

# TOSHIBA TEC GROUP Environmental Report 2001



 **TOSHIBA TEC CORPORATION**



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# Message



The Toshiba TEC Group recognizes global environmental issues have become increasingly serious. It is a problem which mankind needs to solve cooperatively. Our staff regards environmental protection as the most important tasks for the management of our company. Our implementation of activities on protecting tomorrow's global environment is in association with our customers and our neighbors.

In accordance with the Toshiba Group's slogan - "Committed to People. Committed to the Future," - at the product development phase, we assess the impact of usage of the contemplated product and how to maximize recyclability and/or ease of disposal when it has come to the end of its life. Our business activities are being performed to contribute to establish a recycling-based society.

Through this "Environmental Report 2001," we hope you understand the entire Toshiba TEC group environmental protection activities, how these activities have been promoted in domestic business sites and overseas subsidiary companies, as well as what environmental protection measures are being taken for products.

This report also outlines our activities in each business site on prevention of global warming, effective use of resources, and controlling and reducing chemical substances.

Our dedication to reducing waste has resulted in many domestic plants declaring "Zero Emissions." Continuing the success of the activities at these sites and raising the level of the total environmental protection activities, we enhance the environment audit and education of the environment.

In establishing a recycling-based society, we have adopted the concept of environmental consciousness in the development of products (copiers, POS terminals, and vacuum cleaners). As for the copiers, in accordance with the Law for Promotion of Utilization of Recyclable Resources, we are creating products containing reused parts. As for the retail information products including POS terminals, we are establishing a product collection and recycling system to begin with the next year. Furthermore, recycling of small secondary batteries, and collection of plastic containers and packages have also been carried out. In addition to these activities, we will give considerations to environmental product planning concerns which take place in the planning phase.

Treasuring the partnership with our customers and our neighbors, we will continue to make great strides in protecting nature, clean water, and the air, in Izu Peninsula where Toshiba TEC originated, and to foster ties with the Earth.

On a continuous basis, Toshiba TEC updates information of these activities in our environmental reports and on our web site. We trust you will understand how committed we are to improving the environment and making it a healthier place for all of us to live. We welcome your comments and suggestions.

A handwritten signature in black ink that reads "Kenichi Mori". The signature is written in a cursive, flowing style.

Ken-ichi Mori  
President and Chief Executive Officer  
September 2001

# To Our Readers

## Editorial Policy

The Law for Promotion of Utilization of Recyclable Resources was enacted in April 2001, based on the Basic Law for Establishing the Recycling-based Society. It promotes collection, reuse, and recycling of "end-of-use" products.

The Toshiba TEC Group assesses the environmental impact of usage of the contemplated product and how to maximize recyclability when it has come to the end of its life, are carrying out environmental protection activities including manufacturing of environmentally conscious products.

In October 2000, Toshiba TEC issued their first environmental report as the Toshiba TEC Environmental Report 2000 describing the above environmental protection activities. The Toshiba TEC Environmental Report 2001 was made in accordance with the Environmental Reporting Guidelines prepared by the Ministry of the Environment. It covers the results of environmental protection activities of Toshiba TEC and its main subsidiary companies in the fiscal year 2000 (from April 1, 2000 to March 31, 2001), and future prospects.

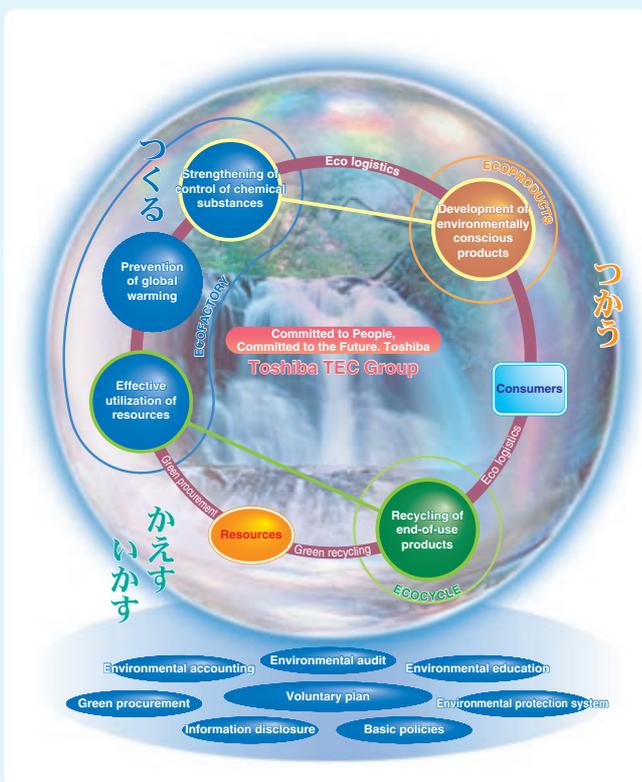
The Toshiba TEC Environmental Report 2001 consists mainly of "Toshiba TEC Group's Commitments," "Environmental Protection Activities at Manufacturing Bases," and "Environmentally Consideration Regarding Products."

As the Toshiba TEC Group's Commitments, the environmental voluntary plan, the environmental accounting, and the environmental management are outlined. It includes data obtained from the domestic and overseas subsidiary companies. Environmental Protection Activities at Manufacturing Bases contain activities characteristic of each business site or domestic production subsidiary companies.

Environmental Consideration Regarding Products introduces environmentally conscious products designed taking into consideration, the impact of usage of the contemplated products and usage by customers.

## Items Added or Improved in Environmental Report 2001

- (1) Increase of the number of reported group companies from 5 to 15
- (2) Review of the second environmental voluntary plan, and the third voluntary plan (on pages 8 and 9)
- (3) Environmental accounting (including overseas subsidiary companies) (on pages 10 and 11)
- (4) Evaluations of environmental facilities for pollution prevention (on page 13)
- (5) Environmental protection activities at manufacturing bases (TOSHIBA TEC business sites, domestic subsidiary companies, and overseas subsidiary companies) (on pages 18 though 24, and 37)
- (6) Information on environmentally consideration regarding products (energy saving during operation, recycling of end-of-use product, environmental labeling, etc.) (on pages 26 though 37)
- (7) Occupational health and safety



## Scope of this Report

### Toshiba TEC Corporation

Ohito Business Center  
Mishima Works  
Yanagicho Works  
Hadano Plant

### Domestic subsidiary companies

FUJIKEN CO., LTD.  
TOSEI DENKI CO., LTD.  
TEC KASHIYA DENKI CO., LTD.  
TEC IZU DENSHI CO., LTD.  
TEC PRECISION, INC.  
TEC MRC CO., LTD.  
TEC SPARE PARTS SUPPLY CO., LTD.  
TEC SANGYO CO., LTD.

### Overseas subsidiary companies

TEC SINGAPORE ELECTRONICS PTE. LTD.  
TIM ELECTRONICS SDN. BHD.  
TOSHIBA TEC EUROPE IMAGING SYSTEM S.A.  
TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD.  
TOSHIBA TEC GERMANY IMAGING SYSTEMS. G.m.b.H  
TOSHIBA TEC FRANCE IMAGING SYSTEMS S.A.  
TOSHIBA AMERICA BUSINESS SOLUTIONS, INC.

# Topics of Fiscal 2000

## Environmental Report

### First issue of Environmental Report

The Toshiba TEC Environmental Report 2000 was issued on October 20, 2000.

On that day, The 5th Technologies Exhibition was held at Mishima Works. Before opening the exhibition, Mr. Ken-ichi Mori, president and chief executive officer, placed his commemorative signature on the report in the environmental engineering booth. The English version and the 8-page digest version were also issued. Toshiba TEC is planning to issue the environmental report yearly.



Digest version

## Environmental Accounting

### Overseas production subsidiary companies joined in the environmental accounting.

The three domestic subsidiary companies introduced the environmental accounting in the fiscal year 1999. In the fiscal year 2000, four overseas subsidiary companies subject to consolidated accounts joined. Eight companies, including Toshiba TEC, have adopted the environmental accounting.

This accounting data is incorporated into TOSHIBA Group's environmental accounting.

#### Companies adopting environmental accounting:

1. TOSHIBA TEC CORPORATION
2. FUJIKEN CO., LTD
3. TOSEI DENKI CO., LTD.
4. TEC IZU DENSHI CO., LTD
5. TEC SINGAPORE ELECTRONICS PTE. LTD
6. TIM ELECTRONICS SDN. BHD
7. TOSHIBA TEC EUROPE IMAGING SYSTEM S. A.
8. TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD.

For details, see page 10.

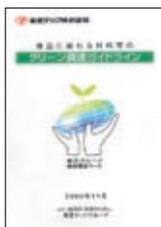
## Green Procurement

### Explanatory meetings were held for partners.

Toshiba TEC issued the Green Procurement Guidelines in November 2000 and has held explanatory meetings for the Guidelines since December 2000.

Toshiba TEC started Evaluation of Environmental Protection Activities made by the partners, and has just started Environmental Performance Investigation on Procured Products in September 2001.

For details, see page 25.



## Collection and Recycling System for Copiers

### Collection and Recycling bases have been set up in Japan.

The Document Processing & Telecommunication Systems Company of Toshiba TEC has established the collection and recycling system for copiers in Japan. The ninth collection and service base was set up in Sendai area in the summer of 2001, which completed the nationwide deployment of collection and recycling of copiers.

In April 2001, Toshiba TEC introduced a remanufactured product with a reused part rate of 60% as the PREMAGE651RM digital plain paper copier (for Japan).

For details see page 34.

## Actions for Lead-free Soldering

### Working group activities were accelerated.

Reduction of lead soldering has been demanded since it includes a toxic substance. The research team found a substitute for lead soldering, which facilitated the manufacturing of lead-free soldering products. The Home Electric Appliances Group started to sell the VC-M12V vacuum cleaner containing a board produced through lead-free soldering in February 2001.

For details, see page 27.

## End of the Second Environmental Voluntary Plan

### 10 commitment items were achieved.

The second environmental voluntary plan started in April 1996 and ended on March 31, 2001. A concrete action plan for the 12 items was made, in which the development and design departments along with manufacturing sites determined the targets and made efforts to achieve them.

All targets regarding the products were achieved. As for the target regarding manufacturing, reduction of waste has been considerably improved and zero emissions are nearly achieved. However, targets regarding energy saving and reduction of chemical substances have not yet been achieved.

For details, see page 8

# Company Profile

## Company Profile

**Company name:** TOSHIBA TEC CORPORATION  
**Paid-in capital:** 39.9 billion yen  
**Establishment:** February 21, 1950  
**Number of employees:** Not consolidated: 5531 (as of April 2001)

**Business Description:**

1. Production and distribution of electric appliances
2. Production and distribution of office machines
3. Production and distribution of scales, medical instruments, medical instruments for animals, gas instruments, and other instruments
4. Production and distribution of chemical products
5. Production and distribution of freezers/refrigerators, vending machines, household water purifying machines, packaging machines, and air conditioning equipment
6. Production and distribution of household or business garbage processors
7. Lease, buying and selling of used products, replacement and production/distribution of parts related to the above products
8. Development, design, production, distribution and lease of software for computers
9. Information processing and information supply service
10. Planning, design, management, and undertaking of construction work, plumbing, electrical work, and networking
11. Buying and selling, lease, agency, management of real estate
12. Finance business
13. Temporary personnel service
14. Every business related to or incidental to the above items

**Head office:** 1-1, Kanda Nishiki-cho, Chiyoda-ku, Tokyo, 101-8442 Japan  
 Phone: +81-3-3292-6223

**Retail Information Systems Company:** 3-21-1 Nihonbashi Hama-cho, Chuo-ku, Tokyo

**Document Processing & Telecommunication Systems Company:** 2-4-1, Shibakoen, Minato-ku, Tokyo

**Home Electric Appliances Group:** 1-1, Kanda Nishiki-cho, Chiyoda-ku, Tokyo

**Research & Development Center:** 6-78, Minami-cho, Mishima-shi, Shizuoka (in Mishima Works)

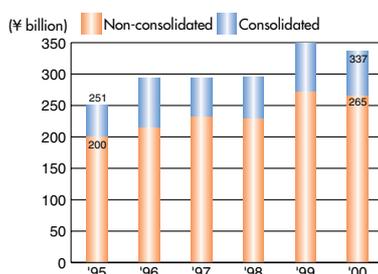
### Business sites and plant:

(Business sites/plant)	(Location)	(Products)
Ohito Business Center	Ohito-cho, Tagata-gun, Shizuoka	POS systems, electronic cash registers, electronic scales, etc.
Mishima Works	Mishima-shi, Shizuoka	Facsimile machines, printers, etc.
Yanagicho Works	Kawasaki-shi, Kanagawa	Digital multifunctional copiers, etc.
Hadano Plant	Hadano-shi, Kanagawa	Vacuum cleaners, health equipment, etc.

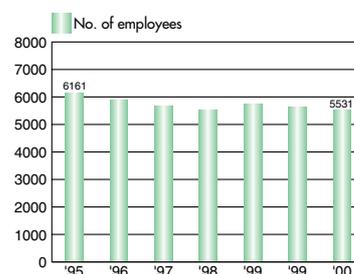
### Subsidiary companies:

Japanese companies	Production	7 companies	Overseas companies	Production	5 companies
	Sales, maintenance, or service	6 companies		Sales or service	16 companies
	Software	2 companies		Software	1 company
	Other	2 companies		Procurement	1 company
	Total	17 companies		Other	1 company
			Total	24 companies	

**Net Sales (Consolidated)**



**Number of Employees**



## History of Toshiba TEC's Environmental Protection Activities

Appointed the in-house company presidents and general managers to Environmental Protection Administrators.  
Renamed the Corporate Environmental Protection Administrator as Corporate Environmental Protection Promoter.  
Renamed as TOSHIBA TEC Corporation.  
Copier business transferred from Toshiba Corporation.  
Lighting business transferred to Toshiba Lighting & Technology Corporation

Established the ECP Promotion Committee.

Established the TEC social contribution fund system  
Changed the name of Corporate Environmental Protection Committee to the Corporate Environmental Protection Council.  
Renamed as TEC Corporation.  
Facsimile machine and laser beam printer businesses transferred from Toshiba Corporation.

Established the Corporate Environmental Protection Committee.  
Appointed the director responsible for environmental protection as Environmental Protection Administrator.

Established the Analysis Department in Mishima.  
Established the Environmental Protection Department in Ohito and Hadano.  
Established the Environmental Protection Department in Mishima.  
Renamed as Tokyo Electric Co., Ltd.  
.Founded as Tokyo Electric Appliances Co., Ltd.

**2001**  
Issued TOSHIBA TEC Environmental Report 2001.  
Planned and announced the Third Environmental Voluntary Plan.  
Reviewed the Second Environmental Voluntary Plan.  
Implemented Environmental Accounting including the domestic and overseas consolidated subsidiary companies.  
Issued TOSHIBA TEC Environmental Report 2000.  
Introduced Environmental Accounting in the domestic manufacturing sites and consolidated subsidiary companies.  
Completed the sewer connecting constructions at the domestic manufacturing sites.

**2000**  
Accredited with ISO 14001 (Yanagicho in January).  
Completed construction of visible industrial wastewater plumbing at all the domestic manufacturing sites.

