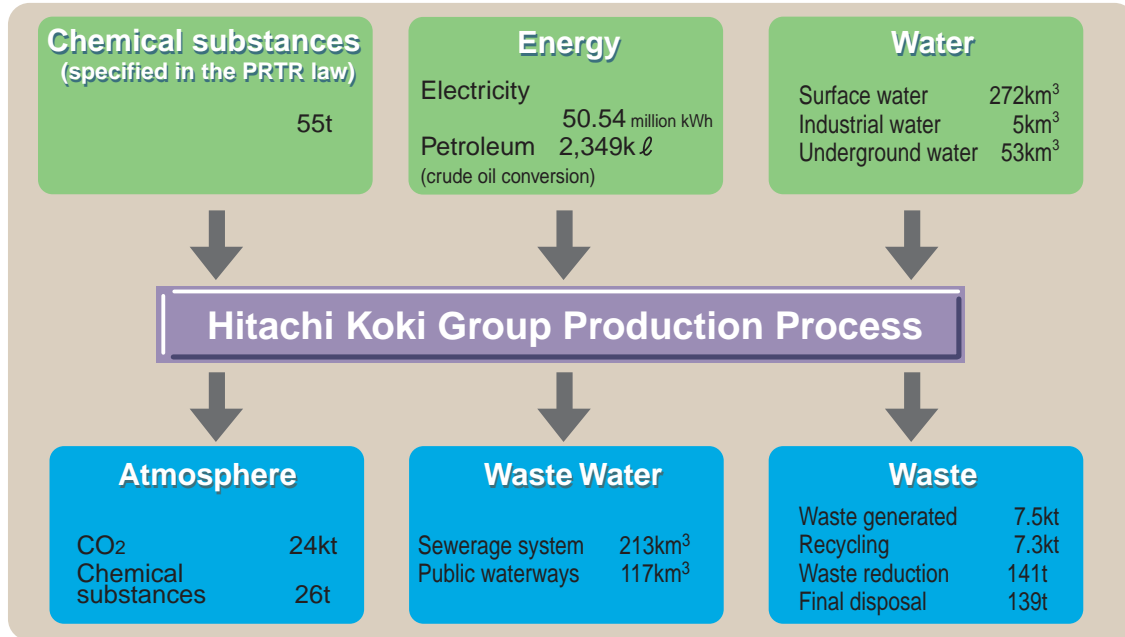


Eco-friendly factories

Resource Input and Waste Output into the Environment

The following is a summary of Hitachi Koki Group's performance for fiscal 2001

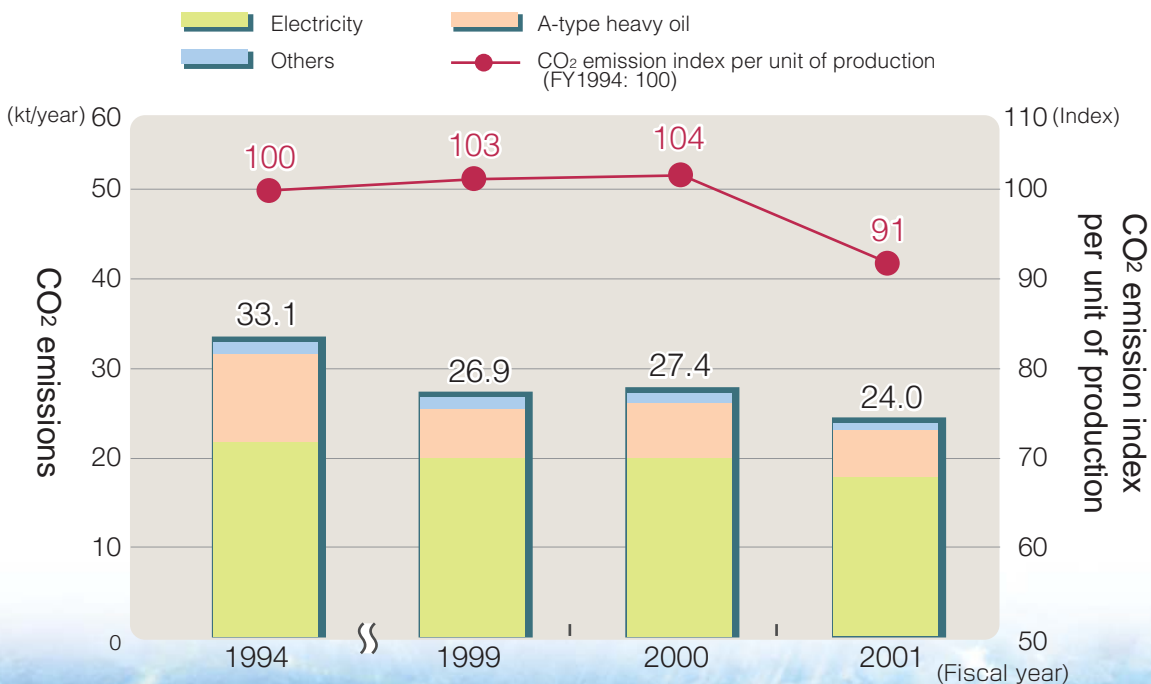


Prevention of Global Warming

We are striving to cut the emission of greenhouse gases.

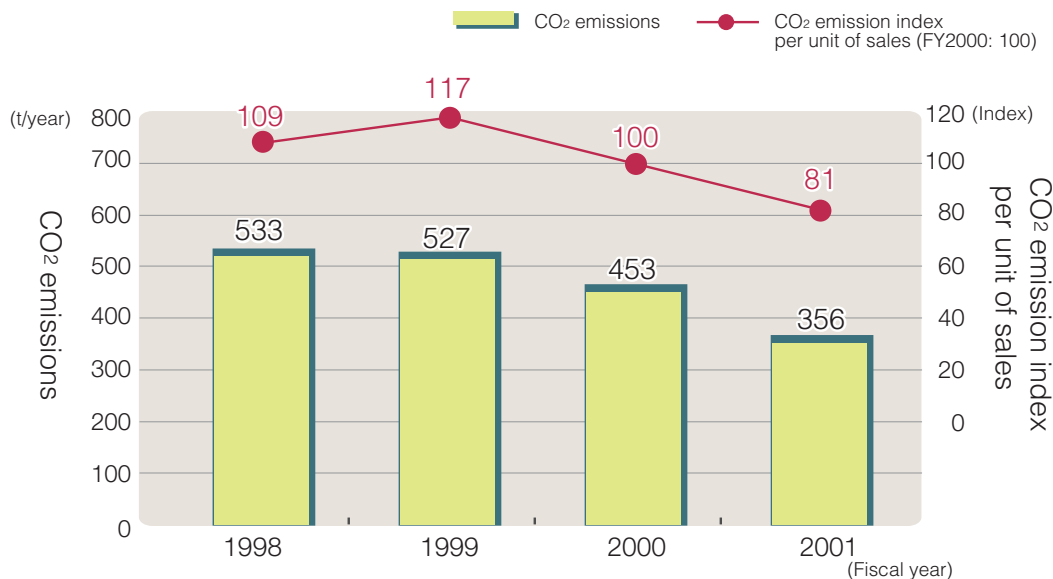
Trends in Production-related CO₂ Emissions (CO₂ emissions per unit of production)

Because manufacturing processes require large amounts of energy (electricity, etc.), we have been vigorously promoting energy conservation activities. In fiscal 2001, our CO₂ emissions decreased by 12%, and our CO₂ emissions per unit of production also decreased by 12% compared with the previous year.



Trends in Transportation-related CO₂ Emissions (CO₂ emissions per unit of sales)

As a result of a review of transportation routes and changing from road transport to sea and rail, our CO₂ emissions per unit of sales have been reduced by 19% compared with the previous year.



