drive conveyors, food processing machines, packaging machines and assistive products with a capacity in the range of 2.5W to 15kW are compatible with standard specifications in the RoHS directive, made to be environmentally friendly and safe.

Environmentally Friendly

Plastics Machinery Division
Reduced Power Consumption
Electrically Powered Plastic Injection Molding Machine

In this machine that produces plastic products by pouring molten plastic into a mold and shaping it, the electric drive system replacing the hydraulic drive realizes substantial reductions in power consumption.

Energy Conservation

Quantum Equipment Division
Downsizing Equipment
Ultra-Compact Cyclotron (HM-7) for Production of Labeled Compounds for PET Diagnosis

The device produces the pharmacological agent (labeled compound) for PET (Positron Emission Tomography) examinations, one type of cancer diagnosis. Being about half the size of conventional units, it helps reduce the power consumption and the generation of waste at hospitals.

Energy Conservation

Precision Equipment Group
Reduced Power Consumption
SICERA® Cryopump

Ultrahigh vacuum pump used in semiconductor production processes and other applications that reduces power consumption by separately optimizing and operating multiple cryopumps and the minimum number of compressors.

Energy Conservation

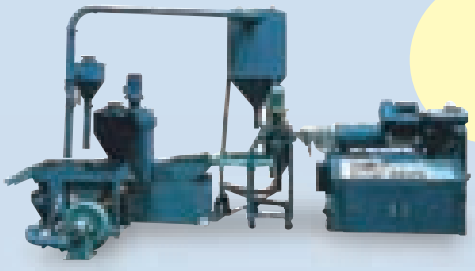
Mechatronics Division

Applicable to a Wider Range of Products

Semiconductor Encapsulating System

This device encapsulates semiconductor IC chips using resin, preventing the resin from entering culls and runners, reducing waste generated at molding.

Environmentally Friendly



Sumitomo Heavy Industries Modern, Ltd.

Helps Reduce Waste

Pelletizing Recycling System

This system re-pelletizes the mill ends generated in plastic film production and other processes to recycle them into raw materials, reducing waste by reusing mill ends and defective products.

Environmentally Friendly

SEN Corporation

Adoption of Energy-Conserving Equipment

Ion Implantation System

This device implants ion on silicon wafers in semiconductor production processes, implementing lower voltage and lower power consumption of semiconductor components by tracking rapid progress in semiconductor technologies.

Energy Conservation

Sumitomo NACCO Materials Handling Co., Ltd.

Contributing to Energy Conservation by Adopting an Electronically Controlled Engine

Forklifts with Gasoline and LPG Engines

Compliant with exhaust gas controls, the forklift is enabled for an electronically-controlled speed limit device. Combining use with the optional speed limit device contributes to energy conservation by reducing acceleration irregularities and controlling speed.

Energy Conservation

Sumitomo Heavy Industries HIMATEX Co., Ltd.

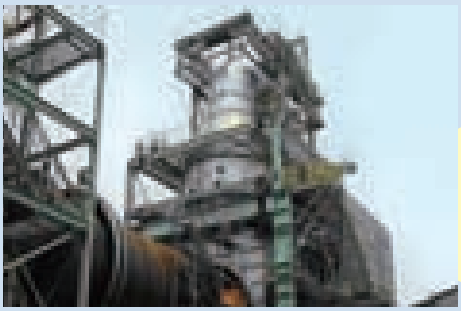
High-Performance Roll That Conserves Resources and Energy

Centrifugally Cast High-Speed Roll

A mill roll used in iron-making.
The use of different materials for the outer shell layer and inner core ensures wear resistance and economic efficiency at the same time.

Energy Conservation

Contributing to Environmental Protection through Products



Energy and Environment Group

Recovering Valuable Metals from Industrial Waste

Sumitomo W+E Rotary Kilns

These facilities for recycling industrial waste through high-temperature processing (to collect metals and turn them into pellets) contribute to reducing the burden on the environment by recycling industrial waste.