**1999**  
Dismantled waste incinerators from all the domestic manufacturing sites  
Accredited with ISO 14001 (Ohito in June).  
Accredited with ISO 14001 (Hadano and Mishima in March).  
Set up Recycle Centers in all the domestic manufacturing sites  
Planned and announced the Second environmental Voluntary Plan.  
Established the Environmental Policy.  
Kicked off the activities to be accredited with ISO 14001

**1998**  
Dismantled waste incinerators from all the domestic manufacturing sites  
Accredited with ISO 14001 (Ohito in June).  
Accredited with ISO 14001 (Hadano and Mishima in March).  
Set up Recycle Centers in all the domestic manufacturing sites  
Planned and announced the Second environmental Voluntary Plan.  
Established the Environmental Policy.  
Kicked off the activities to be accredited with ISO 14001

**1997**  
Set up Recycle Centers in all the domestic manufacturing sites  
Planned and announced the Second environmental Voluntary Plan.  
Established the Environmental Policy.  
Kicked off the activities to be accredited with ISO 14001

**1996**  
Kicked off the activities to be accredited with ISO 14001

**1995**  
Kicked off the activities to be accredited with ISO 14001

**1994**  
Implemented the Environmental Audit System (EASTER) at the domestic manufacturing sites and all subsidiary companies.  
Abolished use of chlorofluorocarbons and 1,1,1-trichloroethane in all the domestic manufacturing sites and subsidiary companies.  
Planned the First Environmental Voluntary Plan.

**1993**  
Planned the First Environmental Voluntary Plan.

**1992**  
Planned the First Environmental Voluntary Plan.

**1989**  
Established the Corporate Environmental Protection Basic Regulations.

**1986**  
Abolished use of trichloroethylene at all business sites.

**1977**  
Abolished use of trichloroethylene at all business sites.

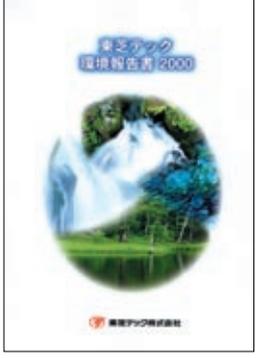
**1975**  
Abolished use of trichloroethylene at all business sites.

**1974**  
Abolished use of trichloroethylene at all business sites.

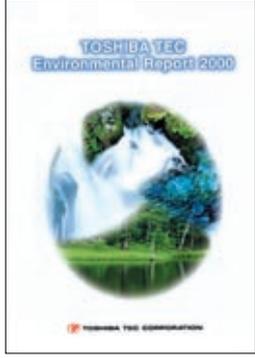
**1952**  
Abolished use of trichloroethylene at all business sites.

**1950**  
Abolished use of trichloroethylene at all business sites.

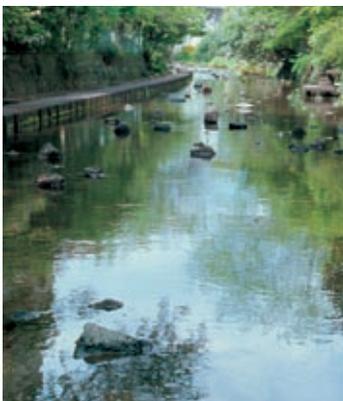
**Issue of Environmental Reports**  
**First issue: Toshiba TEC Environmental Report 2000**



Japanese version issued on October 20, 2000.



English version issued on November 20, 2000



Genpei River, Mishima

# Environmental Management

## **BASIC COMMITMENT OF THE TOSHIBA GROUP**

We, the Toshiba Group companies, based on our total commitment to people and the future, are determined to help create a higher quality of life for all people, and to do our part to help ensure that progress continues within the world community.

### **COMMITMENT TO PEOPLE**

We endeavor to serve the needs of all people, especially our customers, shareholders, and employees, by implementing forward-looking corporate strategies while carrying our responsible and responsive business activities. As good corporate citizens, we actively contribute to further the goals of society.

### **COMMITMENT TO THE FUTURE**

By continually developing innovative technologies centering on the fields of Electronics and Energy, we strive to create products and services that enhance human life, and which lead to a thriving, healthy society. We constantly seek new approaches that help realize the goals of the world community, including ways to improve the global environment.

**Committed to People,  
Committed to the Future. TOSHIBA**

## **Philosophy**

We, at TOSHIBA TEC CORPORATION and its group companies, will pursue excellence in all matters through dynamic and wise application of the latest knowledge, undertaking efforts for a better environment and assuring our contribution to society, to development of each group company and to promotion of the happiness of each group member.

## **Principles**

1. We will provide products that customers need and appreciate, giving first priority to customer satisfaction.
2. We will provide the quality that engenders customers' confidence.
3. We will always pursue new technologies to establish higher corporate and social values.
4. We will respect each individual's capability to work to the fullest.
5. We will view our business from a worldwide standpoint as a global corporation.
6. We will contribute, as a good corporate citizen, to development of society, undertaking efforts for a better environment.
7. We will share our prosperity with all the people concerned, including customers, shareholders and group members.

**Toshiba TEC Group**

## **Basic Philosophy for Environmental Protection**

We, the Toshiba TEC Group companies, based on the recognition that the basic obligation of existing human beings is to hand down to our next generation, our irreplaceable Earth in a sound state. Therefore, we are determined to act according to the Toshiba TEC Group's management philosophy and policy.

For the business activities, products and services that have a great impact on the environment, we set objectives and targets, in every phase of the group, to the extent that is technically and economically possible, in order to continually improve the environmental management system.

## **Basic Policy for Environmental Protection**

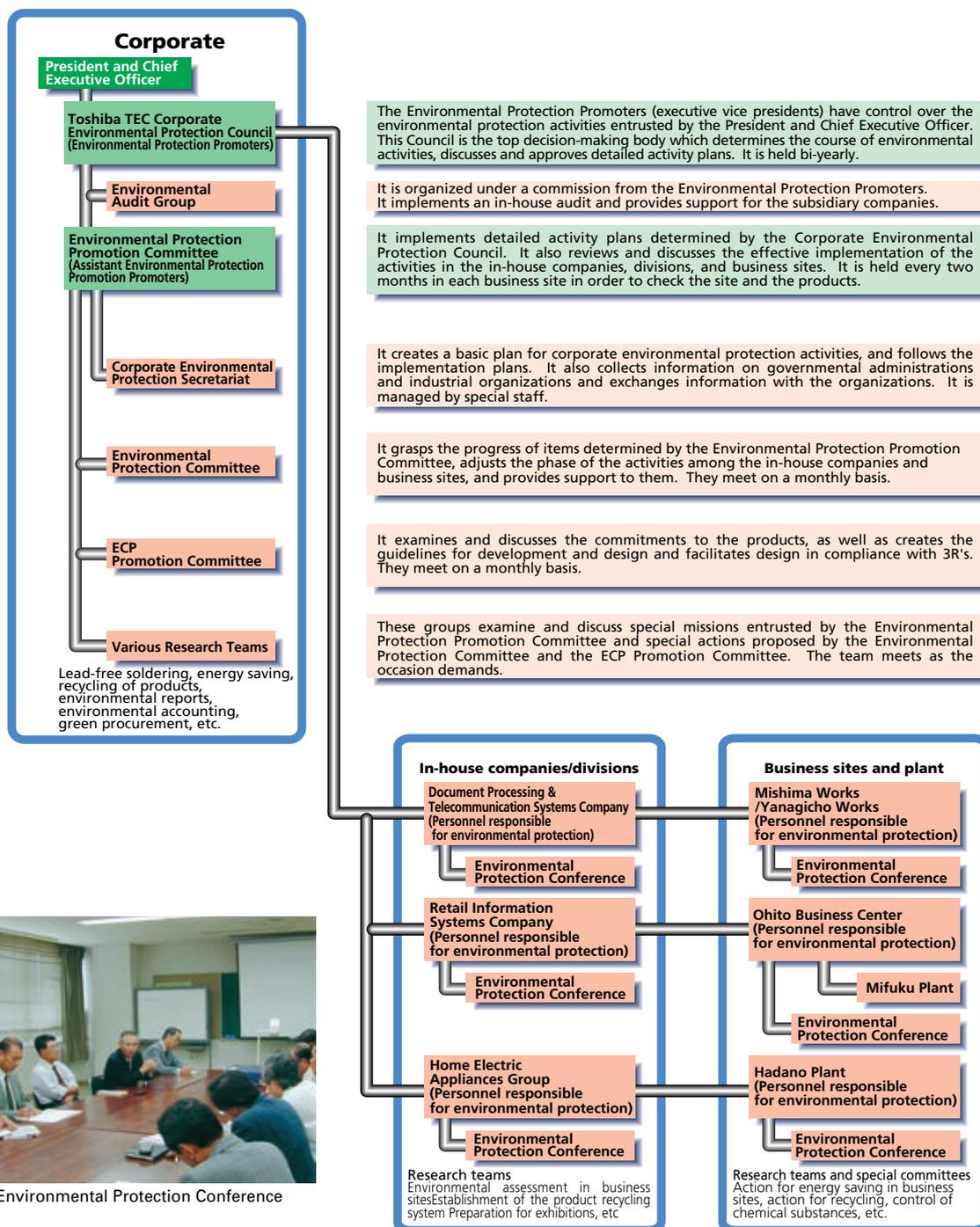
- (1) Toshiba TEC Group considers environmental protection to be one of management's primary responsibilities.
- (2) Toshiba TEC Group specifies objectives and targets for its business activities, products and services to reduce environmental impacts and prevent pollution.
- (3) Toshiba TEC Group continually strives to improve the environment through vigorous implementation of environmental measures.
- (4) Toshiba TEC Group complies not only with laws and regulations, and industry guidelines, which it has endorsed, but also its own standards for environmental protection.
- (5) Toshiba TEC Group contributes to society through its environmental protection activities, which include the development and supply of excellent, environmentally conscious technologies and products in cooperation with the local community.
- (6) Toshiba TEC Group recognizes that natural resources are finite, and committed to reducing, reusing and recycling in each phase of production covering use of materials, manufacturing, distribution, consumption, collection, and recycling and reusing.
- (7) Toshiba TEC Group educates all its employees to enhance their consciousness of the environment.
- (8) Toshiba TEC Group instructs and supports subsidiary companies to advance environmental activities throughout the Toshiba TEC Group.
- (9) Toshiba TEC Group notifies those inside and outside of the group, of implementations of the environmental protection activities as needed.

**Toshiba TEC Group**

Established in  
April 1995  
Revised in  
September 2001

## Environmental protection system

With aims of enhancing our commitment to the environmental protection throughout the Toshiba TEC Group and making it integral to the operation of every Toshiba TEC Group company, Toshiba TEC set up the Corporate Environmental Protection Committee in 1989 (renamed as Corporate Environmental Protection Council in 1994). Chaired by the Environmental Protection Promoter (director responsible for environmental protection), the council discusses and determines various environmental issues. As its subordinate organizations, the environmental protection conference was set up in the in-house companies, divisions and business sites, to advance the corporate activities for environmental protection.



# Environmental Voluntary Plan

(Company Independent Action Plan)

## Summary of implementation of the second voluntary plan

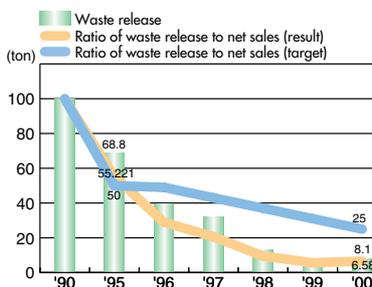
The Toshiba TEC business sites and development/design departments implemented the second voluntary plan, according to their own purposes and targets, from April 1996 to March 2001.

2 out of the 4 commitment items of the first environmental voluntary plan were not achieved. One of the 2 commitment items, "reduction of ratio of waste to net sales," was achieved in the second voluntary plan. The other item remaining unachieved, "reduction of ratio of energy to net sales," is now being tackled as one of the commitment items for the third voluntary plan. Reduction of utilization of toxic chemical substances was not achieved either, in the second voluntary plan, since there was hindrance in taking an action for lead-free soldering. The introduction of lead-free soldering was individually selected as a commitment item for the third voluntary plan.

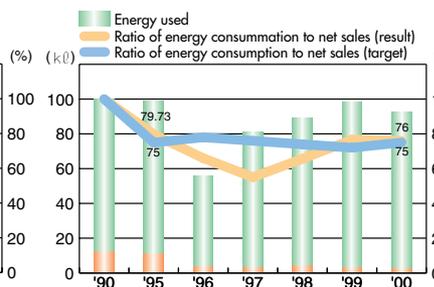
## Achievement of the second voluntary plan (April 1, 1996 to March 31, 2001)

Commitment items	Targets	Final result as of fiscal 2000	Achieve ratio
1 Implement product assessments	All products from fiscal 1995	100% implemented	😊
2 Reduce use of parts and materials that are difficult to recycle	30% reduction by fiscal 2000, compared with fiscal 1995	-42%	😊
3 Reduce weight per product function	10% reduction by fiscal 2000, compared with fiscal 1995	-26%	😊
4 Reduce electricity consumed per product function	10% reduction by fiscal 2000, compared with fiscal 1995	-48%	😊
5 Reduce weight of product packaging	30% reduction by fiscal 2000, compared with fiscal 1995	-30%	😊
6 Reduce time required to disassemble products	30% reduction by fiscal 2000, compared with fiscal 1995, by facilitating product disassembly.	-35%	😊
7 Reduce use of Styrofoam packaging	50% reduction by fiscal 2000, compared with fiscal 1995	-85%	😊
8 Reduce ratio of waste to net sales	75% reduction by fiscal 2000, compared with fiscal 1990	-93%	😊
9 Reduce ratio of energy consumption to net sales	25% reduction by fiscal 2000, compared with fiscal 1990	-24%	😞
10 Secure ISO 14001 certification	All business sites by fiscal 1998	Completed in June 1997	😊
11 Establish and implement a product environmental vision	Vision established and implemented in each in-house company and business site	100% implemented	😊
12 Reduce utilization of toxic chemical substances	50% reduction of utilization of chemicals subject to the 33/50 Project of the U.S. Environmental Protection Agency by fiscal 2000, compared with fiscal 1995	-28%	😞

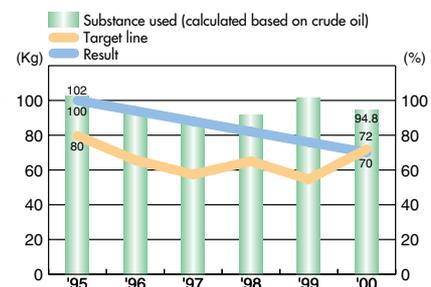
Reduction of waste and ratio to net sales



Energy consumption to net sales (calculated based on crude oil)



Chemical substance to net sales



## Start of the third voluntary plan (April 1, 2001 to March 31, 2006)

The Toshiba TEC's third voluntary plan, covering the period from the fiscal years 2001 to 2005 is now being implemented. The principal commitments for this plan are the Zero Emissions, the Reduction of CO<sub>2</sub> Emission per Unit Production Output, and the Application of Lead-free Soldering.

### Zero emissions

By facilitating the conversion to reduce waste at the design phase and thorough reusing and recycling, Toshiba TEC aims to reduce the quantity of final disposal (landfill or incineration) to 1% or less of the total discharge, by the fiscal year 2003.

### Reduction of CO<sub>2</sub> emission Per unit production output

Through optimization of management and investment in facilities, Toshiba TEC aims to achieve saving energy. It also aims to reduce CO<sub>2</sub> emissions per unit production output through the appropriate arrangement of inverter controllers, effective use of night-time electricity, and promotion of peak cut.

