



Environmental activities of the Hitachi Cable Group

The Hitachi Cable Group established “Environmental Protection Action Guidelines” in 1993 and has promoted environmental protection activities since then. In 2005, the Group newly established “Action Guidelines for Environmental Conservation,” made an environmental action plan based on the Guidelines, and has promoted environmental conservation activities.

Hitachi Cable Group’s Action Guidelines for Environmental Conservation

Purpose

In order to realize an environmentally harmonious and sustainable society through products and services, the Hitachi Cable Group is committed to meeting its social responsibilities by promoting globally-applicable “MONOZUKURI” (designing, manufacturing or repairing of products), which is aimed at reducing environmental burdens of products throughout their entire life cycles, ensuring environmental conservation.

Action Guidelines

1 Realization of a sustainable society

Global environmental conservation is a critical challenge shared by all humans. We are committed, therefore, to fulfilling its responsibilities by assisting in the realization of an environmentally harmonious and sustainable society as one of its management priorities.

2 Contributing to society by developing technologies and production processes

We will make efforts to contribute to society by developing highly reliable technologies and production processes, while identifying needs considering concerns related to global environmental conservation and limited resources.

3 Responsibilities of members of the board and departments responsible for environmental conservation

Members of the board in charge of environmental conservation are responsible for facilitating appropriate environmental conservation activities. Departments responsible for environmental conservation should endeavor to promote and ensure environmental conservation activities, including improving environment-related rules and regulations and setting goals for environmental burden reduction. These departments should also confirm that their environmental conservation

activities are conducted in a proper manner and ensure that these activities are maintained and improved.

4 MONOZUKURI to reduce environmental loads

We will promote globally applicable “MONOZUKURI” with the aim of reducing environmental burdens at every stage, including product research and development, design, production, distribution, sales, usage and final disposal.

5 Initiatives to reduce environmental burdens

We will investigate and review the environmental impact caused in the course of its “MONOZUKURI” processes. Hitachi Cable will also introduce excellent technologies and materials useful to safeguard the environment, in other words, to reduce environmental burdens through energy and resource saving, chemical substance management, recycling, and other measures.

6 Observation of environmental regulations

Our environmental conservation efforts are not only to be focused on observing international environmental regulations and those of national and local governments, but also on conserving the environment by implementing voluntary environmental standards when necessary.

7 Meeting local community's requests

Regarding globally-applicable MONOZUKURI activities, impact on the local environment and community are to be considered. In addition, measures that meet local communities' requests should be implemented.

8 Employee education

We will educate its employees on the observance of environment related laws, raise their environmental awareness and encourage their interest in society at large and broad-based environmental conservation activities.

9 Prevention of environmental problems

We will evaluate potential environmental problems and prevent them from occurring. In the event that any environmental problem occurs, Hitachi Cable will take appropriate measures to minimize the impact on the environment.

10 Communications with stakeholders

We will make efforts to disclose information on its environmental conservation activities to its relevant stakeholders. We will also actively communicate with these stakeholders so as to strengthen mutual understanding and forge cooperative relationships with them.

Established in April 2005



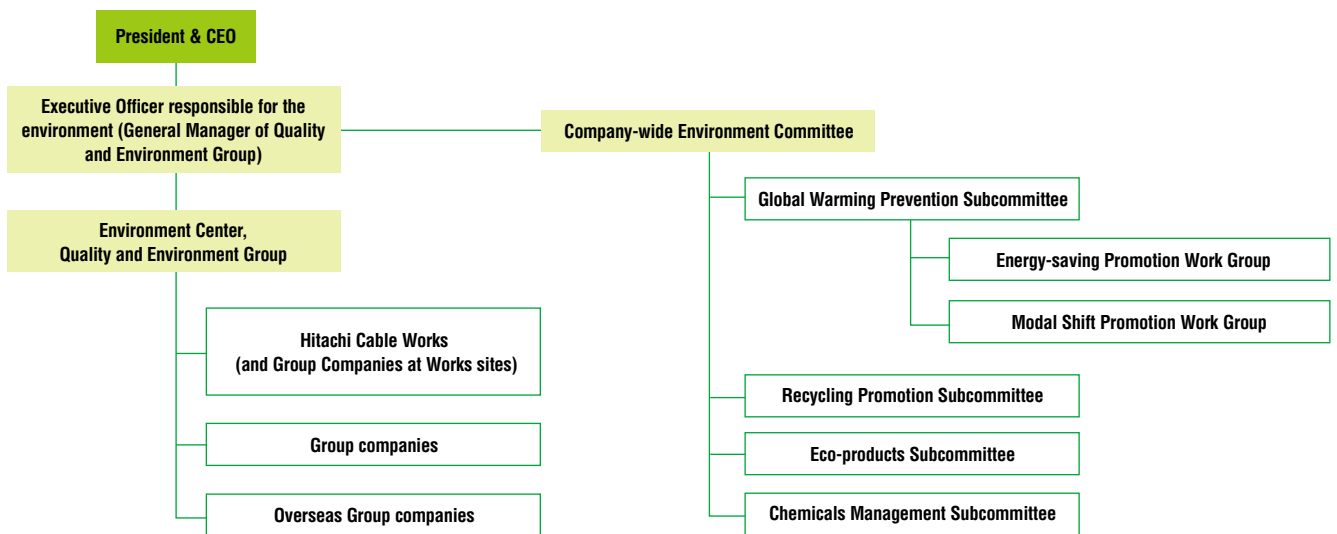
Environmental Management Status

Environmental management structure

Hitachi Cable has established a Company-wide Environmental Committee and its subcommittees to prepare plans for the Group's environmental actions, to review and evaluate achievements, to study possible improvements, to discuss common challenges, etc. Based on the Action Guidelines for Environmental Conservation, each Works and Group companies promote

environmental improvement activities by each unit of certification of ISO14001 Environmental Management System. The Hitachi Cable Group further established the Environment Center in Quality and Environment Group for the Group-wide environmental management, and the Center communicate action policies and information to the Works and the Group companies and

sum up achievements through environmental activities. The Environment Center is also a part of the certification for ISO14001 environmental management system, under the Hitachi Group Environmental Promotion Mechanism and plays a role to carry out departmental activities in accordance with the environmental management policy of the entire Hitachi Group.



ISO 14001-certification status

All the production sites of Hitachi Cable, domestic Group companies and affiliates have ISO14001 environmental management system certification. Among all the domestic Group companies and affiliates including non-manufacturing companies, Hitachi Cable Trading Ltd., a sales subsidiary, has obtained this certification, resulting in a total nine

certified companies in the Group. For overseas Group companies and affiliates, Densen Works of Hitachi Cable (Suzhou) Co., Ltd, Thai Hitachi Enamel Wire Co., Ltd, Suzhou Hitachi Cable Precision Co., Ltd, and Hitachi Cable UK, Ltd. newly won the certification, and a total of 18 sites are now certified.

The "Hitachi Group Environmental

Operation Organization," an integrated organization of environmental protection promotion departments of Hitachi Group companies is also ISO14001 certified, and at Hitachi Cable, the Environment Center is subject to the certification.

Hitachi Cable and Group Companies at Work sites

Number of certificates	Number of certified Hitachi Cable sites	Number of Group Companies at Work sites
3	6*	9

*:With the exception of Misawa Works

Hitachi Cable Group and affiliated companies

Number of certificates	
Domestic	Overseas
9	18

Hitachi Group Environmental Operation Organization Range of certification

Certified department in Hitachi Cable	Departments in the Hitachi Group
Hitachi's Corporate Environmental Policy Division and Environmental Management	Environment Center, Corporate Quality and Environment Group

Environmental Management Evaluation System, GREEN21 Ver 3

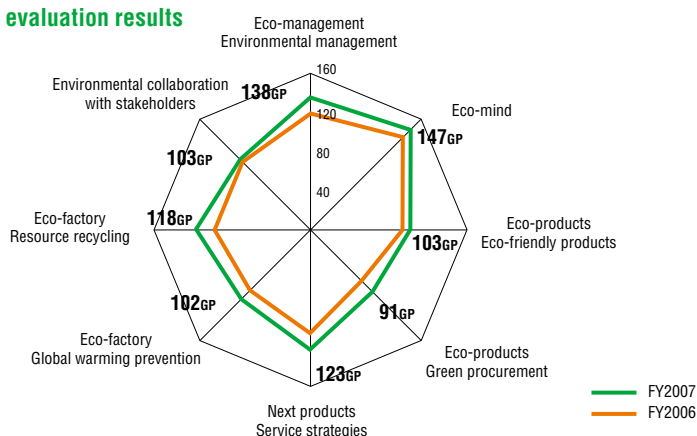
Based on an evaluation system for environmental measures, GREEN21 Ver. 3, the Hitachi Group promotes its evaluation activities. For “GREEN21 Ver 3” kicked off in the fiscal year 2006, 640 Green Points (GP) achieved in Ver 2 activities are taken as a reference, and Ver 3 aims to achieve an environmental management level of 1,280 GP in the fiscal year 2010.