Environmentally Friendly

Energy and Environment Group

Contributes to Processing SOx, NOx and Dioxins in Exhaust Gas

Dry-type Desulphurization-Denitrification System

This exhaust gas treatment facility uses a movable active-charcoal bed to treat SOx, NOx, dioxin, dust, mercury, etc.
Sulfur, nitrate, and dioxin can be eliminated by a single facility, thereby making it possible to reduce energy consumption compared with conventional facilities.

Environmentally Friendly

Energy Conservation

Sumitomo Heavy Industries Environment Co., Ltd.

Facilitating CO_2 Reduction Effect and Biogas Recovery

SAT Low-Concentration Anaerobic Wastewater Treatment Facility

This is a facility for purifying wastewater discharged by factories. With approximately 40% less motive energy and approximately 60% less sludge than conventional facilities, the reaction vessel, whose volume is reduced by half, also makes a contribution to better space efficiency.

Environmentally Friendly

Energy Conservation

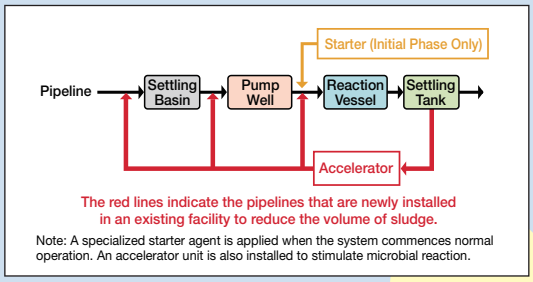
Sumitomo Heavy Industries Environment Co., Ltd.

Superior Diffusion Performance Enables Energy Conservation

Micrus® Superfine-bubble membrane tube

This equipment diffuses ultrafine air bubbles into factory effluent and sewage to provide efficient purification of wastewater.
There are an energy-conserving effect of a superior diffusion performance and a cost reduction effect due to simple maintenance.

Energy Conservation



Sumiju Environmental Engineering Inc.

40% or More Reduction in the Annual Sludge Output

Dires® Sludge Reduction System

A system that controls excess sludge discharged from effluent treatment facilities through the use of microorganisms.
This system significantly reduces initial costs and running costs compared to conventional mechanical systems or systems that use chemicals.

Energy Conservation

Sumiju Plant Engineering Co., Ltd.

Highly Effective in Conserving Energy

Pre-evaporator

This is a plate-type falling-liquid-film evaporator that pre-concentrates black liquid generated in the production of pulp.
The unit generates heat from exhaust fumes instead of steam from a boiler. This ensures superior energy conservation and reduces CO_2 emissions.

Environmentally Friendly | Energy Conservation

Steel Structure and Process Equipment Division

Effective Use of Petroleum Resources

Coke Drum

This equipment is used in the oil refining process. It pyrolyzes heavy oil to collect valuable light oil such as gasoline.
This unit converts heavy oil, now limited in use, into light oil.

Environmentally Friendly

Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

Energy Conservation, Effect of 20% Improvement in Fuel Efficiency and CO_2 Reduction, Reduced Running Cost

Magnet Specifications for Another 20% Improvement in Fuel Efficiency of the Hydraulic Excavator Awarded the 2007 Grand Prize for Energy Conservation
Magnet Specification of LEGEST® Hybrid, the World's First Hydraulic Excavators

The magnet specification machine is primarily used for scrap work where frequent swiveling action recovers energy, making the model suitable for hybrid development.

Environmentally Friendly | Energy Conservation

Sumitomo Heavy Industries Techno-Fort Co., Ltd.

Low Noise, Reduced Maintenance Cost

Wet Clutch and Brake for Forging Presses

This clutch and brake unit for activating and stopping the rotary shaft ensures 10% less noise value than air-driven and dry units. The airless operation also reduces running costs.

Environmentally Friendly | Energy Conservation

Shin Nippon Machinery Co., Ltd.