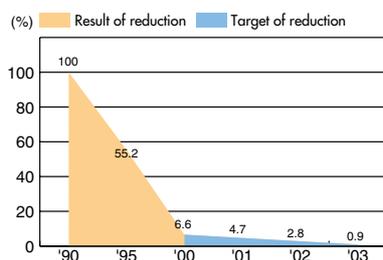
### Application of lead-free soldering

Application of lead-free soldering is being expanded step by step, starting with the vacuum cleaners and bar code printers in the fiscal year 2000. Toshiba TEC intends to apply lead-free soldering to all new models distributed in and after April 2003.

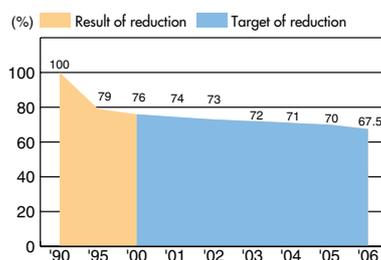
Commitment items	Target
1 Zero emissions of waste	Started in 2001; final disposal to 1% or less of total discharge by the end of fiscal 2003
2 Reduce release of chemical substances	30% reduction by the end of fiscal 2005 compared with fiscal 2000
3 Reduce CO <sub>2</sub> emissions	25% reduction by the end of fiscal 2010 compared with fiscal 1990
4 Green procurement	Set target by the end of the fiscal year 2001
5 Provide product information	50% of products to be in compliance with the voluntary standards by the end of fiscal 2005
6 Reduce electricity consumed per product function	30% reduction by the end of fiscal 2005 compared with fiscal 2000
7 Apply lead-free soldering	Application of lead-free soldering to all products distributed in and after April 2003
8 Abolish HCFCs*	Abolition by December 2004

\* HCFCs is the abbreviation of hydrochlorofluorocarbons, substances widely used as refrigerant in air conditioners, etc. Pursuant to the Montreal Protocol of 1995 on protection of the ozone layer, HCFCs, substitutes for CFCs, are within the scope of regulation and their use is to be abolished by 2020.

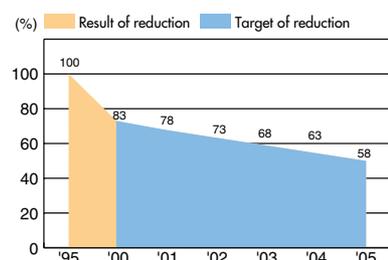
Target of reduction of waste



Target of reduction of CO<sub>2</sub> emission per unit production output



Target of reduction of chemical substances



# Environmental Accounting

## Investment and cost

Subject of aggregation: Toshiba TEC Corp. and 3 domestic subsidiary companies and 4 overseas subsidiary companies  
 Subject period: April 1, 2000 to March 31, 2001

### Environmental costs

(Unit: thousands of yen)  
 Figures in parenthesis are figures for Toshiba TEC on a non-consolidated basis.

Classification	Content	Expenditure	Current expenses	Total costs
Business area costs	Reduction of environmental impacts 1)-3)	162,733 (160,721)	140,711 (125,126)	303,444 (285,847)
Content	1)Pollution prevention costs	23,485 (22,221)	39,278 (35,539)	62,764 (57,760)
	2)Global environmental costs	127,603 (127,603)	11,075 (6,764)	138,678 (134,367)
	3)Resource circulation costs	11,645 (10,897)	90,358 (82,823)	102,002 (93,720)
Upstream/downstream costs	Green procurement, recycling, etc.	9,187 (0)	63,423 (60,893)	72,610 (60,893)
Management activity costs	Environmental education etc.	0 (0)	246,913 (218,010)	246,913 (218,010)
R&D costs	Development of ECP	6,810 (6,810)	191,361 (183,681)	198,171 (190,491)
Social activity costs	Tree planting, disclosure of information, etc.	0 (0)	44,322 (37,963)	44,322 (37,963)
Environmental damage costs	Restoration of soil pollution, etc.	0 (0)	0 (0)	0 (0)
Total		178,730 (167,531)	686,730 (625,673)	865,460 (793,204)

Toshiba TEC participated in the Environmental Accounting System as a member of the Toshiba Group basic framework, as it did in the fiscal year 1999. In the fiscal year 2000, its overseas production subsidiary companies that are consolidated to Toshiba, also joined in this system.

The Toshiba Group's Environmental Accounting System was introduced in the fiscal year 1999. Classification of environmental costs and the calculation criteria are in accordance with the guidelines established by the Environment Agency (the current Ministry of the Environment) of Japan in May 2000.

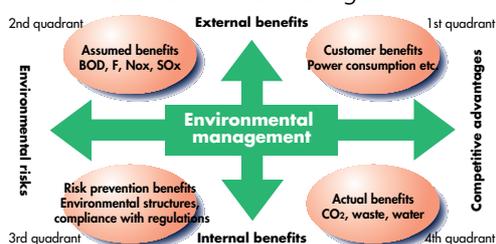
Regarding benefits, environmental impact reduction benefits are indicated quantitatively. Also, Toshiba TEC defined its own standards, namely "actual economic benefits" and "assumed economic benefits," and monetary values of these economic benefits are calculated.

#### Calculation result

	Toshiba TEC Group	(Toshiba TEC not-consolidated)
Environmental protection costs	¥870 million	(¥790 million)
Actual benefits	¥30 million	(¥40 million)
Assumed benefits	¥110 million	(¥110 million)
Customer benefits	¥310 million	(¥290 million)

Total expenditure during the period	4,219,797 (3,177,713)
Total R&D expenditure during the period	24,967,189 (24,377,734)

The figure below indicates the orientation of Toshiba Group's environmental accounting. Toshiba's environmental accounting, for fiscal 1999, are primarily concerned with the second and the fourth quadrants. The third quadrant was calculated as a part of the total benefits for internal control. For fiscal 2000, Toshiba calculated the first quadrant, as benefits to society. In the environmental accounting this time, customer benefits were evaluated on representative models of copiers and vacuum cleaners. The evaluation will be made with a larger range of products. This system is still in its infancy. By providing versatility and through trial and error, Toshiba TEC is working to establish a better approach, so that measured benefits serve as appropriate indices for environmental management.



#### Companies subject to calculated

- TOSHIBA TEC CORP.  
Ohito Business Center  
Mishima Works  
Yanagicho Works  
Hadano Plant

#### Domestic subsidiary companies

- FUJIKEN CO., LTD.
- TOSEI DENKI CO., LTD.
- TEC IZU DENSHI CO., LTD.

#### Overseas subsidiary companies

- TEC SINGAPORE ELECTRONICS PTE. LTD.
- TIM ELECTRONICS SDN. BHD.
- TOSHIBA TEC EUROPE IMAGING SYSTEM S.A.
- TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD.

## Effects

### Environmental benefits

(Unit: thousands of yen)

Figures in parenthesis are figures for Toshiba TEC on a non-consolidated basis.

Benefits	Environmental impact reduction (Values with ▲: Differences between fiscal years 1999 and 2000)		Benefits by amount (Values with ▲: Increase of expenditure)		Economic benefits
CO <sub>2</sub>	▲424ton	(▲585ton)	34,392	(32,941)	<b>Actual benefits</b> 31,770 (40,616)
Water	▲22,648m <sup>3</sup>	(▲2,509m <sup>3</sup> )	▲84	(856)	
Final disposal of waste	▲80ton	(▲34ton)	10,523	(6,804)	
BOD	▲549kg	(▲527kg)	34,392	(32,941)	
Fluorine	▲9.6kg	(▲13kg)	▲799	(291)	
Total nitride	96kg	(▲38kg)	2,377	(2,377)	
Particles of soot	▲11.2kg	(0)	0	(0)	
NO <sub>x</sub>	▲49.6kg	(▲49.6kg)	1	(1)	
SO <sub>x</sub>	2kg	(2kg)	▲2	(▲2)	
Other	▲78.8kg	(▲78.8kg)	0	0	
<b>Total</b>					<b>Assumed benefits</b> 110,670 (111,555)
					31,770 (40,616)

Customer benefits	Environmental impact reduction volume	Monetary value of benefits
Environmental impact reduction benefits during use	Conversion to electricity consumption: 5.2 million kW	Toshiba TEC: ¥290 million Subsidiary companies: ¥20 million Total: ¥310 million

- Changes in the main environmental impacts are presented on page 14. Indicated in the above table are differences in volumes of environmental impacts in fiscal 1999 and in fiscal 2000.
- Benefits concerning waste include gain from sale of items with value.
- Main items of assumed economic benefits are shown in the above table.
- Customer benefits were calculated for 3 types of products; copiers, vacuum cleaners and POS registers.

	Economic benefit items	Environmental impact reduction items
Actual benefits	Environmental impacts can be clarified quantitatively and easily converted into monetary value.	Reduction of electricity Reduction of fuel Reduction of water Reduction of waste
Assumed benefits	Environmental impacts can be clarified quantitatively and converted into monetary value based on certain assumptions.	Reduction of environmental impacts on atmosphere Reduction of environmental impacts on water
Customer benefits	Reduction of environmental impacts during use by customers, such as reduction of power consumption, and other economic benefits are calculated.	Reduction of environmental impacts during use of products

### Basis for calculation of assumed benefits

Monetary values were calculated by giving each substance, calculated in terms of cadmium, a weighting based on environmental standards and ACGIH-TLV (allowable concentration of each substance as determined by the American Conference of Governmental Industrial Hygienists) and multiplying the result by the amount of compensation in the case of cadmium pollution. Reduction in environmental impacts on atmosphere, water and soil is indicated quantitatively and the environmental impact reduction volumes are compared with the previous year's results, and also reduction of environmental impacts is calculated in terms of monetary value to enable comparison of various environmental impacts on the same basis.

\* Explanation of the concept of weighting by referring to cadmium and hexavalent chromium

Environmental standard values for cadmium and hexavalent chromium are 0.01mg/l and 0.05mg/l, respectively, and the reciprocals, 100 and 20, respectively, are used as weighting coefficients for the substances. According to comparison using weighting coefficients, environmental impact cost of hexavalent chromium is calculated to be ¥2,502,144/kg, which is one fifth of that of cadmium. Regarding atmosphere-related environmental impacts, data of ACGIH are used for weighting.

### Basis for calculation of customer benefits

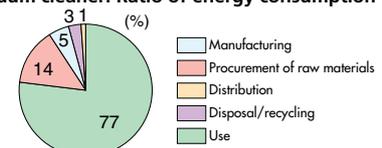
Benefits of reduction of environmental impacts of products throughout their life cycles are calculated in terms of physical quantity units and monetary units. A life cycle comprises several phases: 1) procurement of raw materials, 2) manufacturing, 3) transport, 4) use, 5) collection, 6) recycling and 7) appropriate processing. Toshiba TEC's environmental accounting focuses on the benefits of reduction of environmental impacts at the use phase. Energy-saving benefits are calculated using the following formula.

Benefits (yen) =  $\sum$  [(power consumption per year of the former model - power consumption per year of the new model) x number of units sold per year x benchmark unit price of electricity charge]

### Ratio of the environmental impacts at the use phase

According to LCA of Toshiba TEC's representative vacuum cleaner model, the environmental impacts for the use phase (energy consumption, CO<sub>2</sub> emission, etc.) account for the largest portion of environmental impacts for the entire life cycle and the environmental impacts for the transport, collection and recycling phases are negligible.

Vacuum cleaner: Ratio of energy consumption



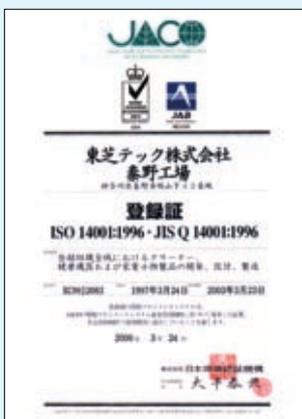
# Environmental Management System

## ISO 14001 certifications

Toshiba TEC established a system to reduce environmental impacts and to continuously implement environmental protection activities. Considering ISO 14001, the international standard for environmental management systems to be an effective tool, Toshiba TEC has been recommending that its domestic and overseas subsidiary companies be accredited with it.

### ● ISO 14001 certifications at domestic business sites

The Hadano Plant and the Mishima Works were accredited in March 1997 and the Ohito Business Center in June 1997. This indicates that all the three domestic manufacturing sites are certified. Toshiba TEC received an extended examination that included examinations at TEC IZU DENSHI at the renewal time to promote accreditation jointly with its subsidiary company. The Yanagicho Works had been certified as a company in Toshiba Yanagicho Works in January 1999, when it separated from Toshiba.



Hadano Plant



Mishima Works



Ohito Business Center



Yanagicho Works

### ● ISO14001 certification at overseas subsidiary companies

To provide the overseas subsidiary companies with the management system similar to that for the domestic business sites, Toshiba TEC intended for the three bases in Southeast Asia to be accredited with ISO. As a result, TEC SINGAPORE ELECTRONICS PTE. LTD. and TIM ELECTRONICS SDN. BHD. (Malaysia) were certified in April 1998. Then, PT TEC INDONESIA was certified in August in the same year.

According to the transfer of the copier business from Toshiba to Toshiba TEC in January 1999, the overseas subsidiary companies in Europe, the United State, and China were accredited, in succession.

## Environmental audit

As a member of the Toshiba Group, Toshiba TEC has been implementing the voluntary audit from 1994, in accordance with the Environmental Audit System in Toshiba on the bases for ECO Responsibility (EASTER).

The "environmental management system" has been audited according to ISO 14001, and improvements in environmental performance such as "control of workplace" and "achievement of the voluntary plan" have been audited according to EASTER. The voluntary audit enables objective evaluation of environmental protection activities in each business site and transmission of such activities among the sites, in order to improve the level of environmental protection. The evaluation results are reported to the top management and reflected on management operations.



Auditing in the field

# Environmental Education

## Environmental education

The education according to position is offered to the personnel at every level from new employees to senior management, to enhance the environmental consciousness and expertise. The curriculum includes the basic policy for environmental protection, the laws and regulations concerning the environment, the voluntary plan for environmental protection (VPE), the environmental management system (EMS) and the environmental audit. Not only Toshiba TEC personnel but also personnel of the subsidiary and cooperating companies receive environmental education.

### Education according to position



Managerial personnel

Non-managerial personnel

New employees

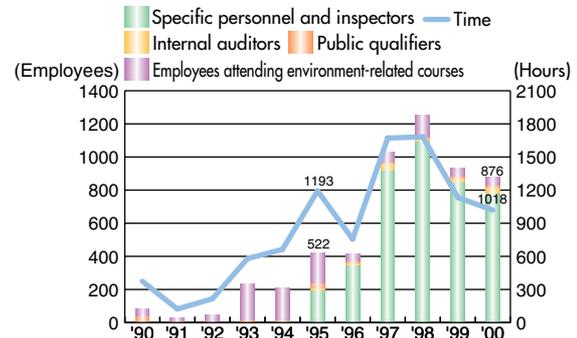
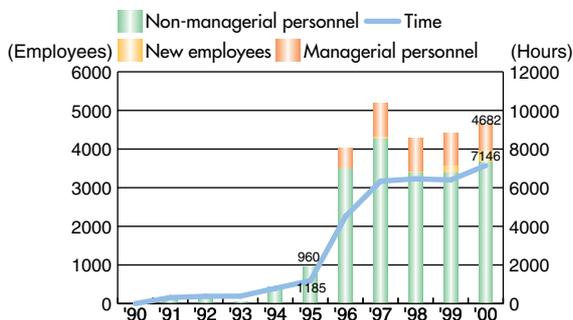
### Education according to specialty

Education for internal auditors

Education for personnel in charge of environmental protection

Education for specific personnel and inspectors

Education for development and design engineers



### Education for internal auditors, specific personnel and engineers

Toshiba TEC provides education for internal auditors and specific personnel to audit the compliance with the ISO 14001 requirements. Through their official qualification, the trainees recognize the necessity for appropriate judgment and observe the laws and regulations.