In the fiscal year 2007, the result was 925 GP, exceeding our target of 896 GP, accounting for 99GP improvement from the environmental management level evaluation of 826GP in FY2006. However, when looking at individual categories, the scores for environmental-conscious products, green procurement and global warming

prevention turned out to be low in FY2007 again, and environmental collaborations with stakeholders remained on the level equivalent to that of FY2006. It is our challenge to raise the level of scores by expanding eco-friendly

products, carefully putting measures against global warming into practice, and support for an expansion of community environmental activities in which employees participate.

Green Point evaluation results



Categories and evaluation items

Category	Major evaluation items
Eco-management: environmental management	Action plans, environmental accounting, compliance with laws and regulations
Eco-mind	Environmental education of employees
Eco-products: eco friendly products	Eco-design management, environmental-conscious products
Eco-products: green procurement	Green procurement
Next generation products: service strategies	Eco-products strategies, sustainable business models
Eco-factory: global warming prevention	Energy-saving at factories, energy-saving transportation
Eco-factory: resource recycling	Waste reduction, chemicals management
Environmental collaboration with stakeholders	Information disclosure, global citizen activities

Compliance status of environmental laws and regulations

In the fiscal year 2007, one instruction was given in the Hitachi Cable Group. As a result of water quality analysis during a regular in-plant sewage inspection of Tsuchiura Works by the Tsuchiura City municipal government, it turned out that the content of nitrogen slightly exceeded 60mg/litter of the wastewater standards specified in the Tsuchiura City Sewage Ordinance. The cause of the trouble was that during a cold period in winter, we applied a rather larger amount of chemicals to remove phosphorus subject to regulation together with nitrogen,

but this actually had a negative impact on nitrogen removal. As a countermeasure, we reviewed the amount of chemicals applied and specified a control condition that can satisfy both nitrogen and phosphorus standards. No other violations of regulations were found.

We also received a complaint from a local

resident concerning building demolition work during a holiday period at Hitaka Works. As the content of the complaint was the noise on a holiday, we immediately stopped work as the countermeasure and changed to a weekday, which was duly accepted by the resident.

Number of instructions and complaints

Category	FY2005	FY2006	FY2007
Instructions	1	2	1
Complaints	1	1	1



Environmental education

We conduct environmental education to share global warming and many other environmental challenges as well as promote awareness and concrete action by employees for global environmental conservation. Education is based on “environmental e-learning,” which is provided to all employees and updated every year as well as introductory and explanatory articles through publications for employees and their families. 3,965 employees finished the 2007 version of the environmental e-learning course. For professional education, we offer professional courses directly related to operations, and for function-based education, an educational

system available with environmental literacy necessary for each function. For employees of overseas Group companies, we offer



Explanatory session of the Environmental Principles of the Hitachi Cable Group (Suzhou Hitachi Cable Precision Co., Ltd., China)

opportunities to directly communicate the Environmental Principles of the Hitachi Cable Group for awareness raising.

Category	Name of education
Position-based education	Manager and supervisor education Planning staff education Education for newly employed
Professional education	Environmental-related professional education Specified operation staff education Auditor education
General education	Internet education (environmental e-learning) Environmental policy presentations Environmental lectures Publication for employees and their families

Environmental auditing

We audit environmental management to check the compliance status of manufacturing sites and conduct on-site surveys. In FY2007, environmental auditing was conducted at three domestic and overseas manufacturing sites, and we confirmed that there were no significant problems.

Additionally, we audit the environmental management result report that sums up the results in FY2007 to confirm compliance, identifying one case of exceeding wastewater standards specified in a city sewage ordinance and two cases of exceeding voluntary control values, and confirmed that countermeasures had been take for each case.

At the same time, we also study and review the results of internal auditing based

on individual units of ISO14001 certification in terms of mechanism. Through these auditing and checking processes, we check and confirm compliance, risk management and systems throughout the Group.



Environmental audit for works (PHCP, Inc., Philippines)

Category	Description	
Environmental auditing (on-site survey)	Subject	3 works in FY2007 subject
Results of auditing the environmental management result report	Subject	14 works
	Exceeds ordinance regulation value	1 case
	Non-compliance with voluntary control standards	2 cases
Management result report Results of internal auditing based on ISO14001	Subject	14 works 169 units
	Non-compliance	3 cases
	Correction required	96 cases

Risk checkups at works

At individual works, risk checkups are conducted in order to confirm the safety of facilities (environmental facilities) that cause concern about the effects on the environment in case of trouble. Regarding such facilities as fuel storage tanks, chemical solution storage tanks, chemical storage rooms, facilities using

chemical solutions, exhaust gas cleaning towers, and high-pressure gas facilities, we inspect the actual conditions of facilities and promote necessary improvements in order to minimize effects in case of assumed natural disasters, accidents or operational mistakes.



Environmental facilities risk checkup (Hitaka Works)

Environmental accounting

Shown below is the current status of the costs of environmental conservation activities performed at Hitachi Cable Group's domestic sites as well as the economic and environmental conservation effects. The scale of the total environmental conservation costs increased by 3% compared with that of the previous year.

The main reason being the increase in R&D costs of eco-friendly products toward resource- and energy-saving when compared with that of FY2006.

In relation to investments, following FY2006, we took measures to convert fuel from LPG, heavy oil and kerosene to city and LNG gas to reduce CO₂ emissions and rehabilitation of facilities to enhance yields and reduce the volume of waste generated in production processes.

- **Period: April 2007 to March 2008**
- **Subject: Hitachi Cable and domestic Group companies**
(Excluding the Yonezawa factory of Hitachi Cable Precision Co., Ltd.)

Environmental conservation cost

(Unit: million yen)

Category		Major activities	Investment amount ※1	Cost
Cost at Works area		Pollution prevention, energy saving, resource- saving, waste processing, monitoring and measurement of environmental facilities	1,359	3,960
Details	Pollution prevention cost	Facility investment and maintenance for removal of air pollutants and wastewater processing	163	1,093
	Global environmental conservation cost	Facility investment and maintenance for energy saving and CO ₂ emission reduction	997	549
	Resource recycling cost	Waste processing operations Facility investment and maintenance for waste recycling and reduction	199	2,318
Upstream/downstream cost		Collection and reuse of drums, bobbins, reels, pallets and containers	0	509
Management activity cost		Operation and maintenance of environmental management systems Cost of environmental education for employees and labor cost of environmental management organization	0	494
R&D cost		R&D of environmental-friendly products	0	1,034
Social activity cost		Greening, beautification, landscaping and other environmental improvements	0	4
Environmental damage compensation cost		Environment-related donation and surcharges	0	3
Total			1,359	6,004

(Unit: million yen)

Item	Amount
Total amount of investment in the applicable period	27,823
Total R&D cost in the applicable period	10,526

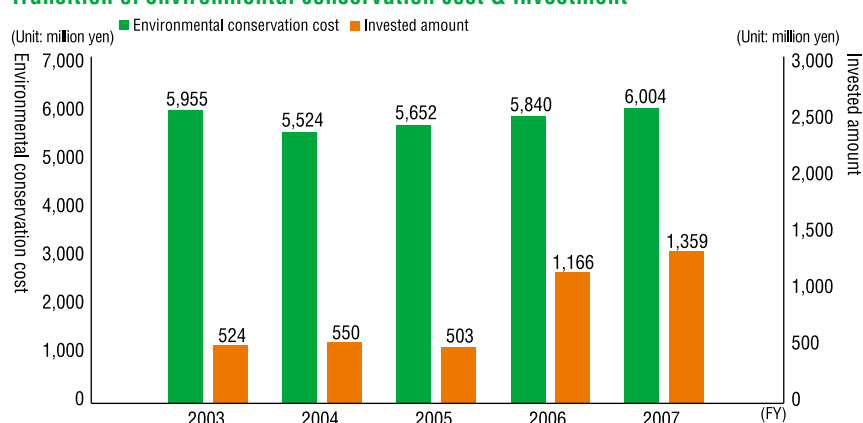
Economic effects generated from environmental conservation measures ※2

Description of cost reduction	Amount
Energy cost reduction through energy saving	260
Cost reduction through reusing drums, bobbins and pallets	882

Environmental conservation effects ※3

Description of effects	Reduced amount
Reduced electricity consumption	9,490 Mwh
Reduced amount of fuel consumed (converted to crude oil)	273 kl

Transition of environmental conservation cost & investment



※ 1 Major investment

Pollution prevention: Facilities liquid waste disposal/tank installation: 29 million yen

Global environmental conservation: Melting furnaces, heating furnaces and conversion of boiler fuel: 655 million yen

Resource recycling: Curtailment of waste material – Application of material efficiency/facility improvement to enhance yields: 87 million yen

※ 2 As the percentage and amount of scrap metal in income derived from waste recycling is large, it is not included in the economic effects.

※ 3 Environmental conservation effects represent the effects of reduction generated from the measures.



Environmental Action Plan and Results

Hitachi Cable sets up an environmental action plan to be applied to the entire Group every year. Shown below is a table of targets of key items in the 2007 Environmental Action Plan and their results/evaluation. We also listed the plans for the fiscal year 2008 to 2011.