Afforestation Activities

Katsuta Plant has preserved the natural forests existing on its site. These natural forests are home to many species of birds. The forest consists of about 1,700 evergreen and deciduous trees that we take good care of, as they are not only beautiful but also make a useful contribution by absorption of CO₂, a greenhouse gas. In addition, about 600 cherry trees have been planted on either side of the roads at

our site, which is opened to the public in springtime to provide a place for recreation and relaxation for local citizens.

In Hitachi Koki Sawa Co., Ltd., unoccupied areas that have become the habitat for groups of pheasant have been allowed to revert to their wild state (no weeding or other forms of disturbance are permitted).

Examples of Improvements

(1) Introduction of nighttime compressors

Compressors intended for nighttime use only have been introduced into workplaces and the operation of the central compressing system during these hours has been discontinued. By eliminating the unnecessary supply of compressed air to the entire plant from the central compressor, resource savings have been made.

Energy saved: 217.4 (MWh/year)

(2) Reduced consumption of electricity thanks to the introduction of a composite machine tool

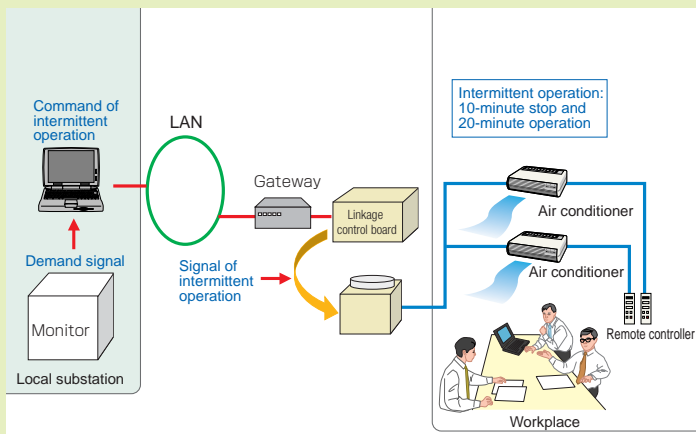
The conventional machining facility, which comprised five separate machine tools and their carrier units, was used for machining the armature shafts of power tools motors. This facility was decommissioned and replaced with a composite machine tool to improve production efficiency and reduce the consumption of electricity.

Energy saved: 30.8 (MWh/year)

(3) Automatic control of air conditioners

The amount of electricity consumed is monitored to minimize the demand for power. If energy consumption approaches the maximum contract demand value, the monitor transmits a signal (demand signal) to each air conditioner via LAN to switch from continuous to intermittent operation automatically. Thus the amount of electricity used in running the air conditioning system can be reduced and the contract demand is also decreased.