The development and design engineers receive environmental engineering education allowing them to advance the creation of environmentally conscious products.



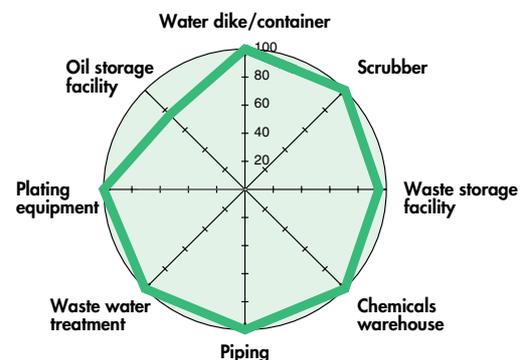
Education for managerial personnel

## Environmental structure management

Environmental structures are improved according to the Toshiba Group's guidelines, in order to reduce environmental impact.

- A: Guidelines for installation and structure of water dikes and containers
- B: Guidelines for installation and structure of scrubbers for waste gas
- C: Guidelines for installation and structure of waste storage facilities
- D: Guidelines for installation and structure of chemical warehouses
- E: Guidelines for piping liquid chemical substances and waste water
- F: Guidelines for installation and structure of waste water treatment facilities and on-site water waste systems
- G: Guidelines for installation and structure of plating equipment
- H: Guidelines for installation and structure of oil storage facilities

### Compliance with the environmental structure guidelines (%)

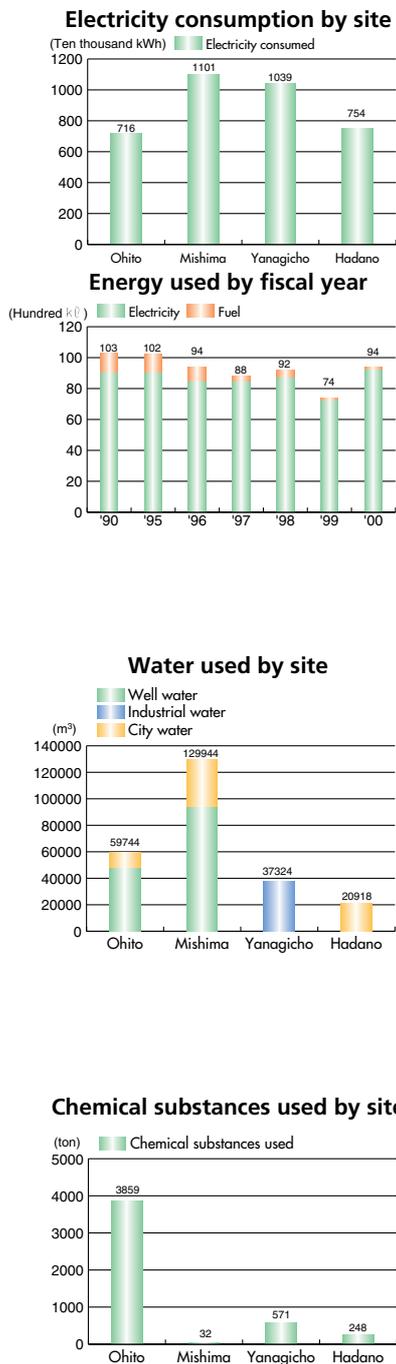


# Environmental Aspects

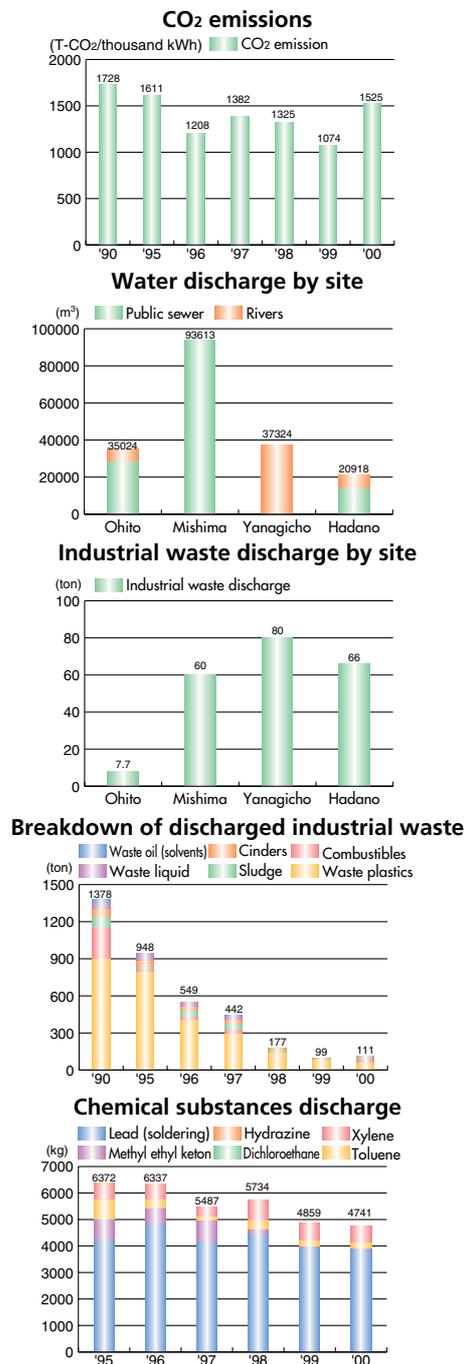
## Toshiba TEC's environmental impact

Manufacturing at Toshiba TEC does not cause any special environmental impact, since the assembling of POS terminals, copiers, facsimile machines, vacuum cleaners and health equipment mainly consists in manufacturing process. Therefore, Toshiba TEC substitutes natural gas and electricity for crude oil to reduce CO<sub>2</sub> emissions. The water resource is effectively used, for example, the coolant is collected and recycled as toilet flushes. Toshiba TEC is moving forward with recycling waste in order to achieve zero emissions. It is also making intensive effort to reduce or abolish the use of chemical substances. As part of this effort, Toshiba TEC is implementing lead-free soldering. The following charts indicate inputs of energy, water and chemical substances, and of outputs, such as CO<sub>2</sub> emissions, discharge of water and disposal of waste. The data obtained at the business sites in the fiscal year 2000 is indicated.

### INPUT (Toshiba TEC's 4 business sites)



### OUTPUT (Toshiba TEC's 4 business sites)



# Occupational Health and Safety

To a considerable degree, business activities derive their vitality from the physical and mental well-being of employees.

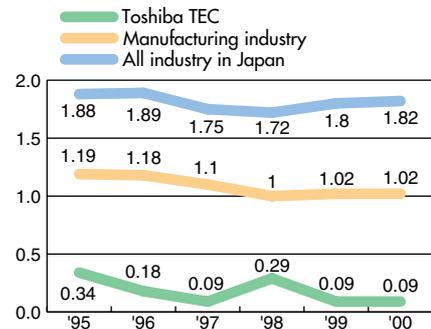
It is important for management and supervisors to recognize ensuring the safety and well-being of employees as part of the company's social responsibility, as well as to facilitate appropriate management of health and safety. It is important for employees to have the opportunities to derive personal satisfaction from their work.

Toshiba TEC is striving to tackle the health and safety activities alongside the employees, support their health both in mind and body, provide working environments that encourage employees to realize their potential, in accordance with laws and regulations.

## Safety control

Toshiba TEC has long been seeking to eliminate accidents in the work place. The figure shows the occurrence of accidents at work per one million hours. With regard to the overall data, Toshiba TEC is considerably lower than average for the entire industry and for the manufacturing industry in Japan. It is stepping up its efforts to eliminate accidents and the employees are encouraged to be more conscious of danger in their daily action as to eliminate danger itself. Toshiba TEC intends to vigorously promote activities that incorporate the guidelines of the Ministry of Health, Labor and Welfare for safety and hygiene management systems.

Occurrence of accidents at work  
(per one million hours)



## Occupational health control

Control of working environments, work control, and health control are promoted to prevent any medical problems associated with occupations.

Keeping fit is largely up to the individual. In the event of periodic health check-ups indicating problems, such employees have an opportunity for personal consultations with medical professionals to advise them on what they need to do in order to cultivate healthy lifestyles.

Toshiba TEC is vigorously working to enhance the awareness of employees maintaining a good mental health. Education is provided for employees and supervisors. A hot line has been opened for employees and their families as members of the Toshiba Group where they can receive advice from health-care professionals.



Personal consultation with a medical professional

## Work environment measurement

To maintain a clean working environment, the amounts of fine particles, organic solvents, specified chemical or toxic substances are measured to evaluate the conditions in the working environment. Measurements and analysis are carried out by the Work Environment Measurement Team stationed in the Analysis Room of the Mishima Works. Periodically they visit work places. If the team finds any problem, it provides support and advises improving the environment of work places. The team conducts measurements at neighboring companies, as well as the subsidiary companies.

(Registered as a work environment measurement organization. Registration number: Shizuoka 22-23)



Analysis room

# Risk Control

## Contamination prevention management

### Prevention of global warming

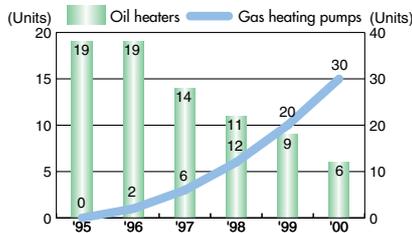
As an action against global warming, the Mishima Works reduced oil heaters and substituted them with gas heating pumps.



Outside units of gas heating pumps

In the fiscal year 2001, equipment which uses oil fuel or which is used for oil fuel, such as oil boilers and oil tanks, will be abolished.

### Reduction of oil heaters and introduction of gas heating pumps



### Maintaining water resources and reduction of use

The Ohito Business Center, Mishima Works and Hadano Plant are located in an environment, which is rich in water resources. These sites are ensuring water resources, by placing great importance on the prevention of soil pollution caused by discharging water, oil or chemicals.

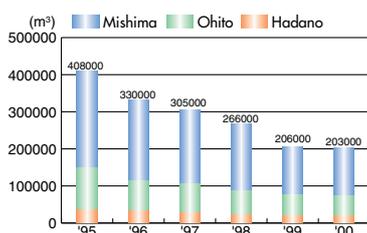
In fact, Toshiba TEC had wasted affluent well water until the early 1990's. However, as the groundwater level lowered, every site of Toshiba TEC attempted to stop wasting water resources and save water, thus attached water-saving valves to every tap and used electronic switches for toilet flushes and recycling coolant.

In the fiscal year 2000, decrepit plumbing (including fire hydrants) was removed and new plumbing was established on the ground, in order to facilitate management and prevent water leakage in three business sites.



Visible plumbing (not in the ground)

### Water used



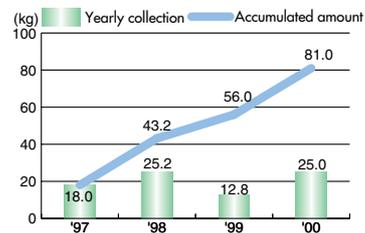
### Prevention of diffusion of substances that deplete the ozone layer

To prevent emissions of CFCs that deplete the ozone layer, a periodical check is performed. Collection is made when the facility is transferred or scrapped, in accordance with the relevant rules.



CFCs measurement

### CFCs collection



### Chemical substances control

The Mishima Works and the Ohito Business Center strictly control transformers containing PCB and inspect them monthly.

Toshiba TEC will start examining disposal of stored PCBs in detail in accordance with the Law Concerning Special Measures for Polychlorinated Biphenyl Waste Disposal (enforced in July 2001).

\* PCB: Polychlorinated biphenyl, used as insulating oil for electric equipment.



PCB storage (Mishima)

## Activity toward zero emissions

Recognizing that resources on the Earth are limited, each business site is striving to reduce waste and protect the irreplaceable Earth from pollution caused by waste. The aim is to establish a recycle-based society.

To achieve zero emissions, control of waste discharge is important. Toshiba TEC is moving forward with volume reduction of waste, reuse of resources and effective use of waste. Discharged waste such as plastics and liquids are stored under well-controlled conditions until they are finally disposed of.

Toshiba TEC aims to achieve zero emissions in the fiscal year 2003 through the Third Voluntary Plan. To do so, thorough separation of waste is essential and waste is separated into 88 categories.



Bulletin board for waste separation (Ohito)

## Training for emergency

Assuming an emergency occurs such as an earthquake, heavy rain, fire, power failure, or equipment breakdown, which may affect the environment, each business site is providing training for those emergencies. Toshiba TEC has created emergency guidelines to minimize the damage from spreading, and end the emergency as soon as possible. If any points are needing to be improved upon, corrective and preventive measures are reviewed according to the guidelines.



Emergency training (Hadano)

## Actions for preserving soil and ground water

The Mishima Works and the Hadano Plant are located in spring water areas around Mt. Fuji and the Tanzawa mountain range, respectively. Next to the Ohito Business Center there is a clear stream from the Kanogawa River. Under these circumstances, water quality preservation is considered to be an important issue of the environmental policy at these business sites.

Toshiba TEC took measures to control soil pollution at an early stage and has been implementing voluntary measurement and monitoring on a regular basis.

A little 1.1.1-trichloroethane was found at the Hadano Plant in 1990. Although the findings were before the Environmental Quality Standards for Soil Pollution was announced (1991), Toshiba TEC notified the City of Hadano of the pollution and took actions for purification. They replaced the soil located adjacent to the ethane tank, and vacuum-suctioned the place that stores components, under instructions from the city. As a result, the city certified the plant for having completed purification activities, in 1994. The Hadano Plant has been continuously monitoring water quality using the monitoring well installed on the premises.

The monitoring wells were also voluntarily installed in the Ohito Business Center and the Mishima Works in 1998. These business sites report the water quality analysis results on a regular basis to the local governments in Mishima and Ohito.



Taking underground water sample (Mishima)

 A detailed table titled '観測井戸測定結果一覧表' (Monitoring Well Measurement Results Summary Table). It contains multiple columns for well ID, location, and measurement data. The table is organized into several sections with headers.

Periodical report to the City of Mishima

## Ohito Business Center

### Profile

Description of business: Development, design and production of POS systems, electronic registers, scales, bar code printers, and OA equipment



Foundation: February 1950  
Premises area: 66,177 m<sup>2</sup>  
Floor space: 42,018 m<sup>2</sup>  
Tree planting ratio: 25.4%  
Number of employees: 1,092

### Environmental impact

City water/well water used: 59,744 m<sup>3</sup>  
Water discharge to rivers: 6,717 m<sup>3</sup>  
Water discharge to sewer: 28,307 m<sup>3</sup>  
Electricity consumption: 71,650,000 kWh  
Waste discharge: 7.7 tons  
Chemical substances used: 3,859 kg  
(subject to the 33/50 Project)

### Main products



POS system

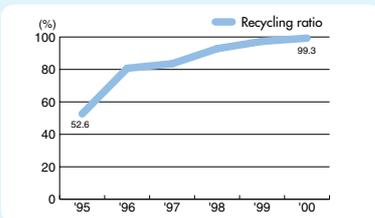
Scale

Office computer

### Characteristic activities

#### 1. Achievement of zero emissions

Achievement of zero emissions is contained as a commitment item for the Third Voluntary Plan. The Ohito Business Center has already achieved this in the fiscal year 2000, based on results from the analysis on waste, employees' cooperation in thorough separation of waste, and selection of recycling companies with a wide range of technology. The Environmental Research Team goes on patrol to recycling centers to understand how waste is separated, and determine the separation criteria, which leads to reduction of waste.