○:Achieved; ×:Not achieved/improvement efforts required; —:Not subject to evaluation

Item	2007 Action Plan		Evaluation	Page	
	Target	Result			
Environmental conservation in production	Global warming prevention	4.6% reduction of CO ₂ generated from energy (Compared with that of FY1990)	11% reduction	○	39
		32% reduction of SF ₆ emissions (Compared with that of FY2003)	35% reduction	○	39
	Transport energy reduction	1% reduction in the basic unit of transportation energy, or a crude oil equivalent of transportation amount (tons/kilo) (Compared with that of FY 2006)	1.6% reduction	○	41
	Effective use of resources	Reduction of final disposal rate (※ 1) to 1% or less	0.5%	○	42
		Reduction of waste and reusable resources generated by 23.1% (Compared with that of FY 2000)	25% reduction	○	42
Chemicals management	Improve the resources recycling rate (※2) by 4% (Compared with that of FY 2005)	12.9%	○	43	
Environmental-friendly products	Chemicals management	12.5% reduction of VOC air emissions (Compared with that of FY2000)	5% reduction	× ^{※ a}	44
	Environmental-friendly products expansion	Increase the registration rate of Hitachi Group environmental-friendly products to 67% or more	Registration rate 81%	○	47
		Improvement in environmental efficiency of products (1) 10% improvement of global warming prevention factor (Compared with that of FY2000) (2) 10% improvement of resources factor (Compared with that of FY2000)	170% improvement of global warming prevention factor and 130% improvement of resources factor, for memory capacity of μBGA products	○	
		Resource-saving for materials used in products (1) 10% improvement of recycled plastic material use rate (Reference year: FY2000) (2) 5% reduction of the amount of packing material used (Reference year: FY2000)	(1) 20% improvement for metal transmission cables (2) 10% improvement for packaging of rubber tape and copper plated products	○	
Green procurement implementation	Green procurement rate for stationery and office supplies of 80% or more	90.9%	○	46	
Environmental management	GREEN21 ver3 improvement	Green Points of 896GP	925GP	○	33
	Environmental education implementation	<ul style="list-style-type: none"> Development of eco-minds among employees and their families Expansion of students who take environmental e-Learning 	<ul style="list-style-type: none"> Issue of PR journals to employee's families 131% increase in the number of students who take environmental e-Learning compared to the previous year 	○	34
	Environmental communication Global citizen activities	<ul style="list-style-type: none"> Communication through exhibitions, etc. Involvement in social contribution activities in relation to the environment including "open house" at Works, community cleaning activities and greening activities. 	<ul style="list-style-type: none"> Participation in eco-product exhibitions, etc. Implementation of community cleaning activities Participation in various volunteer activities, etc. 	○	47

Action plans for production activities at overseas bases

Production activities	Countermeasures against global warming	2% reduction of CO ₂ emission per unit of sales (Compared with that of FY2003)	Number of successful sites: 5/number of sites subject to the activity: 5	○	39
	Effective use of resources	20.7% reduction in waste and reusable resources generated (Reference years to be set up for individual sites)	26.2% reduction	○	
		4% reduction of water used (Compared with that of FY2005)	13.7% reduction	○	
	Chemicals management	4% reduction of VOC air emissions (※ 3) (Compared with that of FY2005)	Number of successful sites: 0/number of sites subject to the activity: 3	× ^{※ b}	

FY 2008 target	FY2010 target
7% reduction (Compared with that of FY1990)	7% reduction (Compared to that of FY1990)
33% reduction (Compared with that of FY2003)	35% reduction (Compared to that of FY2003)
2% reduction in basic units of energy transportation of transportation amount (Compared with that of FY2006)	4% reduction in basic units of energy transportation of transportation amount (Compared with that of FY2006)
Complete depending on the final result	—
23.4% reduction (Compared to that of FY2000)	24% reduction (Compared to that of FY2000)
6%	10%
13% reduction (Compared to that of FY2000)	33% reduction (Compared to that of FY2000)
Target increase from FY2008 Registration rate 80%	Registration rate 80%
Respectively, 13% improvement (Compared with that of FY2000) 13% improvement (Compared with that of FY2000)	Respectively, 20% improvement (Compared with that of FY2000) 20% improvement (Compared with that of FY2000)
Complete depending on the final result	—
Purchase rate 82% or more	Purchase rate 90% or more
1,024GP	1,280GP
<ul style="list-style-type: none"> Continued promotion to employee's families More than an 80% attendance rate of environmental e-learning 	<ul style="list-style-type: none"> Continued promotion to employee's families More than an 90% attendance rate of environmental e-learning
<ul style="list-style-type: none"> Expansion of the provision of product environmental information Expansion of social contribution activities in relation to the environment 	
3% reduction (Compared to that of FY2003)	5% reduction (Compared with that of FY2003)
20.7% reduction (Compared to that of FY2004)	
6% reduction (Compared to that of FY2005)	10% reduction (Compared with that of FY2005)
6% reduction (Compared to that of FY2005)	10% reduction (Compared with that of FY2005)

Remarks on target column

※1 $\text{Final disposal rate} = \frac{\text{Final disposal volume}}{\text{Waste and reusable resources generated}}$

※2 Resource recycling ratio is an index commonly used in the Hitachi Group to quantify levels of sophistication of resource recycling by setting weight factors for individual disposal categories of waste recycling, thermal recycling, simple incineration and final disposal and multiplying the disposal amount of each category with the corresponding factor.

※3 $\text{VOC air emission ratio} = \frac{\text{Emission into air}}{\text{Amount used}}$

Remarks on evaluation column

※a We have promoted studies of measures to reduce VOC2 substances whose emission into the air is large, but we haven't reached the stage where substantial reductions have been achieved. We plan to implement priority policies in FY2008.

※b The use of VOC with a high emission ratio increased and a relative reduction in emissions was not possible. We plan to horizontally develop technology at domestic production bases.



Input of Resources and Energy and Output to the Environment

Hitachi Cable believes our first priority should be continuous efforts to reduce the amount of resources used for production activities and emissions into the environment generated through such activities as much as possible. Shown below are the inputs of energy, water resources, raw materials and other purchased goods and chemical substances handled as well as outputs of environmental burdens, waste and products shipped and recycled products in FY2007.

INPUT

Domestic sites	Total energy input 6,539TJ		
	Electricity	538 million kwh	
	A-heavy oil	6,391,000 liters	
	Light oil	350,000 liters	
	Kerosene	1,551,000 liters	
	Gasoline	255,000 liters	
	LPG	9,559 t	
	LNG	925 t	
	City gas	11,226,000 meters ³	
	Electricity from photovoltaic power generation	22,600 kwh	
	Water supply 4,536,000 meters ³		
	Service water	91,000 meters ³	
	Industrial water	522,000 meters ³	
	Ground water	3,923,000 meters ³	
	Purchased materials		
	Metal	Copper	283,000 tons
		Iron	27,000 tons
		Stainless	2,200 tons
		Aluminum	200 tons
		Other non-ferrous metals	1,700 tons
	Plastic	34,000 tons	
	Rubber	3,100 tons	
	Glass ceramics	1,400 tons	
	Parts & components	3,800 tons	
	Products	32,000 tons	
	Paper	700 tons	
	Wood	5,800 tons	
	Packaging materials	4,100 tons	
Others	8,200 tons		
Chemical substances handled (chemicals contained in materials and purchased products)			
Chemicals covered by the PRTR Law	5,049 tons		
Other chemicals	12,568 tons		

Overseas sites	Energy input	
	Electricity	101 million kwh
	A-heavy oil	12,000 liters
	Light oil	1,000 liters
	Kerosene	1,000 liters
	Gasoline	18,000 liters
	Water supply 355,000 meters ³	
	Service water	198,000 meters ³
	Industrial water	47,000 meters ³
	Ground water	110,000 meters ³

Manufacturing works
Recycled cooling water
21,094,000 meters³

Manufacturing works
Recycled cooling water
400,000 meters³

OUTPUT

Air emission	
CO ₂	263,000 tons
SO _x	8 tons
NO _x	30 tons
SF ₆ (CO ₂ conversion)	2,377 tons (56,800 tons)
PFC, HFC and other greenhouse gases (CO ₂ conversion)	(213 tons)
Chemicals covered by the PRTR Law	114 tons
Wastewater	
Sewage wastewater	865,000 meters ³
Waste into public water area	1,938,000 meters ³
BOD	48 tons
COD	34 tons
Chemicals covered by the PRTR Law	2.1 tons
Waste	
Generated waste	41,328 tons
Recycling	31,067 tons
Final disposal	209 tons
Products shipments	318,000 tons
CO₂ emissions during transportation	15,000 tons
Collected and recycled amount from customers	4,900 tons

Air emission	
CO ₂	73,000 tons
Wastewater 307,000 meters ³	
Sewage waste water	85,000 meters ³
Waste into public water area	222,000 meters ³
Waste	
Generated amount	3,398 tons
Reused amount	1,399 tons
Final disposal amount	397 tons

These figures are taken from five large-scale overseas production sites

Global Warming Prevention

As part of efforts to reduce greenhouse gas emissions, the Hitachi Cable Group has a target of reducing its domestic sites' CO₂ emissions generated through energy consumption by 7% in FY2010 when compared with that of FY1990 and SF₆ gas emissions by 35% in FY2010 when compared with that of FY2003. By summing up these two targets, we set a total greenhouse gas reduction target of 24% by FY2010 when compared with that of FY1990 and when converted to CO₂.

In FY2007, domestic greenhouse gas emissions were 320,000 tons, which represents a 27% reduction when compared with that of FY1990, which was 441,000 tons.

