



Eco-Factories (eco-friendliness in production activities)

Through the entire production process of products, we work to save energy and enhance facilities in an attempt to prevent global warming, reduce industrial waste, and accomplish similar goals.

Prevention of Global Warming (Energy-saving Efforts)

Hitachi Kokusai Electric and Group manufacturers have set a fiscal 2010 energy reduction target in the manufacturing stage to making a 35% cut in the real production CO₂ unit requirement from the level in fiscal 1990, thereby working to slow down global warming. That target is shared by the rest of the electrical and electronics industry.

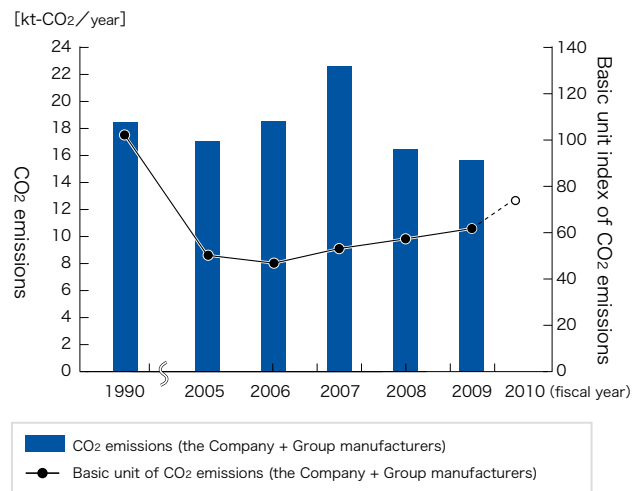
The basic unit of CO₂ emissions in actual production is the unit of measure for the uniform target of the electrical and electronics industry, and has been used as a control indicator since fiscal 2005. The basic unit of CO₂ emissions in actual production by the Company and Group manufacturers in fiscal 2009 was reduced by 40% from the level in fiscal 2005, which cleared our target value of a 33% reduction.

CO₂ emissions by the Company and Group manufacturers in fiscal 2009 were reduced by 5% from the level in fiscal 2008 due to the efficient operation of clean rooms and the renewal of air-conditioners.

The Group will continue to take such energy-saving measures in reexamining the operation methods of the facilities and upgrading them into energy-saving types. Our Group has supported the national campaign for preventing global warming as promoted by the Government of Japan from its initial stage, reduced the use of air-conditioning at all places of business, and participated in

the "black illumination" campaign (to reduce the use of illumination).

■ Changes in CO₂ emissions and the basic unit index of CO₂ emissions in actual production



The emission factor used in calculating CO₂ emissions has been reviewed by examining reports ranging from the current one to that of fiscal 1990, by using the adjusted emission factor of each electric utility as reported by the Ministry of the Environment.

TOPICS

Reducing the environmental impact of physical distribution

At the Toyama Works, we work together with Kokusai Electric Semiconductor Service Inc., which serves as the physical distribution department, to reduce the packing materials used in transporting semiconductor-manufacturing systems and cut CO₂ emissions through a modal shift of transportation in an attempt to reduce environmental impact.

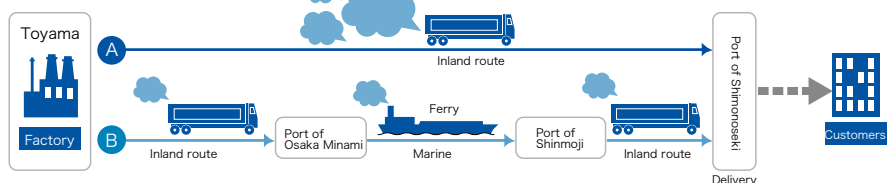
Reducing the use of packing materials

To reduce the use of packing materials for products destined for customers in Japan, we shifted from individual packing to collective packing and introduced reusable carriages, thereby achieving a 45% reduction from fiscal 2008. We also succeeded in reducing the use of cushioning materials by 54% from fiscal 2008 by switching to a different method of fixing the packages.

Reducing CO₂ emissions by a modal shift

In the transport of products destined for customers in South Korea, the specific parts of each semiconductor manufacturing system used to be loaded onto a large truck and a small truck (two trucks total) for inland transport. We then changed part of the route to marine transport by ferry to reduce CO₂ emissions.

In fiscal 2009, we only changed the transport by the small truck and achieved a 19% reduction per product (from fiscal 2008). In fiscal 2010, we are scheduled to change it by both the large and small trucks to achieve a 42% reduction.