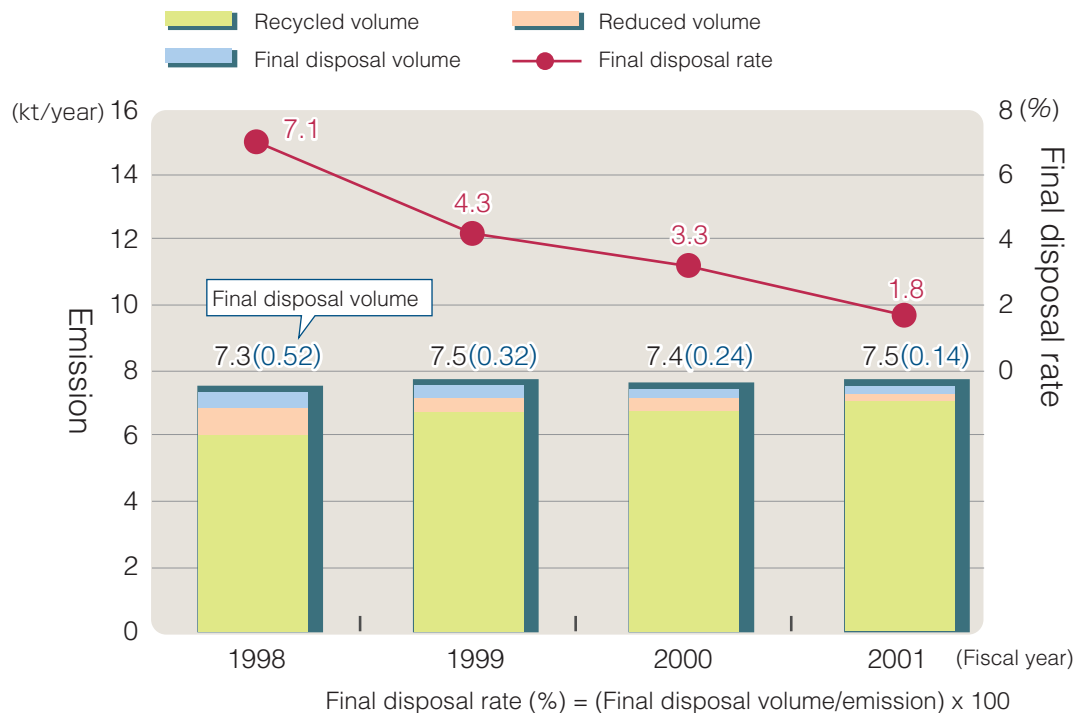
Energy saved:
Electricity consumption 80.0 (MWh/year)
Decrease of contract demand 500 (kW)



Waste Reduction

As the Company regards the reduction of waste volumes as an essential environmental issue, Hitachi Koki is making strenuous efforts to reduce final disposal volumes. In fiscal 2001, our final disposal volumes were reduced by 42% compared with the previous year. Our task ahead is to achieve zero emissions.

Trends in Industrial Waste



Recycling Methods

(FY 2001)

Material	Emission (t)	Recycled volume (t)	Recycling rate (%)	Main recycling methods
Sludge	587	548	93.3	Material for roadbeds, base material for cement
Oil	794	755	95.1	Refuse Derived Fuels (RDFs)
Acid	23	16	69.5	Recycled material
Alkali	81	9	11.6	Recycled material
Plastics	270	238	88.3	Recycled material, RDFs
Paper	908	887	97.7	Material for recycled paper, RDFs
Wood	160	137	85.6	Material for construction materials, RDFs
Metal	4,139	4,123	99.6	Recycled materials
Glass, porcelain	23	5	23.3	Recycled material, material for heat insulators
Rubble	77	77	100.0	Material for roadbeds
Others	480	466	97.1	Material for roadbeds, base material for cement
Total	7,542	7,262	96.3	

Reduced volume: 141 t, Final disposal volume: 139 t

Examples of Improvements

Improvement	Effect of improvement
<p>(1) Provision of information about waste</p> <p>We provide information about waste on our intranet to promote waste reduction and separation activities.</p> <p><Information provided on our intranet></p> <ul style="list-style-type: none"> ● How to separate waste and detailed information ● Examples of incorrect separation and disposal ● Volume of waste generated in each division and the final disposal volume (per month) 	—
<p>(2) Reuse of valuables retrieved from wastes by separation</p> <p>Plastics are separated and sold as valuables.</p> <p><Example></p> <ul style="list-style-type: none"> ● Plastics are separated into poly vinyl chloride, ABS resin, PP resin, PE resin and PC resin and sold as valuables. ● Polystyrenes are reduced in volume and solidified, then sold as valuables. <div data-bbox="948 853 1240 1066" data-label="Image"> </div> <p data-bbox="959 1070 1228 1122">Volume reducing machine for polystyrene</p>	Sold volume 19.3 (t/year)
<p>(3) Reuse of used paper</p> <p>After the printer evaluation test, paper printed on one side is reused for intra-company documents (A4-sized paper) to reduce purchase of paper.</p>	Reduced volume 1,320 (1000 sheets of paper/year)
<p>(4) Change of beverage containers</p> <p>Our co-op store does not sell beverages in PET or glass bottles but only those in cans to reduce the final disposal volume.</p>	Reduced volume: 2.5 (t/year)
<p>(5) Reuse of pallets</p> <p>Pallets used for transportation of purchased items are returned to the suppliers for reuse.</p>	Reduced volume: 3 (t/year)