Reduce CO_2 by Generating Renewable Energy

Steam Turbine for Private Power Generation

Used to generate renewable energy (power generation fueled by renewable energy) with the aim of reducing CO_2

Environmentally Friendly

Nihon Spindle Mfg. Co., Ltd.

Lower Running Cost

Kurieko II

An air-conditioning control system that is able to keep the temperature within ±1°C and the humidity within ±5% of the set values.
With a superior control system, this system reduces power consumption by 60% compared to conventional systems.

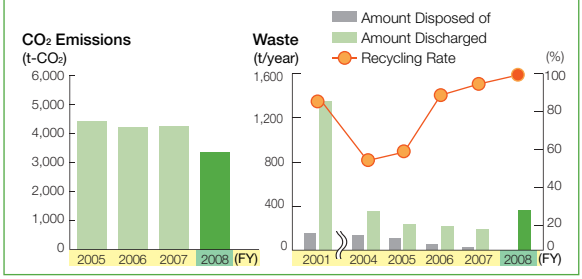
Energy Conservation

Environmental impact data for SHI works (including Group companies within the works), Group companies in Japan (away from SHI works) as well as the main overseas Group companies

Environmental impact data for each works

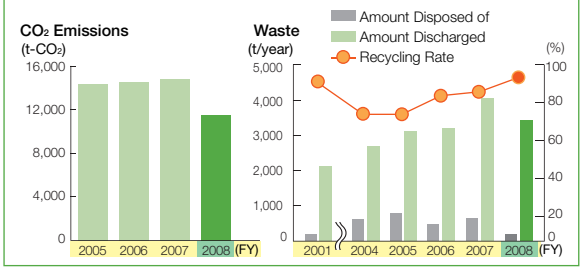
Tanashi Works

- Established in 1939
- ISO14001 (obtained in August 1998)
- Site Area: 43,218 m²
- Building Area: 14,368 m²
- Main Products: Cryogenic Equipment, Defense Equipment



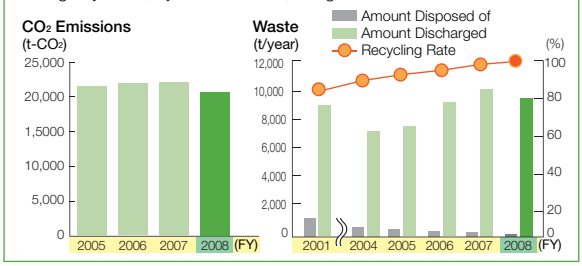
Chiba Works

- Established in 1965
- ISO14001 (obtained in April 1999)
- Site Area: 294,600 m²
- Building Area: 61,630 m²
- Main Products: Plastic Injection Molding Machines, Metallic Molds, Construction Machines



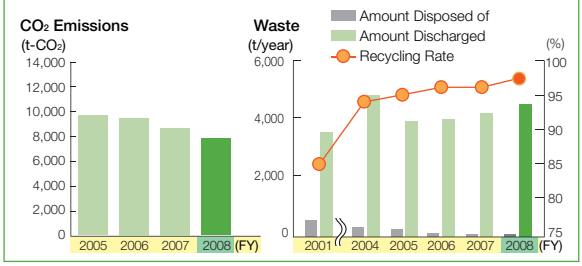
Yokosuka Works

- Established in 1971
- ISO14001 (obtained in March 1999)
- Site Area: 523,000 m²
- Building Area: 170,572 m²
- Main Products: Ships, Laser Processing Systems, Semiconductor Manufacturing Equipment (Molding Equipment), Precision Forgings, Stage Systems, System Controller, Bridges & Steel Structures



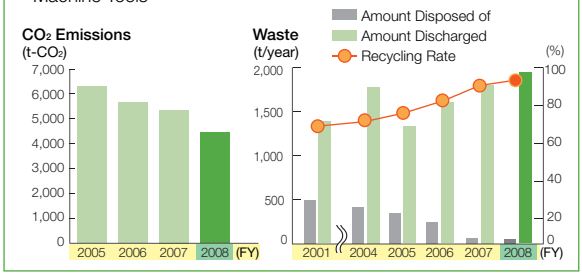
Nagoya Works

- Established in 1961
- ISO14001 (obtained in January 1999)
- Site Area: 293,000 m²
- Building Area: 90,000 m²
- Main Products: Power Transmission and Control, Geared Motors, Inverters, Construction Machines