#### 2. Energy-saving activity

The Ohito Business Center tackled an energy-saving activity by changing the lunchtime. During the lunchtime, operation of the air conditioners was controlled. The Ohito Business Center concluded a peak-time shift agreement with an electric power company for three months in the summer, which resulted in cost reduction.

### 東芝テック株式会社 大仁事業所 環境保全基本方針

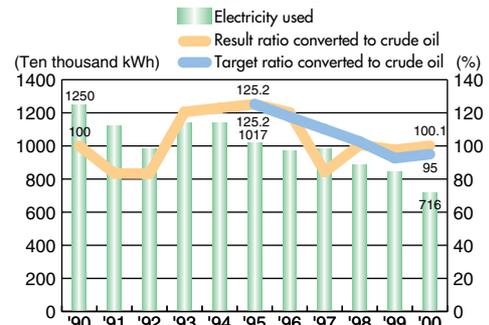
事業所は、富士路線・伊豆国立公園に位置し、狩野川の清流と緑豊かな自然環境に恵まれ、「水と緑と静の都市」の住民と共存している。  
この環境を健全な状態で次世代に引き継ぎ、「かけがえのない地球」環境を守ることが、我々人間の基本的責務と認識に立ち、東芝テックグループの経営理念及び経営方針に基づき行動する。  
また、当事業所は、流通機器の開発・設計、製造、サービスなどの事業活動を行っており、これらによる環境に対する影響の大きい項目に関しては、技術的、経済的に可能な範囲で、全期間において目的、目標を設定して、環境マネジメントシステムの継続的改善を図る。

- (1) 環境保全への取り組みを、経営の最重要課題の一つとして位置付ける。
- (2) 流通機器の事業活動、製品・サービスにかかわる環境側面について、環境負荷の削減、汚染の予防に関する環境目的及び目標を設定し、積極的な環境施策の実施により、環境保全の継続的な改善・向上を図るとともに定期的な見直しを行う。
- (3) 環境保全に関連する法令・条約及び規制として受け入れを決めた要求事項の遵守は勿論のこと、社内規定や自主基準を制定し遵守する。
- (4) 循環型社会の構築に向けた、環境調和型製品の開発・提供を積極的に推進する。
- (5) 地球資源の有限性を認識し、グリーン購入を推進するとともに省エネルギー（電力）、省資源、排出物の発生抑制とリユース、リサイクルに当事業所の全ての領域で取り組む。
- (6) オゾン層破壊物質、地球温暖化物質、その他の環境汚染物質は、可能な限り速やかに、代替技術の採用及び代替物質への転換を図り、使用量を削減する。
- (7) 敷地周辺に及ぶ騒音及び振動を抑え、近隣社会の生活環境の保全を図るとともに、地域・社会と協賛・連携し、環境保全活動を通じて社会に貢献する。
- (8) 社員の環境保全意識を高めるために、全員に対する教育及び広報活動を行う。
- (9) 東芝テックグループ一体となった環境保全活動を推進するために、関係会社・協力会社に対して指導・支援を行う。
- (10) 環境保全基本方針は、一般の人が入手可能とする。

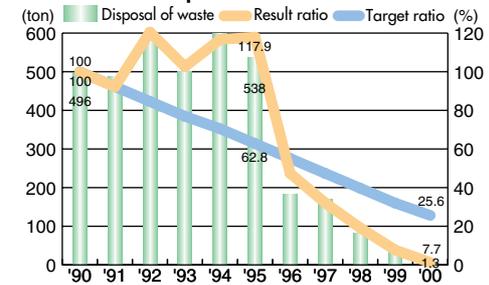
2001年 4月 1日

東芝テック株式会社  
流通情報システムカンパニー 大仁事業所  
事業所長 山本 幹 郎

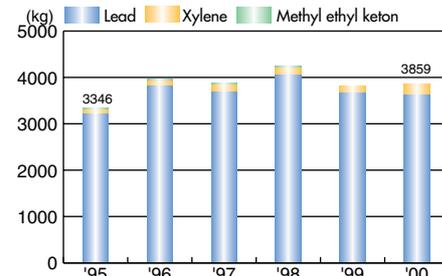
### Energy-saving



### Disposal of waste



### Reduction of chemical substances



## Mishima Works

### ● Profile

Description of business:  
Development, design and production of copiers, multi-functional peripherals, and communication equipment



Foundation: January 1963  
Premises area: 49,645 m<sup>2</sup>  
Floor space: 47,302 m<sup>2</sup>  
Tree planting ratio: 25.3%  
Number of employees: 849

### ● Environmental impact

City water/well water used: 93,613 m<sup>3</sup>  
Water discharge to sewer: 93,613 m<sup>3</sup>  
Electricity consumption: 11,010,000 kWh  
Waste discharge: 60 tons  
Chemical substances used: 32 kg  
(subject to the 33/50 Project)

### ● Main products



e-STUDIO 16/25



TF-6100 (for Japan)

### ● Characteristic activities

Implementation of energy-saving measures  
For the past two years, the air conditioning in the engineering departments was changed from central control to distributed control, which used the ice heat storage system. This system makes ice using night-time electricity and uses the stored heat for the day-time air conditioning, to achieve peak shift for electricity. (Peak shift effect: 137 kw)



Outdoor units of the ice heat storage system

### 東芝テック株式会社 三島事業所 環境保全基本方針

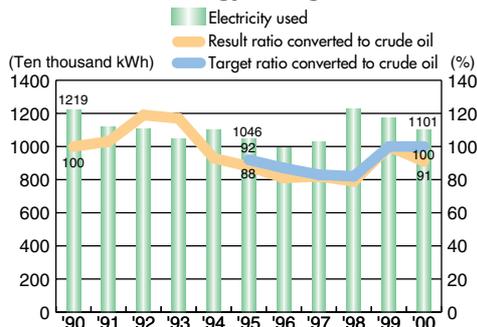
三島事業所は、「水と緑と人が輝く夢あるまち・三島」に立地しており、この環境を健全な状態で次世代に引継ぎ、「かけがえない地球環境」を守ることが基本的責務であるとの認識に基づき、東芝テックグループの経営理念及び経営指針に基づき行動する。また、当事業所は、画像情報通信機器の開発・設計・製造、サービスなどの事業活動を行っており、これらによる環境に対する影響を低減するため環境保全活動を推進する。

- (1) 画像情報通信機器の事業活動、製品、サービスによる環境影響について技術的、経済的に可能な範囲で環境目的・環境目標を設定し、定期的に見直しをすることにより、環境保全の継続的な改善・向上をはかる。
- (2) 環境保全に関する法令・条例及び組織として受け入れを求めた要求事項等の遵守は当然のこと、社内規定や自主基準を制定して遵守する。
- (3) 循環型社会の構築に向けた環境調和型製品の開発・提供を積極的に推進する。
- (4) 地域・社会との協調・連携を密にし、環境保全活動を通じて、社会に貢献する。
- (5) 地球資源の有限性を認識し、省資源、省エネルギー（電力、重油及びガス）、排出物の減量とリサイクルに当事業所の事業活動のすべての領域で取り組む。
- (6) オゾン層破壊物質、地球温暖化物質、有害物質等の環境に負荷を与える物質は、可能な限りすみやかに代替技術の採用及び代替物質への転換を行い使用量を削減する。
- (7) 環境汚染の予防に努めるとともに、敷地周辺に及ぼす騒音・振動及び悪臭等を抑え、近隣社会の生活環境の保全をはかる。
- (8) 社員の環境保全意識を高めるため、全員に対する教育並びに広報活動を行う。
- (9) 東芝テックグループ一体となった環境保全活動を推進するため、関係会社・協力会社に対して指導・支援を行う。
- (10) 環境保全基本方針は、一般の人が入手可能とする。

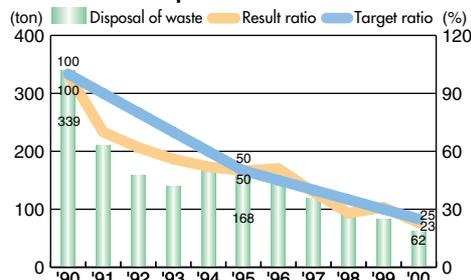
2001年 6月 1日  
東芝テック株式会社三島事業所

事業所長 青木建夫

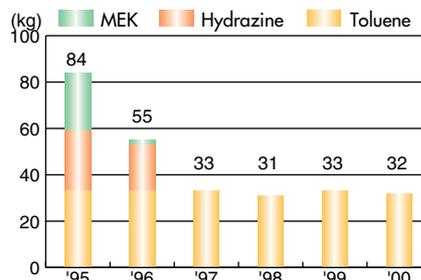
### Energy-saving



### Disposal of waste



### Reduction of chemical substances



## Yanagicho Works

### ● Profile

Description of business:  
Development, design and production of copiers and multi-functional peripherals



Foundation: October 1936 as Yanagicho Plant

Premises area: 113,669 m<sup>2</sup>

Floor space: 137,925 m<sup>2</sup>

Tree planting ratio: 11.6%

The copier business was transferred from Toshiba Corporation in January 1999, and the Yanagicho Plant was renamed as Toshiba TEC's Yanagicho Works.

Number of employees: 646

### ● Environmental impact

City water/industrial water used: 37,324 m<sup>3</sup>

Water discharge to sewer: 37,324 m<sup>3</sup>

Water discharge to rivers: 0 m<sup>3</sup>

Waste discharge: 80 tons

Chemical substances used: 571 kg

(subject to the 33/50 Project)

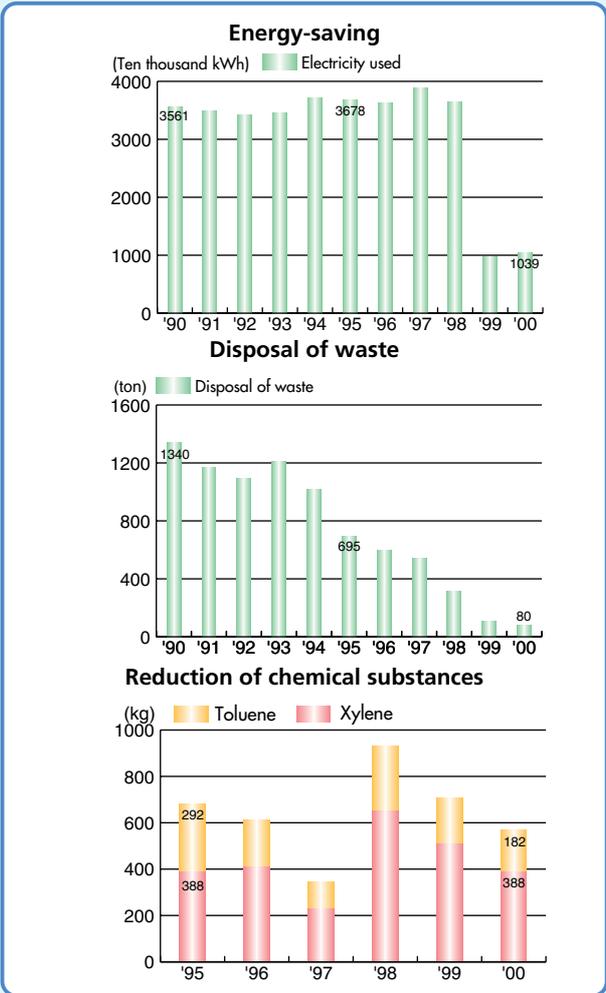


### ● Main products



### ● Characteristic activities

The Yanagicho Works manufactured the PREMAGE651RM (for Japan), Toshiba TEC's first product which used reused parts, in March 2001. This product is a milestone achievement towards the conversion into the recycling-based economic system. The Yanagicho Works established the entire system that covered a wide range, from disassembling and cleaning to re-manufacturing, in order to maintain a high quality and high reliability, in cooperation with the sales, design and service departments. The Yanagicho Works aims to improve the system, expand the applicable products, and increase the reused parts in weight.



## Hadano Plant

### ● Profile

Description of business:  
Development,  
design and production of  
home electric appliances,  
health equipment and  
motors



Foundation: April 1974  
Premises area: 36,206 m<sup>2</sup>  
Floor space: 22,759 m<sup>2</sup>  
Tree planting ratio: 20.2%  
Number of employees: 480

### ● Environmental impact

City water used: 20,918 m<sup>3</sup>  
Water discharge to rivers: 7,521 m<sup>3</sup>  
Electricity used: 7,536,000 kWh  
Water discharge to sewer: 13,397 m<sup>3</sup>  
Waste discharge: 66 tons  
Chemical substances used: 248 kg  
(subject to the 33/50 Project)

### 東芝テック株式会社秦野工場環境保全基本方針

- 秦野工場は、クリーンをはじめとする家電電器、健康機器の生産拠点として、環境に配慮した生産活動の推進及び環境調和型製品の提供を通じて、社会に貢献することを目指します。
  - また、環境保全への取組みを経営の最重要課題の一つとして位置づけ、「かがやかない地球環境」と「名水の里 秦野」を健全な状態で次世代に引き継いでいくことが、秦野工場で製造を営む私たちの基本的責務との認識に基づき、21世紀の社会の持続可能な発展に貢献します。
1. 事業活動、製品、サービスが環境に与える影響を的確に捉え、技術的、経済的に可能な範囲で環境目的・目標を定め、定期的に見直しと共に、環境保全活動のシステムとパフォーマンスの継続的な向上に、全員で取組みます。
  2. 環境保全に関する法令・条例及びグループとして受入れを決めた要求事項及び当工場独自の自主基準を制定し、遵守します。
  3. 環境調和型製品を提供するため、製品のライフサイクル全体を通しての資源有効活用、環境負荷低減等の環境配慮活動に取組みます。
    - (1) 3Rの推進(リデュース・リユース・リサイクル)
    - (2) 省エネルギー化
    - (3) 環境関連物質の削減
    - (4) 環境情報の開示
  4. 生産段階において、次の事項をはじめとした、汚染防止に取組みます。
    - (1) 地球資源の有限性と地球温暖化の防止を認識し、省資源、省エネルギー、廃棄物の削減に、当工場の事業活動のすべての領域で取組みます。
    - (2) 土壌及び水質の汚染を未然に防止するため、機械・施設からの油モレ防止対策に取組みます。
    - (3) オゾン層破壊物質(フロン及びハロン)、有害物質等の環境に負荷を与える物質は、可能な限りすみやかに(代替技術の採用及び代替物質への転換)削減します。
  5. 社員の環境保全意識を高めるため、全員に対する教育並びに応報活動を行います。
  6. テックグループ一体となった環境保全活動を推進するため、関係会社等に積極的な支援を行なうとともに、地域・社会との協賛・連携を通じて、社会に貢献します。
- この環境保全基本方針は、一般の人が入手可能とします—

2001年 4月 1日  
東芝テック株式会社 秦野工場  
工場長 稲井義久

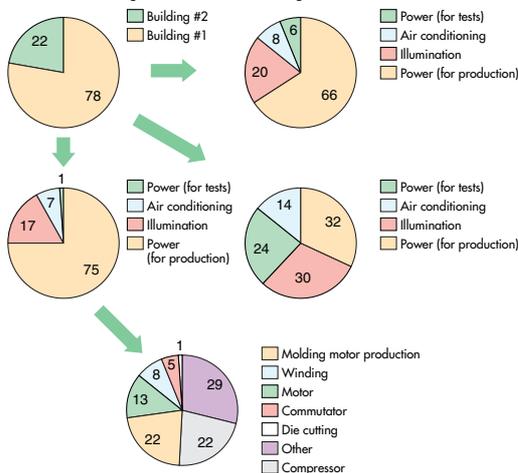
### ● Main products



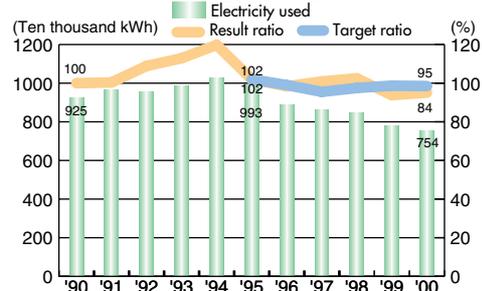
### ● Characteristic activities

Promotion of energy-saving activities  
By understanding and analyzing used electricity in detail, the Hadano Plant is developing effective energy-saving activities. In the facilities and processes where a large amount of electricity is used, measures for achieving the energy-saving target are being taken.