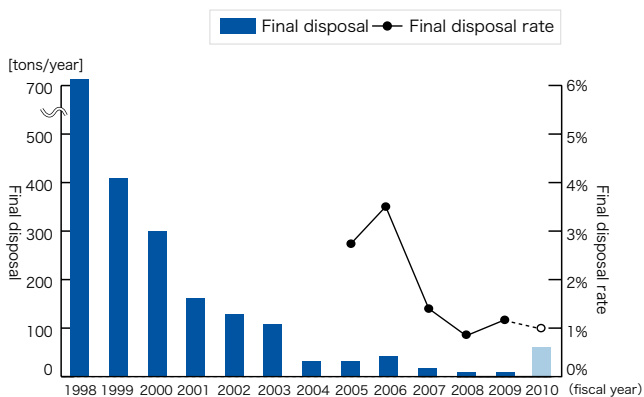


Ⓐ Movement by inland route alone Ⓑ Movement by both inland and marine routes

Waste Reduction

The Company and Group manufacturers are working toward the target of reducing their final disposal of waste by 90% by fiscal 2010 from the levels in fiscal 1998. In fiscal 2009 we enhanced recycling, thoroughly implemented the disposal of sorted garbage, and consequently made a 98% cut in disposable waste from 1998 levels to achieve the target. Moreover, regarding the targeted final waste disposal rate of 2% or less (as added for fiscal 2005 and onwards), we achieved the target in fiscal 2009 at 1.2%. Our target for fiscal 2010 is 1% in final waste disposal rate and we are working to reduce the final disposal of waste even further.

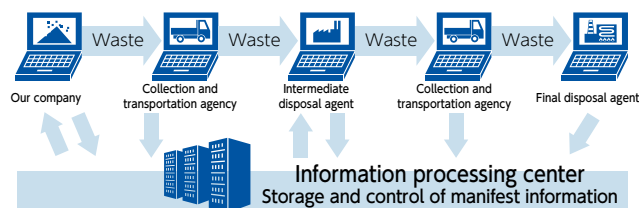
Final disposal and final disposal rate of waste



Promoting the conversion of industrial waste manifest*1 into electronic form

The Government of Japan is promoting the introduction of electronic manifests in place of conventional paper-form industrial waste manifests in order to "share information" and "transmit information efficiently." For fiscal 2009, our Koganei Works, Toyama Works, and Kokusai Electric Semiconductor Service Inc. handled 232 out of 384 cases using electronic manifests. We will continue extending this practice to other factories.

Flow of electronic manifests



*1 Industrial waste manifest: A control form to be issued for preventing illegal disposal and ensuring the proper processing of industrial waste when commissioned to a disposal agent. The issuance of such a document is mandated under the Industrial Waste Disposal Law.

Survey Results of PRTR-specific Chemical Substances

According to the "Law concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" (PRTR Law) that became effective in April 2001, business establishments handling more than a certain amount of any such chemical substances are legally obligated to report the chemical substances. However, neither the Company nor Group manufacturers have encountered any reportable substances exceeding the applicable quantity handled in fiscal 2009. In fiscal 2010, the target chemical substances specified by the PRTR Law are supposed to be reviewed. Accordingly, we will again monitor and tabulate those chemical substances.

PRTR-specific chemical substances actually released and transferred (in kilograms per year)

(Sum of the Company and Group manufacturers)

Chemical substance	Quantity handled	Consumption	Quantity recycled	Transfer	Release
Lead and its compounds	629	574	3	53	0
Hydrogen fluoride and its water-soluble salts	360	0	306	0	54
Toluene	243	10	0	14	220
Xylene	143	11	0	0	132

*Substances significantly handled are shown above

Appropriate Control of PCB-containing Equipment

An entity who owns transformers, capacitors, fluorescent lamp stabilizers, and related equipment containing polychlorinated biphenyls (PCBs) are obligated to strictly store and control such equipment, and properly dispose of it by the end of 2016 as per the PCB Special Measures Law. To prevent PCB loss and leakage, our Group properly controls its PCBs on a continuous basis in locked storage facilities. Moreover, the Group periodically investigates and confirms the storage level and other factors relative to PCB-containing electrical appliances, and reports its findings to the local governments concerned every year.

TOPICS

Granted the Toyama Works Encouragement Award in "GREEN21 Recognition"

The Hitachi Group uses "GREEN21" and has set up a recognition program ("GREEN21 Recognition") in order to promote environmental activities and introduce advanced practices to the rest of the group. In fiscal 2009, 35 sections from the Hitachi Group made their entries. Among these entries, one was granted the grand prix, four were granted divisional awards, and four others were granted encouragement awards. Out of these, our Toyama Works won an encouragement award under the theme of "improving quality in the control of chemical substances in products and promoting a corporate forestry project."