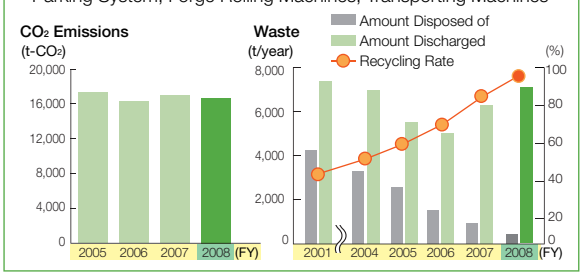
Okayama Works

- Established in 1948
- ISO14001 (obtained in March 2000)
- Site Area: 425,000 m²
- Building Area: 94,000 m²
- Main Products: Small Gear Motors, Gearboxes, Stage Systems, Machine Tools



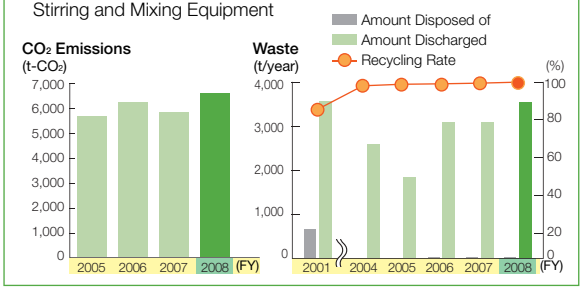
Ehime Works (Niihama Factory)

- Established in 1888
- ISO14001 (obtained in November 1999)
- Site Area: 418,000 m²
- Building Area: 200,000 m²
- Main Products: Ion Accelerators, Coating Equipment, Parking System, Forge Rolling Machines, Transporting Machines



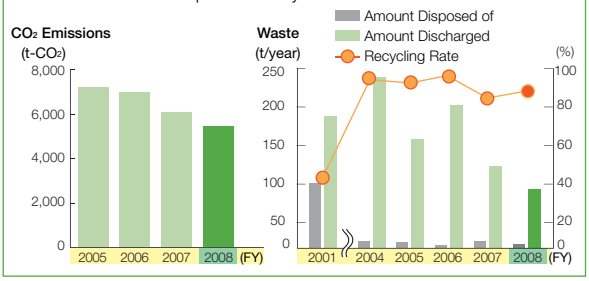
Ehime Works (Saijo Factory)

- Established in 1973
- ISO14001 (obtained in February 1999)
- Site Area: 535,000 m²
- Building Area: 58,341 m²
- Main Products: Bridges & Steel Structures, Pressure Vessels, Stirring and Mixing Equipment

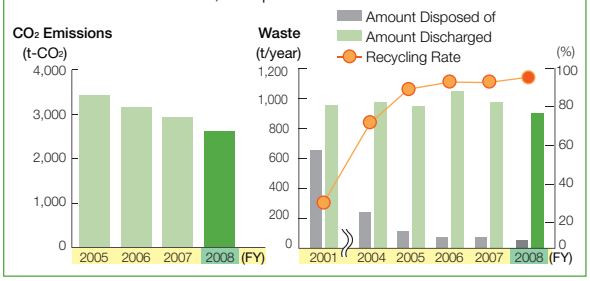


Environmental impact data for Group companies in Japan (away from the works)

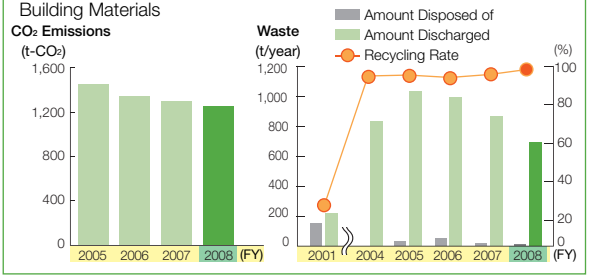
SEN Corporation
Main Products: Ion Implantation Systems