CO₂ emission status

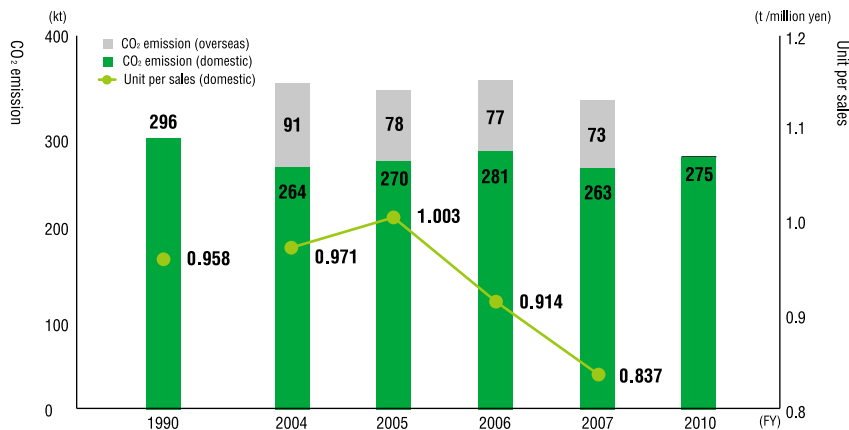
The total of domestic CO₂ emissions generated through energy consumption in FY2007 was 263,000 tons, representing a 6% reduction against 296,000 tons in FY1990. This was greatly contributed by conversion of LPG gas, kerosene and A-heavy oil to city gas and LNG gas used

as heating fuel for copper melting furnaces, industrial furnaces, etc. It was also affected by a lower value of the electricity emissions factor used for conversion to CO₂ emissions in FY2007 when compared with that of FY2006. It is important to take measures for substantial reduction independent of

fluctuations of electricity emissions factors, and we continue to take concrete measures.

The total of CO₂ emissions generated in energy consumption and having large environmental loads in five overseas sites was 73,000 tons.

CO₂ emission and unit



- For domestic electricity emissions factors, the average for all power sources (figures after revision) are used for the 1990's; 0.36t-CO₂/Mwh for FY2004 and FY2005; and individual power company factors notified by the Ministry of Environment for FY2006 and FY2007.
- To calculate the unit sales amount used, zero-base amount of sales is adopted where the cost of copper included in products is deducted to eliminate the impact of copper price fluctuations.
- We reviewed overseas electricity emissions factors, revised the figure and applied it retroactively to FY2004.

SF₆ gas use reduction

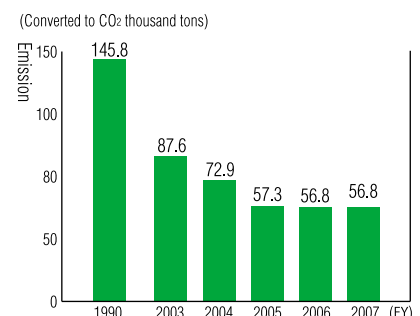
Greenhouse gases other than domestic CO₂ emissions generated through energy consumption include SF₆, which is a gas that is used in insulation performance tests of electric parts and components, CO₂, PFC and HFC used for shielding, resin foaming and cooling agents for heat transfer performance tests of copper pipes.

When converted to CO₂ emissions, most of the emissions were from SF₆. Total SF₆

gas emissions in FY2007 were 2,377 tons, 56,800 tons when converted to CO₂. We were able to reduce the emissions by 35% when compared with FY2003, but in spite of the reinforcement of SF₆ gas collection facilities, an increase in the workload resulted in emissions equivalent to those of FY2006.

The total emission of CO₂ not generated in energy consumption and PFC/HFC was 213 tons/year when converted to CO₂.

SF₆ gas emission





Implementation of a reduction of CO₂ emissions through fuel conversion

As a key measure to reduce CO₂ emissions, Hitachi Cable is promoting a plan to convert such fuels as butane gas, heavy oil and kerosene to city gas (LNG.)

The boiler at Densen Works, one copper melting furnace of Hitachi Wire & Rod Ltd. at Toyoura Works, copper melting and other industrial furnaces at Tsuchiura Works

have already been replaced, reducing 9,300 tons of CO₂ emissions per year. Individual modifications for converting fuel in progress include the conversion from heavy oil to city gas for boilers at Hitaka Works, that from butane gas to LNG of one copper melting furnace of Hitachi Wire & Rod Ltd. at Tsuchiura Works, and that from butane gas

to LNG of fuel for various industrial furnaces of Hitachi Magnet Wire Corp. at Toyoura Works. When these modifications are complete, it is anticipated that 13,400 tons of emissions will be reduced, equivalent to 5% of annual CO₂ emissions, together with the completed modifications.

Examples of energy conversion

Progress status	Works	Energy conversion	CO ₂ emission reduction (tons/year)
Completed	Densen Works	Conversion of fuel for boiler from heavy oil to city gas	2,000
	Toyouura Works (Hitachi Wire & Rod Ltd.)	Conversion of fuel for copper melting furnace from butane gas to LNG gas	2,000
	Tsuchiura Works	Conversion of fuel for copper melting and other industrial furnaces from butane gas, kerosene and heavy oil to city gas	5,300
	Total		9,300
In progress	Hitaka Works	Conversion of fuel for boiler from heavy oil to city gas	2,100
	Toyouura Works (Hitachi Wire & Rod Ltd.)	Conversion of fuel for copper melting furnace from butane gas to LNG gas	700
	Toyouura Works (Hitachi Magnet Wire Corp.)	Conversion of fuel for various industrial furnaces from butane gas to LNG gas	1,300
Planning stage	Takasago Works	Conversion of boiler heat source from heavy oil to electric heat pump system	1,500



LNG storage facility (Toyouura Works)

Other than those mentioned above, the key facility improvements to save energy we have implemented in FY2007 are as follows:

Category	Improvement example
High-efficiency equipment introduced	Replacement with high efficiency freezers and optimization of operational conditions Replacements of packaged air-conditioners with high-efficiency models
Strengthened control	Control of the number of freezers and cooling water pumps in operation Control of the number of industrial water pumps in operation
Production process improvement	Centralization of electronic component production processes Increased number of core wires for painting furnaces and acceleration
Inverter	Employment of inverter type circulation pump for wire drawing lubricant
Power distribution system	Improved efficiency by updating and integrating transformers

CO₂ emission reduction by saving energy during transportation

In order to save energy and reduce CO₂ emissions during transportation, the Hitachi Cable Group promotes modal shifts from truck to railroad and sea freight for regular and long-distance transportation. Thanks

to the newly introduced modal shifts in FY2007, a total of 298 tons of annual CO₂ emissions could be reduced.

The Group also addresses reducing CO₂ emissions through weight reduction

of packing and packaging materials, and the measures taken in FY2007 for this goal succeeded in reducing an annual total of 38 tons of CO₂.

Modal shift measures

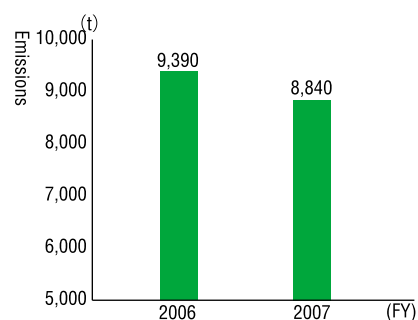
Modal shift category	Product subject to improvement	CO ₂ emission reduction(tons/year)
Railway container transportation	Auto parts for Kyushu	14
	Enameled wires for Kyushu	112
Sea freight	Stock wires for Kyushu	49
	Weld lines for Hokkaido	123

Regular report of specified freighter

Within our Group, it is only Hitachi Cable that falls under the category of specified freighter in the amended Law Concerning the Rational Use of Energy. In the FY2007 regular report submitted in June 2008, we reported

that CO₂ emissions generated by the use of energy had been 8,840 tons. When compared with the reported emissions in FY2006, this represents approximately a 6% reduction.

Transportation CO₂ emissions



※These are the emissions (non-consolidated) of Hitachi Cable, Ltd.

Examples of packing/packaging material weight reduction

■ Reduced weight of cardboard for fixing antenna products



Before improvement

Glued type
Weight: 14kg



After improvement

Roll type
Weight: 8kg



Appearance of a packaged product

Approximately 40% weight reduction, due to the employment of a different type of packaged product



Promoting recycling of resources

As an action item to advance recycling, the Hitachi Group has set three goals and takes action to achieve them: a 24% reduction of the generated volume of waste and reusable resources at domestic production sites in FY2010 when compared with that of FY2000; reduction of the final disposal rate to 1% or less; and a 10% increase of the resource recycling rate in FY2010 compared with FY2005.