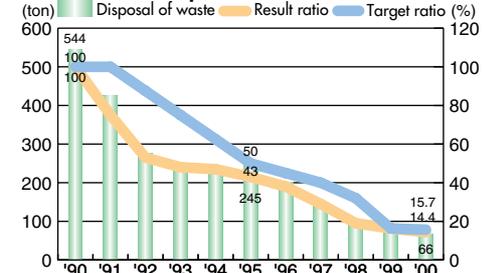
#### Analysis of electricity used (%)



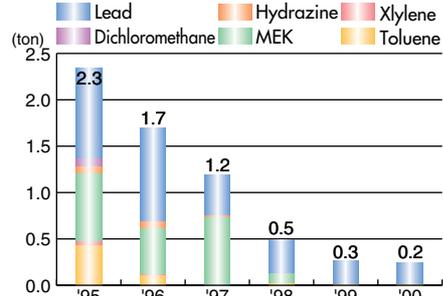
#### Energy-saving



#### Disposal of waste



#### Reduction of chemical substances





## Components Business Group

### ● Profile

Description of business:

Production of mold and components, design/production of printed circuit boards, and development/design of power supply units

Foundation: April 1999

Number of employees: 304



### ● Characteristic activities

The Components Business Group is in charge of production of mold and components and design/production of printed circuit boards at the Mifuku Plant in the Ohito Business Center. The system was accredited with ISO 14001 as an expanded division of the Ohito Business Center.

The Components Business Group, in association with the Mifuku Plant, organizes the lower structure to achieve the purpose and target of the established system. The Components Business Group gained knowledge of the lead-free soldering technique and aims for mounting components on new products using the new facility.



Recycling corner



Lead-free soldering facility (reflow soldering)

## TEC Precision, Inc.

### ● Profile

Description of business:

Production of stamped/sheet metal parts, mold, jigs/tools, and drawers

Foundation: April 1981

Paid-in capital: ¥10 million

Number of employees: 83



Measures concerning noise (sound-proof room)



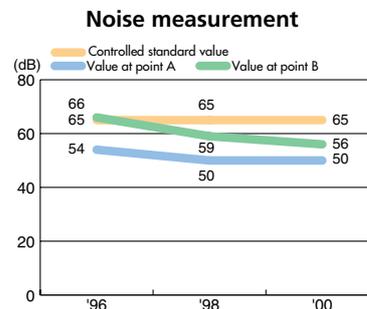
"No Leakage Allowed" management using the leakage preventing facility

### ● Characteristic activities

TEC Precision is in charge of stamping and sheet work for Toshiba TEC, while carrying out its environmental protection activities as a lower structure of the ISO 14001-accredited Ohito Business Center. In terms of the facilities, TEC Precision emphasizes the measures for prevention of noise and soil pollution.

The measures concerning noise are being scheduled and implemented systematically to improve the environment of the workplace and neighborhoods. As an action to prevent soil pollution, the "No Leakage Allowed" movement is being developed.

TEC Precision abolished all heavy oil heaters in the fiscal year 2000 considering prevention of soil pollution, energy-saving, and CO<sub>2</sub> emission control.





### TEC Izu Denshi Co., Ltd.

● Profile

Description of business:

Production/sales of electronic units and OA paper and development/production of power supply units

Foundation: July 1977

Paid-in capital: ¥100.4 million

Number of employees: 146

● Characteristic activities

TEC Izu Denshi produces various electronic units and OA paper, as a subsidiary company of the Ohito Business Center.

1. ISO 14001 extended examination received

TEC Izu Denshi was accredited with ISO 14001 through the extended examination as a member of the Toshiba TEC Ohito Business Center in the fiscal year 2000.

2. Energy-saving activities

(1) All fluorescent lamps were equipped with a pull switch to turn it on only as required. This is a company-wide activity, which reduces wasting of electricity.

(2) The lunchtime is shifted one hour in the summer to minimize the use of electricity during maximum electricity-consuming hours, which achieves peak shift.

3. Environmental consideration to products

(1) Environmental-related products

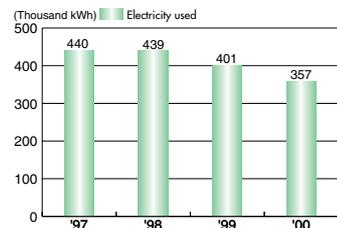
As environmental-related products, TEC Izu Denshi manufactures empty PET bottle/can collecting machines. The latest machine introduced a deposit system to the Japanese market, and raised people's environmental consciousness about the collection of empty containers.

(2) OA paper products

Paper is recycled as OA paper and paper rolls for registers. Paper rolls are Eco-mark approved.



PET bottle collecting machine production line



### Tosei Denki Co., Ltd.

● Profile

Description of business:

Development, design, production and sales of washing machines for business use, vacuum packaging machines and metal washing machines

Foundation: April 1948

Paid-in capital: ¥233.39 million

Number of employees: 210

● Characteristic activities

Tosei Denki is carrying out its own environmental protection activities with its slogan "More Safely and More Nature Friendly." According to its major measures for environmental protection, Tosei Denki is striving to achieve their target to reduce discharge of waste and energy consumption on a company-wide basis.

By separating waste thoroughly, controlling the air conditioner temperatures and operating the air conditioner intermittently, Tosei Denki achieved the target of waste/energy reduction.

Tosei Denki installed the wastewater purification facility and set up higher individual standard, in order to thoroughly prevent pollution of clean water of the neighboring Kanogawa river.

Tosei Denki also manufactures vacuum distilling machines, which purify washing solutions for industrial parts and recycle them. These machines are used by many companies and contribute to the effective use of resources.



Vacuum distilling machine



### Fujiken Co., Ltd.

● Profile

Description of business:  
 Development, production and sales of capacitors, power supply units, electronics application equipment, and air cleaners  
 Foundation: October 1951  
 Paid-in capital: ¥80 million  
 Number of employees: 87

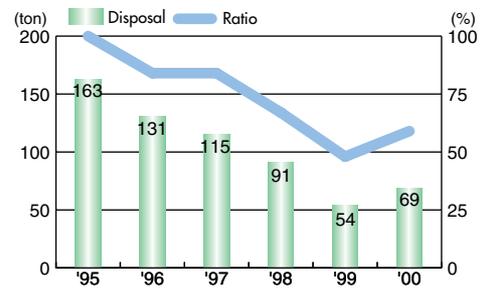


Rainwater processing equipment

● Characteristic activities

Fujiken develops, produces and distributes capacitors, electronics application equipment and air cleaners. As for its environmental protection activities, Fujiken emphasizes waste reduction and energy-saving activities, and is obtaining wonderful results.

To prevent fumes of the lead compound used in the manufacture process from being released and purify water, Fujiken installed the rainwater processing equipment. To create environmentally conscious products, Fujiken changed the capacitor type from wet to dry. As a result, use of oil, lead, and washing solvent contained in the capacitors were abolished, which remarkably reduces the environmental impact and improved the environment of the work place.



### TEC Kashiya Denki Co., Ltd.

● Profile

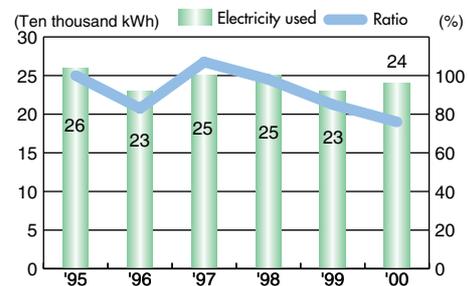
Description of business:  
 Production and repair of electric equipment (including facsimile machines)  
 Foundation: August 1974  
 Paid-in capital: ¥16 million  
 Number of employees: 30



Disassembling the process unit

● Characteristic activities

TEC Kashiya Denki produces and repairs the process units and consumables used for the facsimile machines and printers. TEC Kashiya Denki recycles the process units of main facsimile machines as well. The used process units are collected from the field, recycled, and supplied again to the market. TEC Kashiya Denki is promoting energy-saving activity on a company-wide basis and have obtained a great result so far.



# Environmental Consideration regarding Products



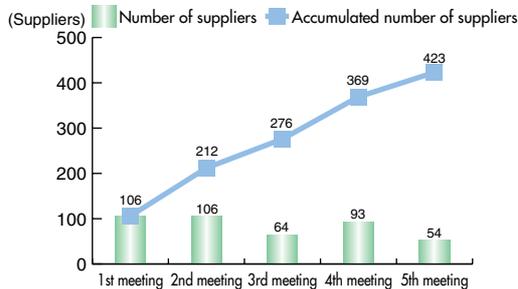
## Green procurement

As part of establishing a recycling-based society, Toshiba TEC is promoting green procurement to provide environmentally conscious products. As a standard for procure materials and parts that have less environmental impacts, Toshiba TEC issued the Green Procurement Guidelines in November 2000.



### Activity Implementation

Based on the Green Procurement Guidelines, Toshiba TEC started Explanatory Meetings for the Guidelines and Environmental Protection Activity Evaluation intended for its suppliers in December 2000. The number of the evaluated suppliers has reached 423 thus far.



Explanatory meeting for the guidelines

### Green procurement policy

Toshiba TEC started the Environmental Performance Investigation on Procured Items in September 2001. This investigation checks six points regarding reduction of environmental impacts; (1) resource saving, (2) reusability, (3) recyclability, (4) use of recycled material, (5) ease of processing/disposal and (6) content of environment-related substances, and is intended for establishing a database for environmental information. By providing the data to the development and design departments, Toshiba TEC is developing environmentally conscious products (EPCs).

#### Policy

To develop environmentally conscious products (EPCs) which have less environmental impacts in each stage of the product's life cycle (material procurement, manufacturing, distribution, consumption, and disposal) in accordance with the Basic Policy for Environmental Protection.

Green procurement (procurement of products/parts/materials having less environmental impacts) is essential.

[Conversion from QCDS (quality, cost, delivery, and speed) to QCDSE (quality, cost, delivery, speed, and environment)]  
When two suppliers are identical in Q, C, D, and S, Toshiba TEC selects the supplier that is superior in E (environment).

#### Evaluation and analysis

Evaluation of the supplier

+

Evaluation of item procured from the supplier

#### Goals

- To procure items from the suppliers that are moving forward with environmental protection based on the evaluation result.
- To procure products, parts and materials, which have less environmental impacts, based on the evaluation result.

## Environmentally conscious products

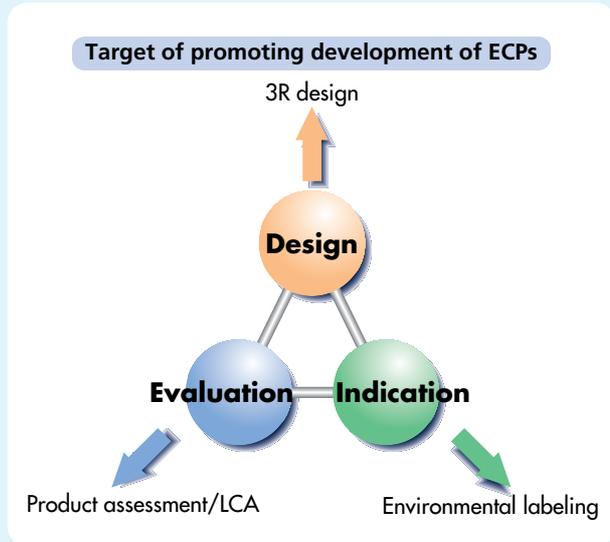
Toshiba TEC strives to create Environmentally Conscious Products (ECPs) of which environmental impacts are minimized at every stage of their life cycle - from materials procurement, manufacture and distribution, through to consumption and eventual disposal. The ECP promotion is intended for improvement of design, evaluation and indication. To be concrete, it is intended for 3R\* design, product assessment/life-cycle assessment (LCA), and environmental labeling.

To develop ECPs, considerations have been made to save energy, save resources, improve recyclability, and reduce and eliminate toxic chemical substances. Through the concept of 3R, Toshiba TEC is implementing activities not only for recycling, but also for reducing waste and reusing parts.

Toshiba TEC basically adopts Product Assessment for product's environmental impact evaluation. The product assessment started in the home electric appliances division, according to the execution of the Law for Promotion of Utilization of Recycled Resources in 1991 (currently called the Law regarding Promotion of the Effective Use of Resources), and implemented for all products manufactured in all divisions from 1995. LCA is also incorporated in the evaluations.

Regarding environmental labeling, Toshiba TEC is striving to be certified by third party organizations to obtain environmental labels including Eco Mark and Blue Angel Mark. Information about main products is being disclosed in the framework prescribed in the third environmental voluntary plan.

\*3R: Reduce, Reuse, and Recycle

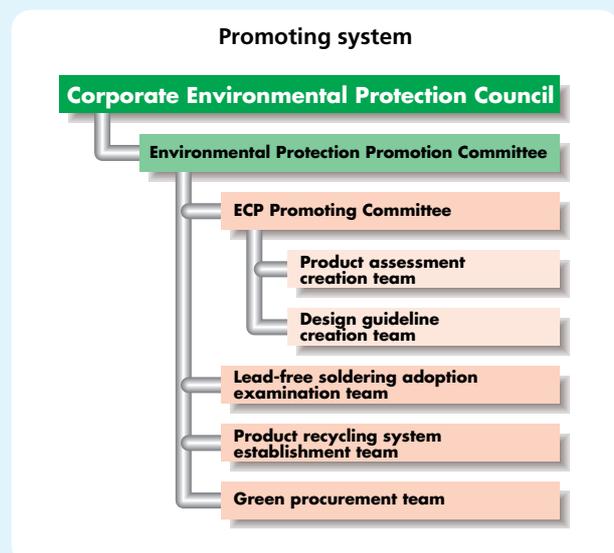


## Promoting system and main activities

Toshiba TEC develops and manufactures their products at the four sites in Japan.