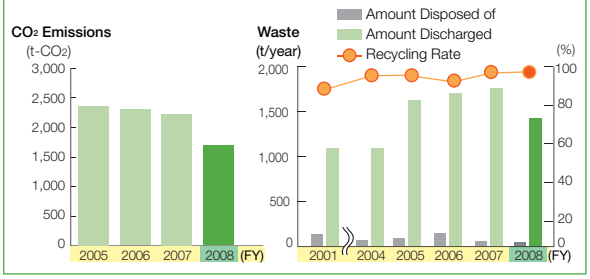
Shin Nippon Machinery Co., Ltd.
Main Products: Turbines, Pumps



Nihon Spindle Mfg. Co., Ltd.
Main Products: Industrial Instruments, Environmental Equipment, Building Materials

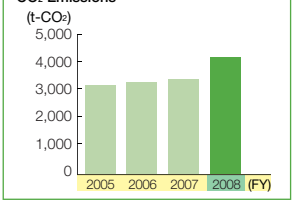


Sumitomo NACCO Materials Handling Co., Ltd.
Main Products: Forklifts

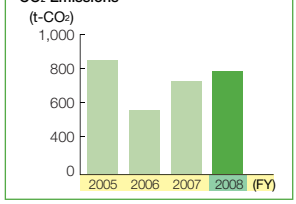


Environmental impact data for main overseas Group companies

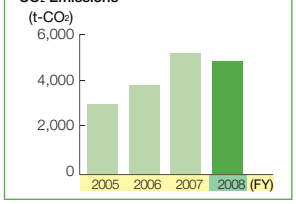
Sumitomo (SHI) Cyclo Drive China, Ltd.
Country: China
Main Products: Power transmission equipment



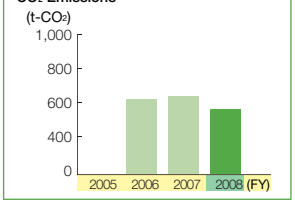
Sumitomo (SHI) Cyclo Drive Logistics, Ltd.
Country: China
Main Products: Power transmission equipment



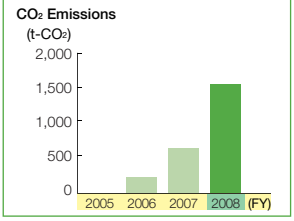
Ningbo Sumiju Machinery, Ltd.
Country: China
Main Products: Components for plastic molding machines



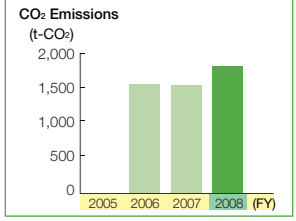
SHI Manufacturing & Services (Philippines) Inc.
Country: The Philippines
Main Products: Precision Components



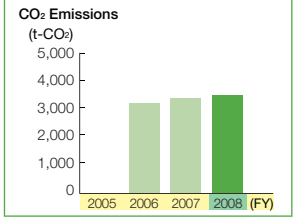
Sumitomo Heavy Industries (Vietnam) Co., Ltd.
Country: Vietnam
Main Products: Motors for power transmission equipment



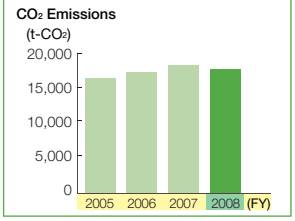
Sumitomo (SHI) Cyclo Drive Germany GmbH
Country: Germany
Main Products: Power transmission equipment



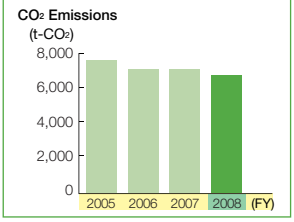
Sumitomo Machinery Corporation of America
Country: United States
Main Products: Power transmission equipment



Link-Belt Construction Equipment Company
Country: United States
Main Products: Construction machinery



Sumitomo (SHI) Demag Plastics Machinery
Country: Germany
Main Products: Plastic molding machines



Each division and company in the Sumitomo Heavy Industries Group aims to establish itself in the local community. Each employee takes the initiative in planning and implementing activities for contributing to the community.