Countermeasures to reduce dioxin emissions

Hitachi Koki and affiliated companies have discontinued the use of all incinerators to prevent the generation of dioxins caused by burning solid wastes. Disposal of waste is now contracted out to the experts.

Abolition	1998: Kasama Plant and Hitachi Koki Yamagata Co., Ltd. 1999: Katsuta Plant, Hitachi Koki Sawa Co., Ltd. and Hitachi Koki Haramachi Co., Ltd.
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Chemical Substance Control

Management System

Since its introduction in 1994, Hitachi Koki has managed a "Chemical Substance Certification and Registration System" to limit the use of harmful chemical substances. This system does not allow the purchase of chemical substances that are not certified by the Environmental Management Subcommittee. In addition, statistics on chemical use are stored in the system's database, making it easy to calculate not only usage volume but also the number and kinds of chemical substances used across the entire company and in individual divisions.

PRTR System

The PRTR (Pollutant Release and Transfer Register) system makes available information on the total amount of harmful chemical substances used or handled at the time of purchase, use, disposal, production, etc. The Hitachi Group has introduced the "Chemical Substance General Management System" instead using the PRTR system, and Hitachi Koki has also introduced the "Chemical Substance General Management System" in order to comply with the PRTR law.

Reduction of Emission and Transfer Volumes of Class-1 Chemical Substances Designated by PRTR Law

Of the 354 kinds of class-1 chemical substances designated under PRTR regulations, the Hitachi Koki group uses 14 of these (more than 0.1 t/year per chemical as of the end of March 2002). We are now reducing the volume of chemicals discharged to the atmosphere when handling toluene and xylene as a matter of the highest priority. The final evaluation of alternatives to toluene and xylene has been finished and these alternatives will be introduced from the first half of fiscal 2002. The table shows those chemical substances where more than 0.1 t/year is handled at the Ibaraki Production Facilities. Refer to page 24 for the other production sites.

No.	Chemical substances designated by PRTR law (: Specific class-1 chemical substances)	Discharged volume of 2001 (t)
1	Bisphenol A epoxy resin (liquid)	15.91
2	Xylene	11.98
3	Toluene	3.51
4	Styrene	2.01
5	Barium and its compounds	0.98
6	Nickel	0.70
7	Ethylbenzene	0.62
8	Ethanolamine	0.53
9	Lead and its compounds	0.46
10	Hexavalent chromium compounds	0.30
11	Nickel compounds	0.23
12	Ethylene glycol monoethyl ether	0.19

Note) PRTR-applicable chemical substances were No. 1 and No. 2 in fiscal 2001.

PCB Control

All the devices or apparatus using PCBs were removed from our production facilities except for some condensers and transformers employed at a number of production facilities. Those devices still using PCBs are strictly controlled in accordance with the special PCB law regardless of whether they are in service or storage.

Water Conservation

Reduction of Water Volume Used

Through the vigorous application of water-saving measures since fiscal 2001, the Katsuta Plant (that accounts for two thirds of the total amount of water used in the entire Hitachi Koki group) has been able to make substantial saving. These measures include changing from high-tank flushing to pushing-button flushing for toilets, optimization of the amount of water used for washing plating and installation of water meters to the main pipes. As a result, the amount of water used at the Katsuta Plant was reduced by 31 % compared with the previous year. We will implement water-saving measures at other production sites from fiscal 2002.