Reduction of volume generated

The volume of waste and reusable resources generated in FY2007 was 41,328 tons, equivalent to a 25% reduction when compared with that of FY2000. However, the volume generated has shown a tendency to increase since FY2005. The main reason for the increase in FY2007 was a temporary

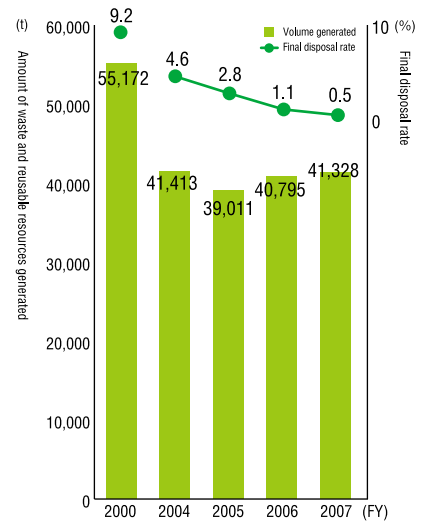
increase in the recycling of copper waste as valuables, and as this is a special case, we expect that the level will return to normal in FY2008. We are taking initiatives to reduce the amount of waste at works and to expand the level of recycling in order to decrease the volume in FY2008.

Reduction of final disposal rate

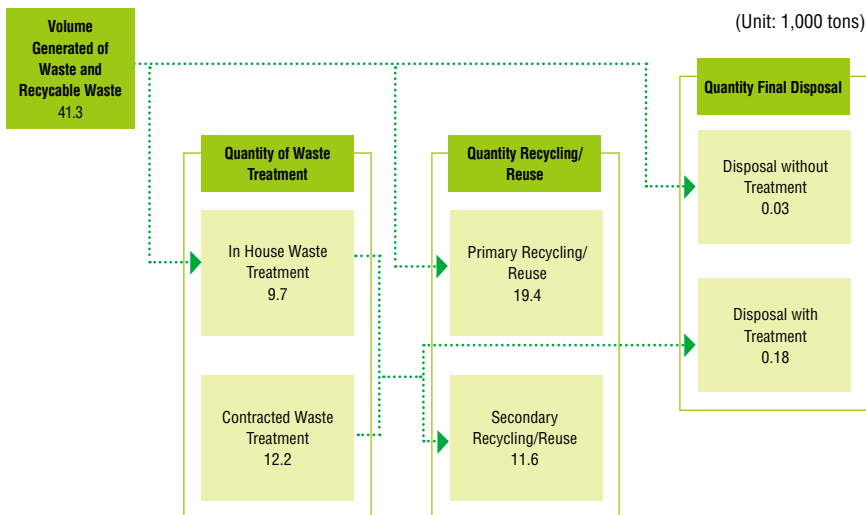
We developed and expanded applications of reused materials and promoted even more thorough sorting at works, resulting in an outstanding final disposal rate of 0.5%. When looking at individual plants and factories of the

seven works of Hitachi Cable and 13 Group companies, all Hitachi Cable Works and 11 Group companies achieved 1% or less, with the remaining two Group companies were able to reach a final disposal rate of 1.5%.

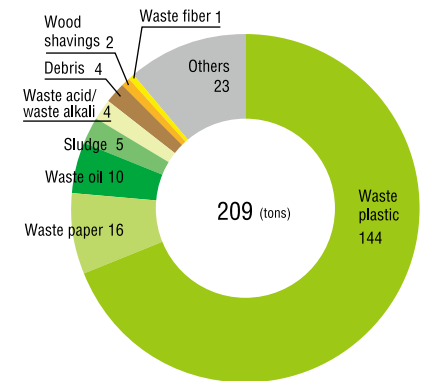
Transition of volume generated and final disposal rate (domestic)



Processing flow of waste and reusable resources



Breakdown of quantity final disposal by category



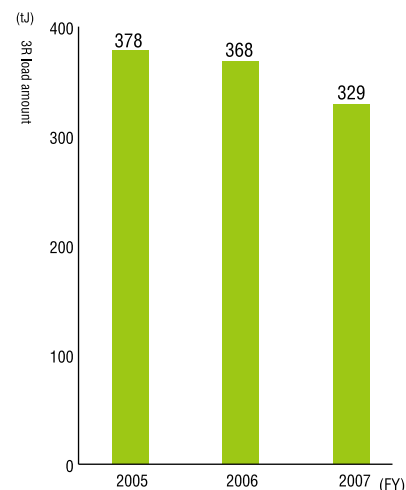
Increasing the resource-recycling rate

Increasing the resource-recycling rate to advance recycling is an activity to increase the reuse amount (rate) of waste. We set the amount of energy required for processing for each category of waste recycling, thermal recycling, simple incineration and final disposal as a factor and the total figure is calculated by multiplying the amount of processing with the factor by category as the “3R load amount,” which is then used for evaluation through comparison with the 3R load amount of the reference year. When the processing is advanced from final disposal with a large factor to recycling and reuse with a small factor and

the processed amount shifts from one category to another, the total amount of the 3R load will decrease, and when compared with the 3R load amount of the reference year, it will thus decrease. The ratio between the decreased amount and the amount in the reference year is called, the “resource recycling rate.”

The 3R load amount in FY2007 was 329 (unit: TJ,) resulting in the remarkable achievement of a 12.9% resource-recycling rate. We believe that measures taken in order to reduce the amount of final disposal have contributed to increasing the resource-recycling rate.

Transition in 3R load amount (Domestic)



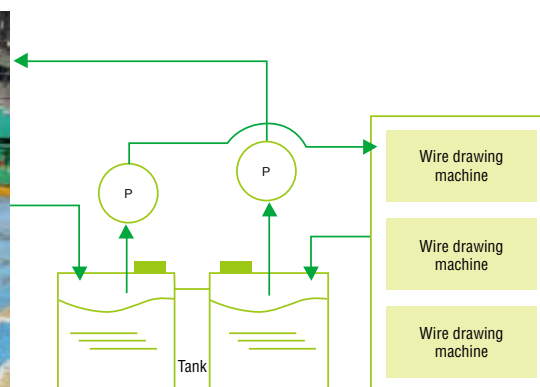
Measures to reduce the volume of waste generated

Toyoura Works of Hitachi Cable conducts an initiative to reduce the volume of generated waste by filtering, cleaning and thus increasing the life of oil used in the production process.

Wire drawing lubricant oil used in wire drawing machines is sent from the tank to the machine via a pump and then fed back to the tank for re-circulation and reuse. As a measure to clean this return lubricant oil, we remove copper particles using a centrifugal, and also thanks to the effect of integration of lubricant oil tanks that were implemented around the same period, we were able to reduce the volume of generated waste oil by 10 tons per annum.



Centrifugal



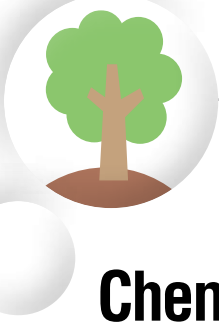
Initiative for recycling waste paper in the office

Our offices sort and recycle paper waste, which accounts for the majority of waste and reusable resources. They promote thorough recycling, and waste paper is sorted into waste paper, brochures and cardboard that

can be recycled as-is; documents to be recycled after cutting; and other waste paper inevitably applied to RPF, paper cups and drink packs.



Paper sorting in the office (Hitaka Works)



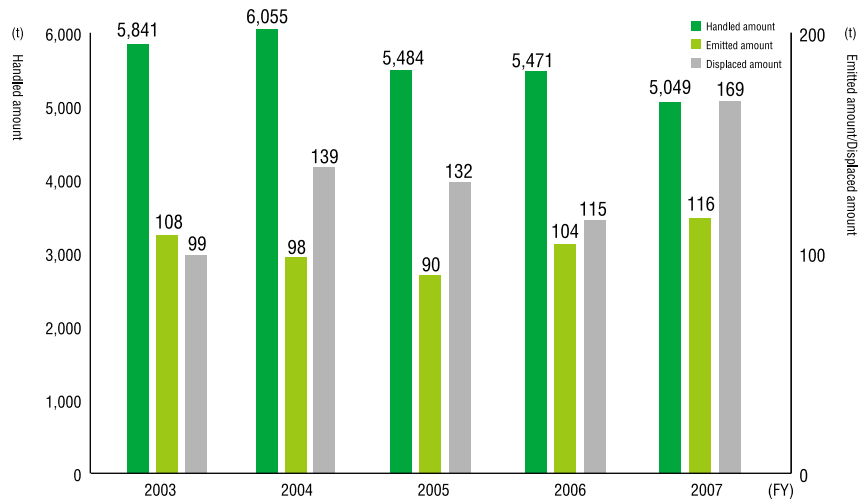
Chemical Management in Production Activities

As one of the action items regarding chemical substances used in production activities, the Hitachi Cable Group targets and takes the initiative to reduce emissions of VOC substances from domestic production sites by 33% in FY2010 when compared with that of FY2000. The Group also continues to grasp and monitor the handling, released and transferred amounts of all the chemical substances purchased and maintains a database to promptly respond to new domestic and international chemical substance regulations and a framework to prevent leakage and other environmental pollution by comprehending variations of use by substance, reducing the risks posed by the use of chemical substances.

Chemicals emission control

The total amount of chemicals handled in FY2007 was 17,617 tons, including 5,049 tons of chemicals subject to the PRTR Law, 116 tons of emitted chemicals and 169 tons of displaced chemicals. The main reason for the increase of emitted and displaced chemicals was the increase of solvents used in cleaning for degreasing and for paint tanks (VOC) because the applications for use changed in the processes where emission and disposal rates were larger. In FY2008, we are implementing a plan to reduce emissions by taking measures to improve the emission rate.