The ECP Promoting Committee, established in 1997, has been solving corporate issues regarding development of ECPs. This committee revises product assessment, creates the design guidelines, promotes the environmental voluntary plan, and creates document regarding ECP improvements.

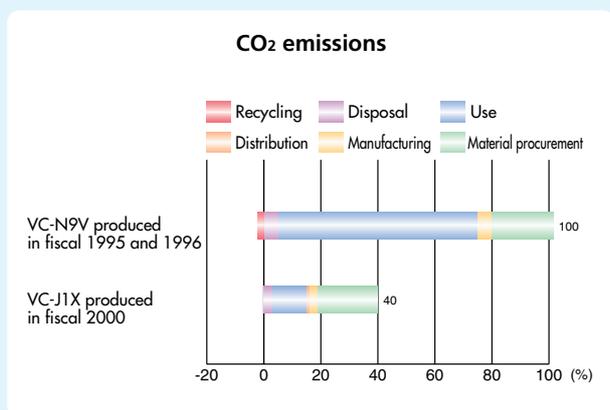
In the fiscal year 2000, this committee inaugurated three teams to examine the adoption of lead-free soldering, the establishment of the product recycling system, and the green procurement, to solve environmental issues.



## Introduction of life-cycle assessment (LCA)

LCA makes a quantitative evaluation of the environmental impact that a product has at every stage, covering material procurement, recycling, and disposal in order to reduce its environmental impact based on the evaluation result.

Toshiba TEC introduced LCA in 1997. The home electric appliances division started to incorporate LCA into product assessment in September 1998, which has been contributing to the creation of energy-saving products, such as air circulation system vacuum cleaners and cordless vacuum cleaners. The following chart describes the difference in environmental impact between the conventional vacuum cleaner and the cordless vacuum cleaner (VC-J1X produced in the fiscal year 2000).



## Efforts to 3R design

Toshiba TEC is concentrating its efforts on the 3R design for its products.

Design taking recycling into consideration has already been implemented. Toshiba TEC endeavors to facilitate dismantling, by reducing the number of screws and composite parts, and by improving the structures. As for the plastic parts, a selection of easy-to-recycle materials and indication of material for parts having a weight of 25 g or more have been carried out.

In terms of reduction, Toshiba TEC is implementing designing for thorough energy saving and to lengthen the life of the products.

For reusing parts, Toshiba TEC unitizes replacement parts for the copiers and performs product design facilitating attachment/removal of units and parts.

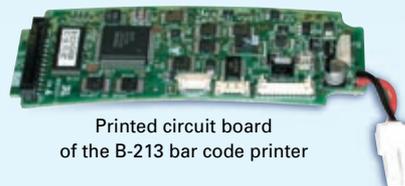
## Striving for lead-free soldering

Toshiba TEC has been focusing on the development of the lead-free soldering technology, for printed circuit boards assembled into the home electric appliances and electronic equipment, for several years. As a result, lead-free soldering was adopted in the VC-M12V vacuum cleaner in February 2001, and in the B-213 bar code printer in March 2001.

Toshiba TEC is striving for expanding the range of products manufactured through lead-free soldering in the fiscal year 2001 and achieving the target "application of lead-free soldering to all products distributed in and after April 2003" in the Third Voluntary Plan.



Printed circuit board of the VC-M12V vacuum cleaner



Printed circuit board of the B-213 bar code printer

## Commitment to chemical substance control

Lead, cadmium, hexavalent chromium and mercury are chemical substances that are toxic to the human body and the ecological system. Control on these substances is being examined in Japan and on a worldwide basis. Toshiba TEC is strongly moving forward with reduction of these chemical substances.

The copiers, for example, converting from the chrome-finished steel plate containing hexavalent chromium to a chrome-free steel plate, are being examined.

In addition, Toshiba TEC reduces the use of plastic parts containing halogen fire retardant that are used in the home electric appliances and electronic equipment, since dioxins may be generated when incinerated.

Toshiba TEC is committed to controlling chemical substances by eliminating PVC from the hose of the vacuum cleaner and by examining the use of halogen-free printed circuit boards for its main products.

## Copiers and facsimile machines

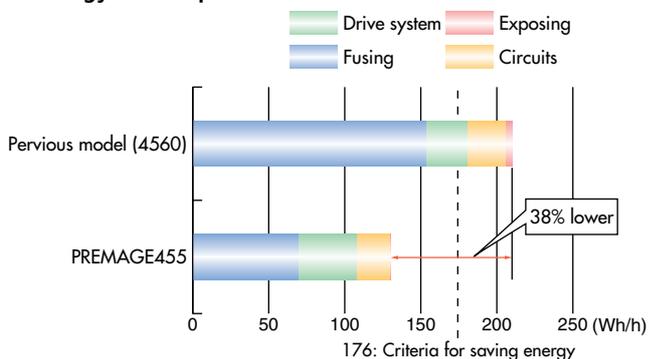
The following are examples of implementing environmentally conscious design for the copiers and facsimile machines.

### ● Saving energy

Copiers fix toner by applying heat and pressure to form copy images, a process requiring considerable power and time. In view of the desire to save energy and improve usability, there is increasing demand for copiers with low power consumption and short warm-up time. To achieve these two attributes at the same time, a tough technical challenge, Toshiba TEC developed a new fuser that uses induction heating (IH) instead of a conventional halogen lamp. The PREMAGE355/455 (Japanese model names, equivalent to the e-STUDIO35/45) are the first copiers in the industry to be equipped with IH technology.

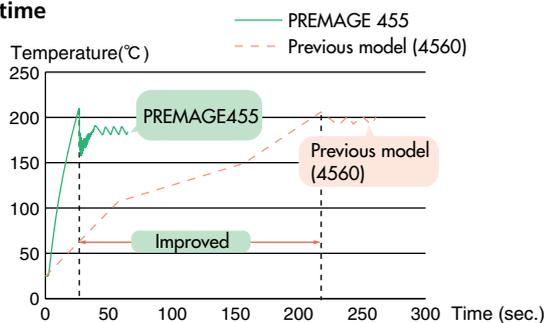
The principle of IH is as follows. By applying high-frequency current to the wire adjacent to the conductor, rapid heating and on-demand heating are enabled. Thanks to adoption of IH technology, the warm-up time of the PREMAGE455 is shortened, and it takes only 30 seconds for the first copy after the power is turned on. Moreover, energy consumption was reduced by 38% to 127Wh/h, far lower than the benchmark set by the Law concerning the Rational Used of Energy for 2006 (176Wh/h).

### Energy consumption



PREMAGE455 copier containing IH fuser

### Warm-up time



### ● Reuse of parts

The main facsimile machines for the Japanese market, including TF-6100, contain the process unit that was collected from the customer, recycled, and reused. Reused parts are also used as consumables.



TF-6100

## POS terminals

This section describes environmentally conscious design for the CV-6310 POS terminal for convenience stores.

### ● Use of recycled materials

Recycled plastic material is used in a part of the drawers. Toshiba TEC is trying to use recycled materials for more products.

### ● Saving resources

Purchase information is stored as electronic data in the store controller, although it was previously printed on the journal. This feature reduces the size and weight of the POS terminal and the printer, as well as enables saving journal paper.

### ● Recyclability

To improve recyclability, plastic parts having a weight of 25 g or more are provided with the indication of material names. Grade indication is also provided with as many parts as possible.

### ● Eliminating PVC

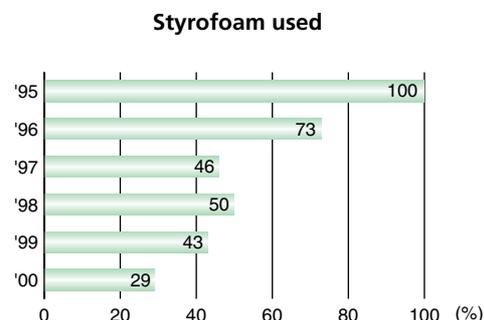
Toshiba TEC achieved abolition of use of PVC, except for wires.



CV-6310

### ● Packaging materials

Toshiba TEC has been changing the packaging material from Styrofoam to pulp mold to reduce the use of Styrofoam. As a result, the amount of Styrofoam used was reduced to 29% compared with the fiscal year 1995.



## Bar code printers

The bar code printers are used for factory automated parts management. An example of the environmentally conscious design is introduced by comparing the B-850 bar code printer with the previous model B-870.

### ● Easy-to-disassemble

To facilitate disassembly, the number of screws was reduced to 65%, compared to the previous model. The number of composite materials and composite parts was also reduced to 83% and 71%, respectively.

### ● Recyclability

To improve recyclability, Toshiba TEC reduced parts that were difficult to recycle. The amount of such parts used was reduced by 5%, compared to the previous model.



B-850

### ● Packaging materials

Toshiba TEC is reducing Styrofoam by adopting laminated corrugated cardboard inside the package for the bar code printers. The abolishment of Styrofoam was achieved for the B-850.

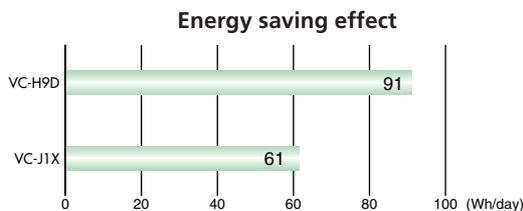
## Vacuum cleaners

### “Energy-saving and resources-saving magic cyclone vacuum cleaner containing nickel hydrogen battery”

The VC-J1X cleaner and the VC-M1X cleaner, placed on the market in September 2000 and September 2001, respectively, are cordless vacuum cleaners which save energy and resources. The main features of these vacuum cleaners are as follows.

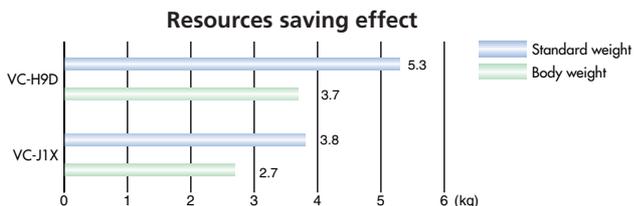
#### ● Saving energy

These new vacuum cleaners reduce power consumption approximately by 33%, compared with the previous alternating type vacuum cleaners, while having the equivalent dust suction performance.



#### ● Saving resources

These new vacuum cleaners achieve reduction in size and weight, and ease of use, while having the equivalent performance.



\* Standard weight: Total weight of the body, hose, extension pipe and floor brush  
 Body weight: Weight of the vacuum cleaner body  
 The above weights do not contain the weight of the charging unit.

Adopting the magic cyclone mode abolishes the use of the dust pack, which is consumable. (The magic cyclone mode is to separate dust and air with centrifugal force. It prevents the filter from clogging up while maintaining a high suction power.)

#### Magic cyclone mode separating dust and air with centrifugal force:

The magic cyclone mode generates a whirling air current which separates dust and air with centrifugal force in the dust cup. It prevents the filter from clogging up while maintaining a high suction power.



**VC-J1X magic cyclone vacuum cleaner**  
 Power consumption: 33% reduction compared with the previous model  
 Weight: 27% reduction compared with the previous model  
 No dust pack required (magic cyclone mode)

#### ● Chemical substance control

Toshiba TEC changed the hose material from PVC to elastomer.

#### ● Using high-performance secondary battery

By using the nickel hydrogen battery for the first time in the industry, Toshiba TEC produces high-power lightweight vacuum cleaners with compact body. (The battery does not use toxic chemical substances like cadmium, mercury or lead.)

#### ● Adopting lead-free soldering

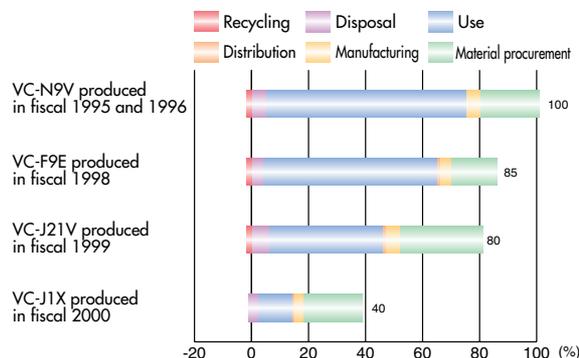
The printed circuit board for the VC-M1X is manufactured with the lead-free soldering technology.

#### ● Reusing recycled materials

The owner's guide and packaging corrugated cardboard use recycled materials.

#### ● Result of LCA analysis

##### CO<sub>2</sub> emissions



## Vacuum cleaners

### “Vacuum cleaner adopting lead-free soldering”

The VC-M12V vacuum cleaner was placed on the market in February 2001, as the first vacuum cleaner adopting a lead-free soldered printed circuit board. The use of such printed circuit board will be extended to the models being developed.



VC-M12V air cycle vacuum cleaner  
Power consumption: 45% reduction compared with the previous model  
Lead-free soldering adopted  
No air exhausted from the body (no smell generated and no dust whirled)

Toshiba TEC provides the following environmental consideration to this vacuum cleaner.

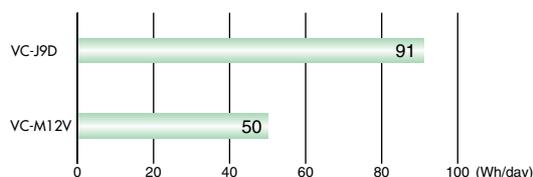
#### ● Saving energy

These new vacuum cleaners reduce power consumption approximately by 45%, compared with the previous vacuum cleaners, while having the equivalent dust suction performance.

#### ● Chemical substance control

Toshiba TEC changed the material of the hose and bumper from PVC to elastomer.

Energy saving effect



#### ● Reusing recycled materials

The owner's guide and corrugated cardboard packaging use recycled materials.

## Juicer/mixers

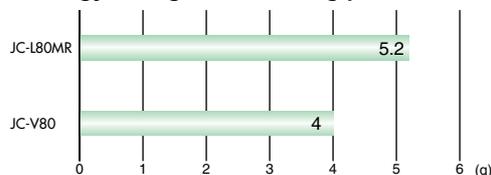
### “Juicer/mixer reducing environmental impacts”

The JC-V80 and JC-V70 juicer/mixers, placed on the market in May 2001, reduce environmental impact. The main features of these energy-saving products are as follows.

#### ● Saving energy

By improving the cutting performance, approximately by 23%, and being equipped with the power consumption equivalent to the previous model, these products contribute to saving energy. (The value depends on the test conditions at Toshiba TEC.)

Energy saving effect (cutting performance)



#### ● Material names indicated

Material names are indicated on every part, excluding parts where it is difficult to place indication due to a reason originating in its function or mold structure.

#### ● Reusing recycled materials

Packaging corrugated cardboard contains recycled materials.

#### ● Chemical substance control

By shortening the power cord length to a minimum, the use of PVC was reduced approximately by 26%.

#### ● Improvement of packaging materials

By using corrugated cardboard as a cushioning material, the use of Styrofoam was abolished.



**JC-V80 juicer/mixer**  
Cutting performance: 23% improvement compared with the previous model  
No Styrofoam used  
PVC reduced



**JC-V70 juicer/mixer**  
Cutting performance: 23% improvement compared with the previous model  
No Styrofoam used  
PVC reduced



## Environmental labeling

Toshiba TEC's products are certified by a third party organization. By affixing a typical environmental label in every country to the products, Toshiba TEC notifies people all over the world that environmental considerations are provided to its products.