Social Contribution Activities

Biodiversity Measures

Working to conserve the natural environment at the site of the Tanashi Works

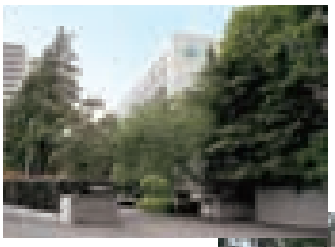
The Group always strives to avoid risks to the environment including the air, water and soil to contribute to the conservation of biodiversity, as well as to maintain and expand green areas.

At the Tanashi Works, we are protecting the Musashino forest, which occupies about 30% of the 43,000 m^2 site area. A part of it has been named the "Forest of Inspiration" and is open to the general public. At 4,600 m^2 the forest occupies more than 10% of the site for the works and harbors 40 or more species of trees and countless grasses, and it is frequently visited by wild birds and insects.

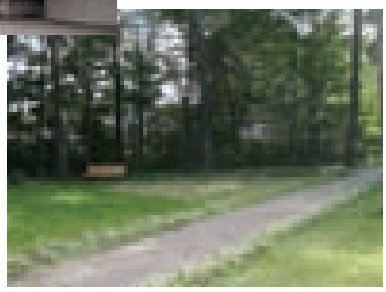
In the Forest of Inspiration, we have in consultation with the government installed rainwater infiltration pipes, which return rainwater to the ground. In the past, most of the rainwater was released into a nearby river via existing storm water drains. As a result, there was potential for land subsidence to occur in connection with the drop in groundwater levels. Local residential areas suffer from floods due to unexpected local heavy rainfall, which is attributable to global warming, a global environmental problem.

By installing rainwater infiltration pipes, we aim to conserve the natural environment by preventing the depletion of groundwater and reducing the risk for land subsidence.

The Forest of Inspiration offers benches and wheelchair-accessible walking trails, creating a welcoming atmosphere for everyone. Fallen leaves are collected for composting as part of the agricultural courses sponsored by community centers in Nishi-Tokyo City, and acorns are collected by nursery school children. Chestnuts collected within the grounds are provided to the locally organized Jomon no Mori Autumn Festival to make cookies.

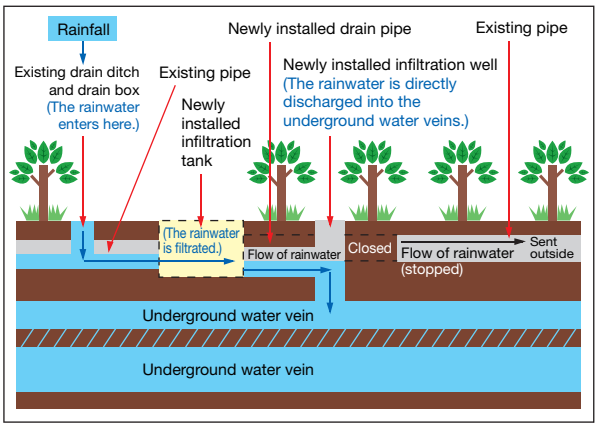


Tanashi Works



Forest of Inspiration

Rainwater Infiltration Pipes Laid Underground



Chestnuts collected in the grounds

Local Traffic Safety Measures

Organizing Lectures and Classes

As a member of the local traffic safety association, the Sumitomo Heavy Industries Group participates in traffic safety campaigns. We also request the cooperation of forwarding companies entering and leaving the factory. We also organize lectures in all areas to raise awareness of traffic safety among company employees.

At the Yokosuka Works, we held classes in collaboration with the local police station to improve motorcycle driving skills.