Handled, released and transferred amount of chemicals subject to the PRTR Law



Reducing VOC air emissions

In relation to VOC emissions in the air, that are assumed to be a cause of photochemical oxidants and suspended particulate matters, the Hitachi Group picks up 41 substances and takes the initiative to reduce VOC emissions of these 41 VOC substances by 33% in FY2010 when compared with that of FY2000.

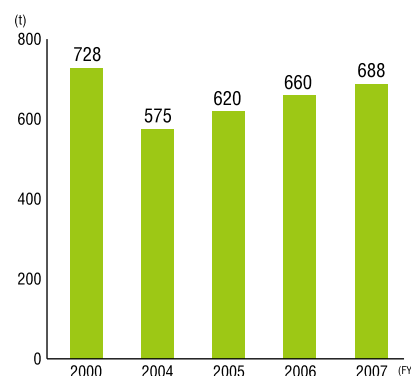
The number of VOC substances dealt with in FY2007 was 32 out of 41, and VOC air emissions with a handling amount of 1 ton per year or more was 688 tons, representing only a 5% reduction when compared with that of FY2000. We were able to reduce VOC air emissions by 21% in FY2004 compared with FY2000, but since FY2005, emissions have continued to increase due to more loads on the processes using VOC and application changes to the processes with higher emission levels, and

we need to take precise action to reduce them.

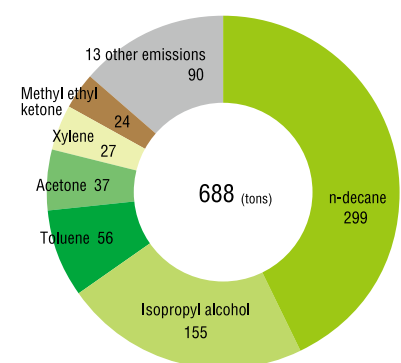
Of these air emissions, two substances, namely, n-decane contained in copper surface cleaning agents and isopropyl alcohol used for copper surface reduction treatment, represent

two-thirds of the total. As a countermeasure against them, we are planning to introduce facilities to drastically improve collection rates of these two substances that evaporate and scatter.

Transition of VOC air emissions (Domestic)



VOC air emissions by type



Released and transferred amount of chemicals subject to the PRTR Law in FY2007

(Unit : ton)

Substance number	Designated chemical substance name	Emission amount		Displaced amount	
		Air	Water	Sewage	Waste
1	Water-soluble compounds of zinc	0.0	0.0	0.0	0.9
9	Adipic acid bis (2-ethylhexl)	0.0	0.0	0.0	8.0
25	Antimony and its compounds	0.0	0.0	0.0	4.3
29	4,4'-isopropylidenediphenol [bisphenol A]	0.0	0.0	0.0	0.0
30	Condensation polymer of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxy-propane [bisphenol A epoxy resin]	0.0	0.0	0.0	38.4
32	2-imidazolidinethione	0.0	0.0	0.0	0.4
40	Ethylbenzene	10.0	0.0	0.0	7.6
43	Ethylene glycol	0.2	2.1	0.0	0.1
63	Xylene	27.4	0.0	0.0	15.6
64	Silver and its soluble compounds	0.0	0.0	0.0	0.0
67	Cresol 1,4	1.5	0.0	0.0	6.2
108	Non-organic cyanide compound (excluding complex salt and cyanate)	0.0	0.0	0.0	0.0
115	N- N-Cyclohexyl-2-benzothiazolesulfenamide	0.0	0.0	0.0	1.3
120	3,3'-Dichloro-4,4'-diaminodiphenylmethane	0.0	0.0	0.0	0.3
172	N,N-dimethylformamide	6.3	0.0	0.0	27.7
181	Thio uric acid	0.0	0.0	0.0	1.8
197	Decabromodiphenyl Ether	0.0	0.0	0.0	0.0
202	Tetrahydromethylphthalic anhydride	0.0	0.0	0.0	0.0
204	Tetramethylthiuram disulfide	0.0	0.0	0.0	0.1
207	Copper soluble acid (excluding complex salt)	0.0	0.0	0.0	1.1
224	1,3,5-trimethyl benzene	0.6	0.0	0.0	0.1
227	Toluene	60.2	0.0	0.0	2.3
230	Lead and its compounds	0.0	0.0	0.0	3.2
231	Nickel	0.0	0.0	0.0	0.6
232	Nickel compounds	0.0	0.0	0.0	1.4
252	Arsenic and its non-organic compounds	0.0	0.0	0.0	5.0
266	Phenol	1.8	0.0	0.0	19.4
269	Phthalic Acid Di-n-octyl	0.0	0.0	0.0	0.9
270	Phthalic Acid Di-n-butyl	0.0	0.0	0.0	0.7
272	Phthalic acid bis (2-ethyl hexl)	0.0	0.0	0.0	13.5
273	Phthalic Acid Di-n-butyl=benzyl	5.9	0.0	0.0	0.0
283	Hydrogen fluoride and its soluble salt	0.0	0.0	0.5	3.2
299	Benzene	0.0	0.0	0.0	0.0
304	Boron and its compounds	0.0	0.0	0.0	0.8
308	Poly (oxyethylene) = Octyl phenyl ether	0.0	0.0	0.0	0.2
312	Phthalic anhydride	0.0	0.0	0.0	0.0
Other 59 substances		0.2	0.0	0.0	1.8
Total		114.7	2.1	0.6	168.4

※ Figures dropping the second decimal digit are indicated. The total figure is different from the total of individual figures shown.

Storage status of electric equipment using PCB

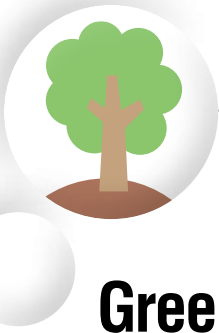
We strictly store and manage these devices at individual sites in compliance with regulations. Most of the works where the devices are stored are located in North Kanto, and we plan to outsource their disposal to the Hokkaido Facility of the Japan Environmental Safety Corporation. We expect to start adjustments on schedule with them finally in FY2008. We will undertake concrete studies of disposal plans, putting first priority on the safe carryout and transport of the equipment. We will continue

to strictly store and manage small devices that are not subject to disposal at present.

Site	Transformer	Capacitor	Others (fluorescent lamp stabilizers, etc.)
Densen Works	0	15	Stabilizer: 391 pieces; waste oil: 54 liters
Hitaka Works	0	43	Stabilizer: 32 pieces Fluorescent capacitors: 2,318 pieces and 11 cans of waste
Takasago Works	0	0	0
Toyoura Works	0	64	Stabilizers: 659 pieces; 5 packs of waste, etc.
Tsuchiura Works	1	365	Stabilizers: 573 pieces and 4 cans of waste oil
Equipment Factory, Hitachi Cable MEC-Tech, Ltd.	0	0	Stabilizers: 67 pieces
Kisai Factory, Hitachi Alloy, Ltd.	0	135	Stabilizers: 24 pieces
Ishioka Works, Tonichi Kyosan Cable, Ltd.	0	6	0
HQ Factory, Tohoku Rubber Co., Ltd.	0	9	0

※ In addition to those shown on the table, there are 17 capacitors in use.

※ In addition to those shown on the table, there are 36 transformers of which 17 are in use.



Green Procurement

Working together with suppliers, the Hitachi Cable Group sets up the basic principle of green procurement to procure products and service with little environmental burdens in consideration of reduction, long life, reuse/recycling, ease of disintegration, ease of processing, energy-saving and optimal use of chemical substances whose regulations have been strengthened.

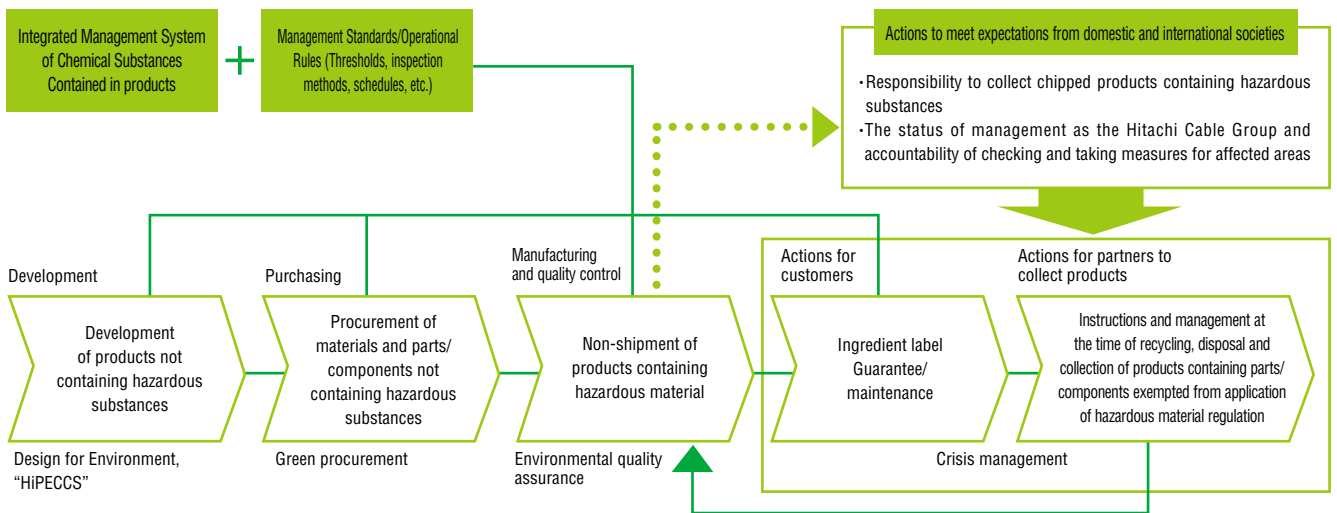
Management of Chemical Substances Contained in Products

In order to comply with the regulations of chemical substances contained in products that are widely adopted, the Hitachi Cable Group established an integrated management system for chemical substances contained in products, "HiPECCS" to grasp and control the amount of chemicals contained in procured materials and components as

well as delivered products in an integrated manner. In relation to chemical substances used in products as materials and components, we obtain such documents as "Non Content Certificate," "Specific Chemical Content Information Sheet," "Analysis Report," and "MSDS" about 15 "Level A Prohibited Chemical Substances" that are

prohibited to be contained in procured goods and 10 "Level B Controlled Substances" whose amount contained in products must be grasped and controlled and register them to the system in order to operate a framework where no product containing any chemical substance exceeding the corresponding regulation limit is used.

"HiPECCS" and management flow of chemical substances contained in products



Green purchasing of stationery and office supplies

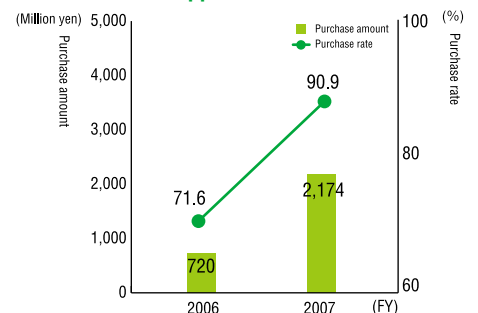
As we now purchase stationery and office supplies mainly on the Internet*, we set a target of increasing the purchasing rate of those with little environmental burdens such as Eco Mark-certified products, Green Mark products and products compliant with the

Green Purchase Law to more than 90% by FY2010.

In FY2007, the green purchase ratio of Web purchase was 90.9%.

*Internet purchasing by Hitachi Procurement Service Co., Ltd.

Purchase rate and amount of stationery and office supplies



* The increase in the purchasing amount was due to an expansion and increase of stationery and supplies ordered on the Internet

Environmental-conscious Products

Aiming to increase our line of environmental-conscious products, the Hitachi Cable Group promotes product registrations in the Hitachi Group's environmental information indication system, "environmental-friendly products," and actively implements initiatives to improve the registration rate with a target to reach a level as high as 80% by FY2010.

The Group also promotes product development with a goal to increase the sales of "environmental-friendly products" to a level of 50% of total sales in FY2010.

Design for Environment

Hitachi Cable promotes its product design, considering the provision of environmental-friendly products as what customers expect Hitachi Cable to do. As a mechanism to realize this, with regard to eight items concerning environmental burden reduction, including volume reduction, reuse and energy-saving, we conduct "Assessment for DfE (Design for Environment)" to compare the extent of performance enhancement and improvement between conventional and newly developed products by scores. Results achieved from "Assessment for DfE" are immediately reflected upon designs through "Design for environment." The Company has created a comprehensive range of environmentally friendly products.

Those products exceeding the reference scores are registered in the Hitachi Group's environmental information indication system, "environmental-friendly products." With newly registered products in FY2007, the accumulated total number of registered products reached 130 with sales of 197.6 billion yen per year. As an index to evaluate the percentage of registered products in the entire product line, we define the ratio between the sales of registered products and those of all products in the category as the "registration rate" and implement initiatives to improve the registration rate. In FY2007, the rate reached a level as high as 81%.

Furthermore, the Hitachi group put into practice a system to indicate environmental-

Sales and registration rate of environmental-friendly products



$$\text{Registration rate} = \frac{\text{Sales of environmental-friendly products}}{\text{Total sales of the products in the category}}$$

friendly products that satisfy predefined conditions such as the number-one in the industry and factor 10 as "Super-environmental-friendly products," and the Hitachi Cable Group registered two products in FY2007.

Assessment criteria of "Assessment for DfE (Design for Environment)"

1. Resource reduction
2. Product longevity
3. Resource recycling
4. Ease of decomposition and processing
5. Environmental conservation
6. Energy efficiency
7. Information disclosure
8. Packing materials

Super-environmental-friendly products

- High-efficiency, thermal conductivity, copper tube, Thermofin Tube
- Lead-free, whisker-suppressive, tin-plated multi-core flat cable

Environmental-friendly products registered in the Hitachi Group's environmental information indication system

Product type	Environmental-friendliness point	Number of registered products
Electric wires and cables	Lead-free, RoHS compliance, recyclability	93
Information network product	Downsizing/weight reduction, lead-free	11
Copper pipes, copper wires, etc.	High-efficiency thermal conductivity performance, recyclability	8
Semiconductor materials	Downsizing/weight reduction	10
Auto parts and components	Lead-free, ELV support	2
Rubber sheets, rubber hose, etc.	Thinner wall, longer life	5
Kitchen products	Water preservation, slime prevention	1

Participating in exhibitions

We have booths at product exhibitions and introduce advantages in terms of eco-friendliness of our products, promoting communication with stakeholders.

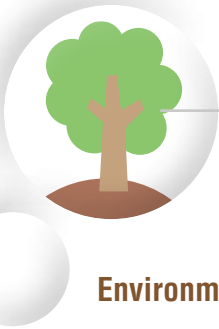
In FY2007, we exhibited our environment-friendly products at four exhibitions including Eco-Products 2007.

Exhibitions where we displaced environment-conscious products (Venue)

- **Automotive Engineering Exhibition (Yokohama)**
May 23- 25, 2007
- **Electrical Construction Equipment and Materials Fair 2007 (Tokyo)**
May 23- 25, 2007
- **Eco-Products 2007 (Tokyo)**
December 13 - 15, 2007
- **Eco-Products International Fair 2008 (Hanoi, Vietnam)**
March 1 - 4, 2008



Eco-Products International Fair 2008 (Hanoi, Vietnam)



Environmental Performance

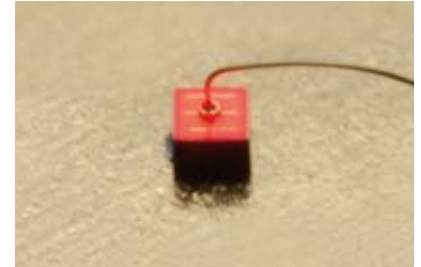
Environmental-conscious Products

High brightness red LED chip

We have developed a red LED chip with a luminous efficiency about five times as high as that of conventional chips.

An LED is a semiconductor element that can directly convert electricity to light and is used for a wide variety of display and illumination light sources, including traffic

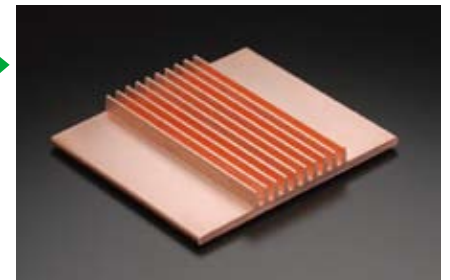
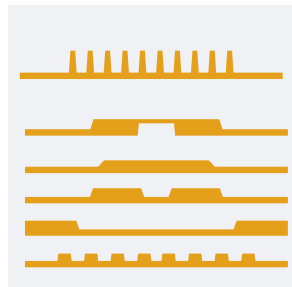
lights by taking advantage of its characteristics of low voltage operation. A high brightness red LED chip has a structure to efficiently extract light to the outside, offering an amount of light about 6.5 times as much as that of an incandescent bulb and about 3.2 times of a halogen lamp, contributing to energy-saving.



Dual-gauge copper strip for automobiles

Hitachi Cable is the world number-one manufacturer of dual-gauge copper strips, a copper board with a complicated sectional shape, in terms of production amounts. The strip is widely used as a base material on which semiconductor elements are arranged but also employed in automobiles where electronic parts and components are mounted. A number of vehicles adopt low power consumption LEDs for lights to help save energy.

Example of a section of a dual-gauge copper strip



Cross-linked PTFE (fluoro-polymer material) Excelon

Application of Excelon[®], our cross-linked fluoro-polymer material, to where parts contact and rub with each other reduces friction and energy loss. Excelon has a cross-linked structure of chemically stable PTFE resin in a unique manner, and damage to contacting parts

are reduced, resulting in a longer life. A major automobile manufacturer employs this product for the chain guide in power transmissions, contributing to an improvement in the mileage.

※Excelon is a registered trademark of Hitachi Cable, Ltd.



Apresia series Ethernet switch

Our Ethernet switch, the "Apresia" series is widely adopted for wide area Ethernet services, assuming an important role as part of the social infrastructure as well as corporate and university local area networks (LANs.)

The Apresia series realized downsizing and lower power consumption by reducing the number of parts and components by, for example, employing compact-size highly integrated printed circuits. For instance, the Apresia2124GT is downsized by about

25% when compared with our conventional products, and thanks to selection and employment of low power consumption parts and components, its power consumption was reduced by about 25% when compared with our conventional equivalent products. (The figures show reduction rates when Apresia2124GT is compared with Hitachi Cable's conventional models of products.)