The Nagoya Works and Sumitomo NACCO Materials Handling Co., Ltd. proactively cooperate with local traffic safety campaigns by periodically undertaking traffic monitoring duties.

Monitoring traffic (Okayama Works)

Motorcycle classes (Yokosuka Works)

Monitoring traffic (Nagoya Works)

Cooperation with Blood Donation Drives

The Group as a Whole Cooperates with Blood Donation Drives

The Sumitomo Heavy Industries Group has collaborated with blood donation drives for many years and for the employees, this has become a fixture as the most familiar contribution activity. In FY2008, a total of 1,074 individuals donated blood.

In the future, the Group will continue its blood donation activities in order to save precious lives.

Giving blood (Yokosuka Works)

Workshop for Assisting Wheelchair Users on Buses

Organizing Workshop in Providing Assistance to Wheelchair Users Boarding Buses

The Yokosuka Works is represented on the board of directors for the Council of Social Welfare in Yokosuka City. As part of this activity, we planned and organized a workshop with the purpose of enabling passengers to assist the driver and user when people in wheelchairs get on and off public buses.

When boarding a bus with a wheelchair, it takes about ten minutes to install the ramp and secure the wheelchair with handrails and dedicated hooks after boarding the bus. All participants reaffirmed the necessity for cooperation after confirming that the time will be shortened and boarding will go smoothly if passengers are able to cooperate.

Wheelchair-accessible bus workshop (Yokosuka Works)

Communication with Local Communities

Work Experience and Visits to the Works

Receiving Students for Work Experience and Factory Tours

The Group receives local young people for work experience and for tours of the factories.

For the students, the experience at the works is their first taste of working, something they cannot experience at school, and they take it very seriously. In FY2008, we accepted 740 students from 82 schools for work experience and tours.

We will continue to accept students while paying careful attention to safety to raise understanding and interest in manufacturing among many members of the young generation.

Work experience at Okayama Works

Work experience at Shin Nippon Machinery Co., Ltd.

Supplies to Welfare Facilities

Providing Cardboard, Electric Cable and Aluminum Cans

The Tanashi Works supplies used cardboard to Work Center Yume no Ki, a social welfare facility in Kodaira City.

The Yokosuka Works provides electric cable ends from shipbuilding and empty cans from its offices and dormitories to Kagamida-en, a support facility for intellectually disabled people in Yokosuka City.

At the facility, the cable covering is removed and the wire at the core extracted, the aluminum cans are flattened in a press and both materials are sold as valuable resources with proceeds going toward operating the facility.

Working at Kagamida-en

A thank you note

Factory Tours for Parents and Children during the Summer Holidays

Cooperating with Yokosuka City on Factory Tours for Parents and Children in the Summer Holidays

The Yokosuka Works are cooperating with Yokosuka City on factory tours for parents and children in the summer holidays, which aim to create an understanding and interest in the works. Aimed at the upper grades of elementary school, we organize tours for parents and children who normally do not have the opportunity to visit a factory.

Participants in the factory tour for parents and children in the summer holidays

Displays at the Environmental Exhibit

We Provide Children with a Place to Learn about the Environment through Displays at the Environmental Exhibit

Sumitomo Heavy Industries Environment Co., Ltd. provides children, who participate in locally sponsored environmental exhibits, a place for learning about the water-related environment of rivers. We will continue the activities into the future to convey to children the importance of protecting the environment.

A learning corner at an environmental exhibit

Displaying and Selling Local Products at Summer Evening Festivals

Tanashi Works Organizes Displays and Sales of Local Products from Kashiwazaki City

Our works sponsor summer evening festivals or summer festivals for engaging in exchange with local people.

At the Tanashi Works, we organized a summer evening festival where we sold local products from Kashiwazaki City, which suffered damage in the Niigata Chuetsu Offshore Earthquake. The products enjoyed a roaring trade and were completely sold out.

Selling local products (Tanashi Works)

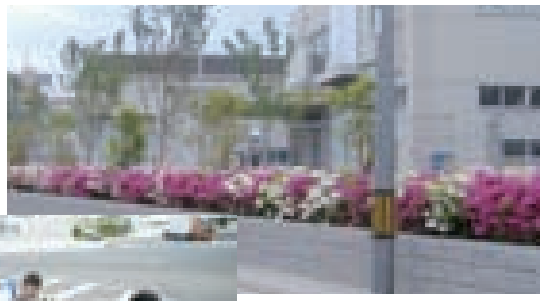
Beautification and Cleanup Activities

Creating Green Spaces around the Factory

Making a Green Wall

Nihon Spindle Mfg. Co., Ltd. demolished the concrete wall on the perimeter of the factory, installing flower beds and green spaces. Using flowers and greenery brightened the atmosphere, which is linked to ensuring safety for commuting.

At the Niihama factory, flower beds were installed for annual planting, providing not only visitors to the works but local people with something that is pleasing to the eye.



The green fence (Nihon Spindle Mfg.)

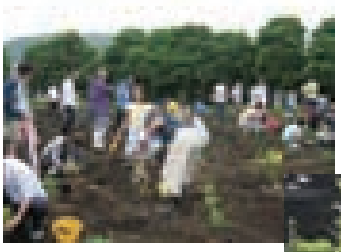
Planting flowers at the factory (Niihama factory)

Planting and Raising Trees around the Factory

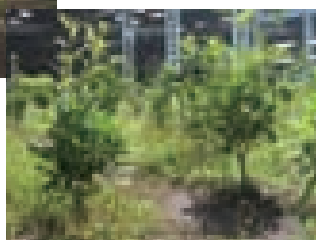
Creating Beautiful Views around the Factory and Planting Trees on the Factory Premises

The Sumitomo Heavy Industries Group is working on creating green spaces by planting trees and flowers in order to make the area around the works more beautiful.

The Yokosuka Works cooperated with the local Association for Creating a 1000 Year Forest to plant 2,200 saplings of trees that grow in the city on the factory premises during a tour of the works for parents and children. The saplings, which were tagged with the names of the family that planted them, are growing well.



Planting trees during a tour of the Yokosuka Works for parents and children



The growing trees

Participating in Neighborhood Cleanup Activities

In 2008 We Also Cooperated with Local Residents on Cleanup Activities

The Sumitomo Heavy Industries Group is tackling cleanup activities. The main activities are cleanup events organized by local municipalities where we participate together with local residents, and cleanup activities in the vicinity of the works.

The Saijo Factory and SEN Corporation participated in the Refresh Setouchi event to clean up Takasu Beach organized by the Saijo City Maritime Promotion Association. Counting this year, the event was organized for the 17th time. Takasu Beach is the only remaining natural sand beach in Saijo City. Families and groups collected the rubbish washed up on the 1.5 km long sandy beach.

Cleanup activity (Niihama Factory)

Cleanup activity (Chiba Works)

Cleanup activity at Takasu Beach (Saijo Factory, SEN)

Efforts at Overseas Group Companies

Efforts at Overseas Factories

Accepting Visits from Local People

Since production started in April 2009, Sumitomo Heavy Industries (Tangshan), Ltd. in Tangshan, Hebei Province, China, has been accepting visits from many ordinary people as well as the provincial government, the municipal government, the Kaiping county government and schools.

Through the factory visits, we facilitate communication and act as a new member of the local community.

Factory tour (Sumitomo Heavy Industries (Tangshan), Ltd.)

Tree Planting at Overseas Factories

Planting Trees with the Aim of Friendship between Companies and Raising Environmental Awareness among Employees

Located in the Philippines, SHI Manufacturing & Services (Philippines) Inc. joined forces with other Japanese corporations in the same industrial park to plant trees. The aim of the tree-planting activity was to make a contribution to the local community and, at the same time, raise employee awareness of the environment through the work, and to create friendships between the companies.

The employees were a little bewildered by their first tree-planting event but the activities finished with the employees smiling and looking forward to the next event.

Tree planting activity (SHI Manufacturing & Services (Philippines) Inc.)

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