Furthermore, we aggressively employ reused material for product packing.



Apresia8007 Series



Apresia4000 Series



Apresia3000 Series



Apresia2000 Series

Site Data (April 2007 - March 2008)

Environmental burden data by works of the Hitachi Cable Group are as follows:

CO₂ emissions/waste data

Domestic sites

Company and location	CO ₂ emissions (t)	Waste・Reusable resources		
		Volume generated (t)	Recycled volume (t)	Final disposal volume (t)
Hitachi Cable Densen Works 3-1-1 Sukekawa-cho, Hitachi City, Ibaraki Prefecture	31,138	2,992	1,947	17
Hitaka Works 5-1-1 Hitaka-cho, Hitachi City, Ibaraki Prefecture	35,867	12,940	10,425	119
Takasago Works 880 Sunazawa-cho, Hitachi City, Ibaraki Prefecture	38,080			
Minato Works 4-5862-2 Kuji-cho, Hitachi City, Ibaraki Prefecture	3,861			
Misawa Works ^{※1} 1 2-100-1 Otsu, Misawa City, Awomori Prefecture	126			
Toyoura Works 4-10-4 Kawajiri-cho, Hitachi City, Ibaraki Prefecture	54,292	7,246	6,204	2
Tsuchiura Works 3350 Kidamari-cho, Tsuchiura City, Ibaraki Prefecture	70,249	9,057	3,840	3
Hitachi Cable Mech-Tech, Ltd. Equipment Works 4-12-1 Hitaka-cho, Hitachi City, Ibaraki Prefecture	1,247	250	157	0
Hitachi Cable Logi-Tech, Ltd. Hitaka Office 5-3-3 Hitaka-cho, Hitachi City, Ibaraki Prefecture	146	1,899	1,879	4
Tokai Office 150 Terunuma, Tokai Village, Naka County, Ibaraki Prefecture	395			
Hitachi Alloy, Ltd. Kisai Works 254-2 Uchidagatani, Kisei-cho, Kitasaitama County, Saitama Prefecture	11,346	1,274	1,083	14
Tonichi Kyosan Cable, Ltd. Ishioka Office 1-1 Aragane, Ishioka City, Ibaraki Prefecture	10,153	3,736	3,677	19
Tohoku Rubber Co., Ltd. Headquarters Plant 1-1-12 Minato, Miyagino Ward, Sendai City, Miyagi Prefecture	4,238	483	432	3
Hitachi Cable Precision Co., Ltd Yonezawa Works 901 Hosen-machi, Yonezawa City, Yamagata Prefecture	1,785	1,451	1,423	26
Domestic sites total ^{※2}	262,924	41,328	31,067	209

Overseas sites

Company and location	CO ₂ emissions (t)	Waste・Reusable resources		
		Volume generated (t)	Recycled volume (t)	Final disposal volume (t)
Hitachi Cable (Johor) Sdn. Bhd. Johor Bahriu, Malaysia	17,159	746	—	—
Shanghai Hitachi Cable Co., Ltd. Shanghai, China	31,571	1,661	1,273	336
Hitachi Cable (Singapore) Pte Ltd. Singapore	14,557	165	45	61
PHCP, Inc. Dasmariñas, the Philippines	6,665	667	80	0
Huanan Wire & Cable Service Co., Ltd. Shenzhen, China	3,287	156	—	—
Overseas sites total ^{※2}	73,241	3,398	1,399	397

※ 1 Misawa Works closed in March 2008.

※ 2 The total differs as each number was rounded off to the nearest integer



Air and water quality data

sites

■ Densen Works

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler	150	60	21

■ Water quality drainage : river

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
Boron (mg/L)	10	-	5	0.1
Fluorine (mg/L)	15	8	4	0.4
Ammonia (mg/L)	100	-	50	3.8
PH	5.8-8.6	-	6.0-8.4	7.0-8.3
BOD (mg/L)	160	40	20	16
SS (mg/L)	200	65	32.5	<5
Oil (mg/L)	5	-	2.5	ND
Zinc (mg/L)	2	-	-	0.4

Hitaka Works

■ Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler Metal melting furnace	180	130-160	39-140
SOx (Nm ³ /h)		2.65-5.18	0.06-0.25	0.03-0.09
Dust (g/Nm ³)		0.2-0.3	0.10	0.01
Lead (mg/Nm ³)		10	0.1-0.8	0-0.06

■ Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
Lead (mg/L)	0.1	-	0.08	0.054
Ammonia (mg/L)	100	-	80	1.6
PH	5.8-8.6	-	6.1-8.3	7.1-8.0
BOD (mg/L)	160	25	20	3
SS (mg/L)	200	40	32	23
Oil (mg/L)	5	-	4	1.3
Zinc (mg/L)	2	-	1.8	0.11

Takasago Works

■ Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler Hot-and-chilled- water generator Hydrogen generator	150-180	60-175	36-110
SOx (Nm ³ /h)		0.14-1.95	0.06-0.39	0.01-0.05
Dust (g/Nm ³)		0.10-0.30	0.01-0.22	0-0.02

■ Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
PH	5.8-8.6	-	6.1-8.3	7.2-7.6
BOD (mg/L)	160	25	20	1
SS (mg/L)	200	40	32	2
Oil (mg/L)	5	-	4	0
Zinc (mg/L)	2	-	1.8	0.08

Minato Works

■ Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler Metal melting furnace	180	170	100
SOx (Nm ³ /h)		0.57	0.41	0.02
Dust (g/Nm ³)		0.2-0.3	0.10-0.24	0-0.02
Lead (mg/Nm ³)		10	0.8	0.1

Misawa Works (closed in March 2008)

■ Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
Boron (mg/L)	10	-	8	0.33
Fluorine (mg/L)	8	-	6.4	0.24
Ammonia (mg/L)	100	-	80	15
PH	5.8-8.6	6.0-8.0	6.3-7.7	7.0-7.2
BOD (mg/L)	160	20	16	12
SS (mg/L)	200	30	24	1
Oil (mg/L)	5	-	4	0
Zinc (mg/L)	2	-	1.8	0.01

Toyoura Works

Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler Metal melting furnace	180-260	80-150	24-99
SOx (Nm ³ /h)		0.71-5.69	0.04-0.79	0.01-0.04
Dust (g/Nm ³)		0.2-0.3	0.05-0.25	0.01-0.029

Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
Ammonia (mg/L)	100	-	80	0.32
PH	5.8-8.6	-	6.0-8.4	7.0-8.1
BOD (mg/L)	160	25	20	4.5
SS (mg/L)	200	40	32	5.7
Oil (mg/L)	5	-	4	<1
Zinc (mg/L)	2	-	1.6	0.11

Tsuchiura Works

Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Metal heating furnace	180	144	27
Dust (g/Nm ³)	Metal melting furnace	0.2	0.16	0.09

Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
Boron (mg/L)	10	10(-)	8	0.1
Fluorine (mg/L)	8	0.8(0.5)	0.4	0.2
Ammonia (mg/L)	100	100(-)	80	2.3
PH	5.8-8.6	5.8-8.6 (6.0-8.6)	6.0-8.4	7.0-8.2
BOD (mg/L)	160	15(10)	8	8.8
SS (mg/L)	200	20(15)	12	5.2
Oil (mg/L)	5	3(3)	2.4	0.6
Zinc (mg/L)	2	1(1)	0.8	0.03
Nitrogen (mg/L)	120	10(8)	6.4	2.8
Phosphorus (mg/L)	16	0.5(0.5)	0.4	0.33

Hitachi Alloy, Ltd. Kisai Works

Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Metal melting furnace ※5 Metal heating furnace	180	144	75
SOx (Nm ³ /h)		2.96	2.37	0.013
Dust (g/Nm ³)		0.1-0.25	0.08-0.16	0.01

※5 Only dust is applied to the metal melting furnace

Water quality drainage : river

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
PH	5.8-8.6	5.8-8.6	6.0-8.4	6.9-7.9
BOD (mg/L)	160	25	20	8.5
SS (mg/L)	200	60	48	14
Oil (mg/L)	5	5	4	<1
Zinc (mg/L)	2	-	-	0.22
Nitrogen (mg/L)	120	120	96	1.9
Phosphorus (mg/L)	16	16	12.8	0.58

Tohoku Rubber Co., Ltd. Headquarters Plant

Air

Item	Facility	Legal limit	Voluntary control value	Observed value (max.)
NOx (ppm)	Boiler Thermal oil boiler	130-150	130-150	37-43
SOx (Nm ³ /h)		0.34-0.52	0.34-0.52	0.013-0.032
Dust (g/Nm ³)		0.10-0.15	0.10-0.15	0.010-0.014

Water quality drainage : sea

Item	Legal limit	Regulation limit	Voluntary control value	Observed value (max.)
PH	5.0-9.0	5.8-8.6	6.0-8.4	6.5-7.2
COD (mg/L)	160	20	18	13
SS (mg/L)	200	20	18	15
Oil (mg/L)	5	3	2.8	2.6
Zinc (mg/L)	2	-	-	0.2
Nitrogen (mg/L)	120	-	-	1.0
Phosphorus (mg/L)	16	-	-	0.3