### International Energy Star Program

The Energy Star label can be attached to OA equipment whose standby power consumption is less than the prescribed criteria. Toshiba TEC participates in the International Energy Star Program and 72 models of the copiers and facsimile machines comply with the criteria (the value is the accumulated result in the fiscal year 2000).



### Eco Mark

The Eco Mark is a Japanese representative environmental label established by Japan Environment Association. Among the Toshiba TEC copiers distributed in the fiscal year 2000, the PREMAGE165/255/355/455/555/655/805 and the PREMAGE651RM (for Japan) were certified.



### Blue Angel

The Federal Environmental Agency of Germany established this environmental label. Six copiers distributed in the fiscal year 2000 were certified. The accumulated number of certified products is 32.



### Nordic Swan

This environmental label is used in five North European countries. Five copiers distributed to the North European market in the fiscal year 2000 were certified.



### Toshiba Group Earth Protection Mark

This mark symbolizes the Toshiba Group's environmental protection activities and was established in June 1999. The Toshiba Group sets up the individual criteria for environmentally conscious products (ECP criteria) and attaches this label to the products that comply with the criteria.

Compliance is judged on more than 20 items, including "design with environmental consideration," "use of recycled materials/parts," "reduction of toxic substances" and "recyclability."

Toshiba TEC started this labeling in the fiscal year 2001, and regards it as an action for information disclosure.



Toshiba Group Earth Protection Mark

## Toshiba TEC's Environmental Products

### Manifest management system

For the SJ-3 JIMCOM (office computer) for issuing slips and invoices, Toshiba TEC provides the Manifest Management System complying with the Waste Disposal and Public Cleansing Law enforced on April 1, 2001. (This system is recommended by the National Federation of Industrial Waste Management Association and other waste management cooperative associations.)



SJ-3



Deposit-system empty can collecting machine



Deposit-system PET bottle collecting machine



Biodegrading garbage processor

# Collection and Recycling

## Collection and recycling system for copiers

Toshiba TEC is promoting collection and recycling of copiers in cooperation with its customers, sales company and recycling firm.

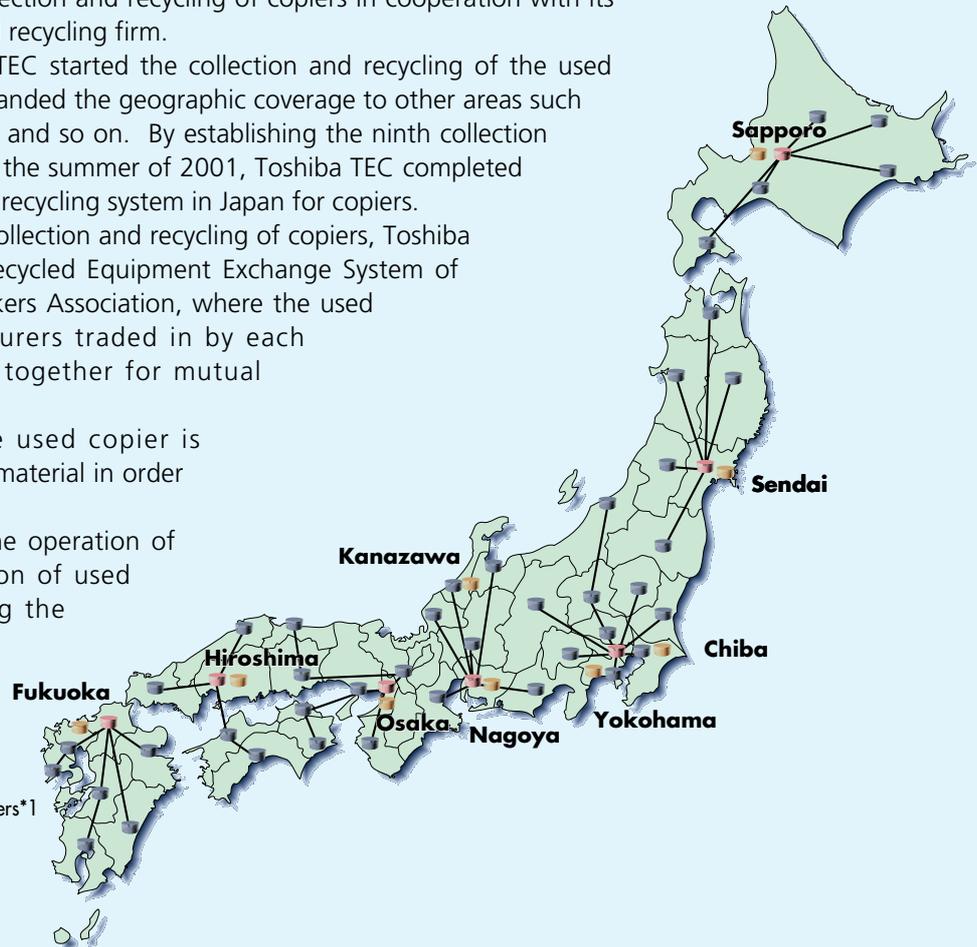
In December 1998, Toshiba TEC started the collection and recycling of the used copiers in Tokyo area and expanded the geographic coverage to other areas such as Nagoya, Osaka, Hiroshima, and so on. By establishing the ninth collection and recycling site in Sendai in the summer of 2001, Toshiba TEC completed the nationwide collection and recycling system in Japan for copiers.

To increase the efficiency of collection and recycling of copiers, Toshiba TEC is participating in the Recycled Equipment Exchange System of Japan Business Machines Makers Association, where the used copiers of other manufacturers traded in by each manufacturer are brought together for mutual exchange.

At the recycling base, the used copier is manually dismantled to each material in order to facilitate the recycling.

Toshiba TEC is reinforcing the operation of diverse logistics for collection of used products and strengthening the activities to increase the reuse of the parts.

-  Collection and recycling bases
-  Recycled Equipment Exchange Centers\*1
-  Collection depots\*2



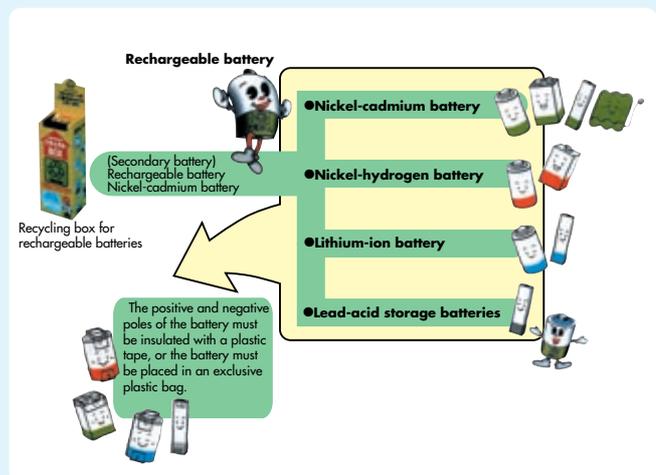
Note) \*1: Recycled Equipment Exchange Centers for the Japan Business Machine Makers Association  
 \*2: Local collection depots for the Recycled Equipment Exchange Centers

## Recycle system for retail information equipment

In the retail information systems equipment business covering the POS systems, Toshiba TEC is struggling to establish a collection and recycling system that collects end-of-use products in order to reduce disposal.

## Recycling portable secondary batteries

Rechargeable batteries are used in some products. They include nickel-cadmium batteries, nickel-hydrogen batteries, lithium-ion batteries and compact valve-regulated lead-acid storage batteries, that use cadmium, cobalt or lead as their main materials. To make effective use of precious resources, Toshiba TEC commits to collection and recycling. It is also affiliated with the Portable Rechargeable Battery Recycling Center, collecting and recycling jointly within the industry.



# Reuse of Parts



## Copier re-manufacturing (RM)

In April 2001, Toshiba TEC introduced the PREMAGE651RM in the Japanese market. This product is the first re-manufacturing (RM) digital copier in the industry, which has achieved the reused parts ratio of 60% (in weight). Reuse of the parts is extremely effective for reducing environmental impacts. The PREMAGE651RM is an environmentally conscious product that contributes to the establishment of a recycling-based society. Reused parts comply with the quality inspection criteria same as for new parts

Reused parts data	
Body weight	250kg
Total weight of reused parts	Approx. 150kg
Ratio of reused parts (in weight)	60% or more
Number of reused parts	Approx. 800
Main reused parts	Frame, wire harness, large-capacity paper cassette, printed circuit board, laser unit, etc.

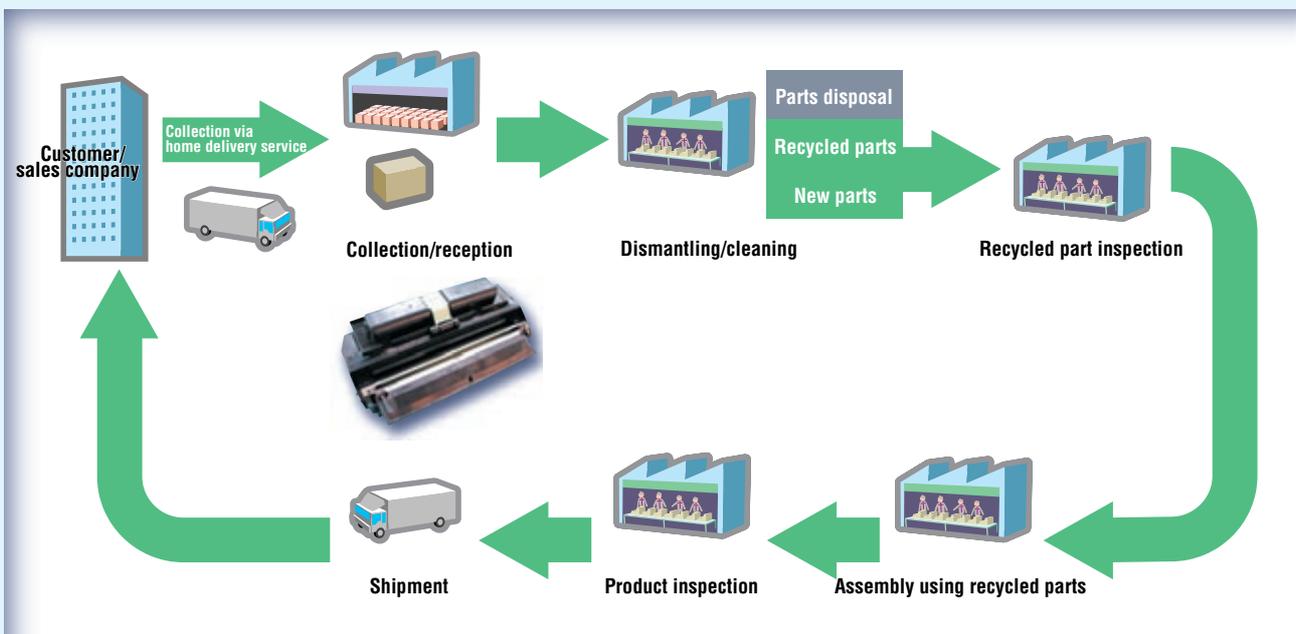
### PREMAGE651RM

Conforms to the International Energy Star Program and the Eco Mark.  
Complies with the criteria for the Law on Promoting Green Purchasing.



## Process unit of facsimile machines

Toshiba TEC is developing a recycling business for the process units of facsimile machines in the Japanese market. The used process units are collected from the field, recycled, and supplied again to the market. More than 60% of the process units distributed to the market have been collected and recycled thus far, which contributes to the reuse of resources. Toshiba TEC will continue to reduce parts disposal and increase the number of reused parts.

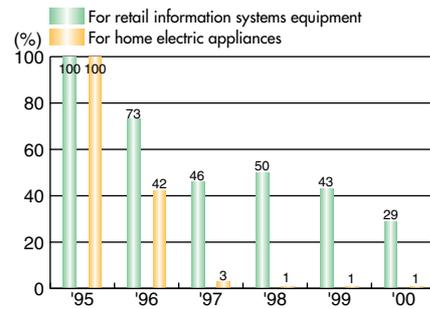


## Consideration regarding packaging

### Consideration regarding product packaging

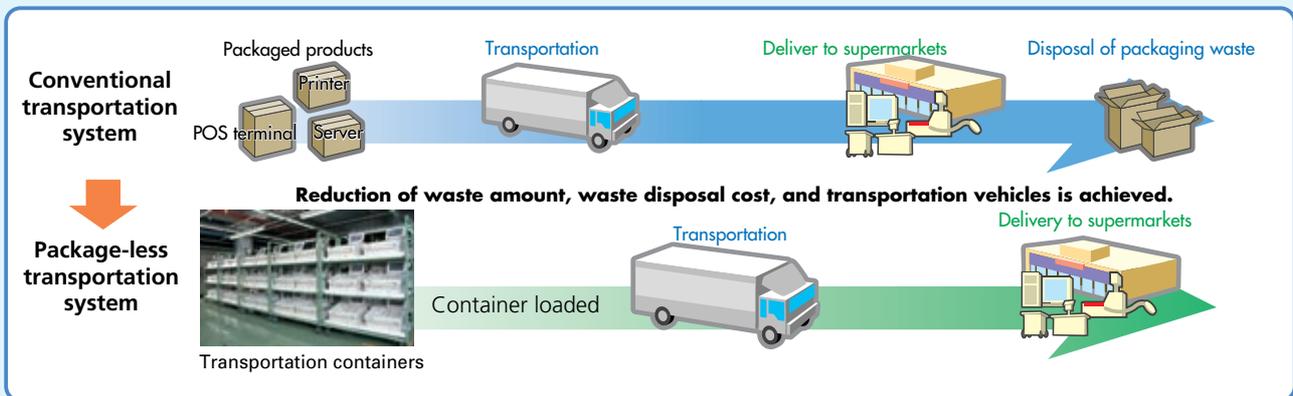
Toshiba TEC previously used Styrofoam for product packaging. However, since Styrofoam uses chlorofluorocarbons at the manufacturing process and emits toxic substances when incinerated, Toshiba TEC reduces the use of it, and uses corrugated cardboard and pulp mold instead.

Styrofoam used



### Implementation of package-less transportation

Package-less transportation is implemented to reduce environmental impacts during transporting. The volume of the transported packages is substantially reduced by reducing the packaging materials.

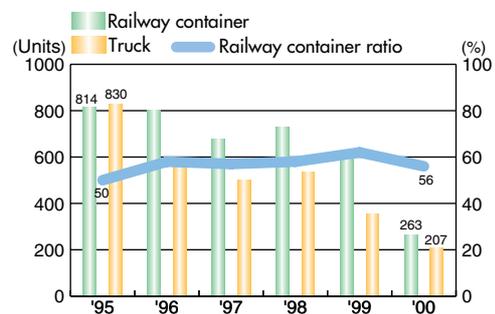


### Use of railway transportation

Toshiba TEC delivers an enormous number of products in Japan, mainly by trucks, which require reducing the weight of products, packaging materials and the volume of the packages. Toshiba TEC uses railway containers to their advantage as well.



Vacuum cleaner transportation



# Environmental Considerations on a Global Basis

Toshiba TEC has subsidiary companies in many parts of the world and conducts various environmental protection activities, in the production and sales phases on a global basis.

## Germany

In Europe, TEC GERMANY IMAGING SYSTEMS. G.m.b.H is playing a leading role in establishing a system to collect consumables and end-of-use parts of the copiers to recycle them. Consumables collected are photo conductors, toner containers, fuser rollers and blades. As an example, red and yellow recycle boxes are in use in Germany to sort and collect consumables and end-of-use parts.

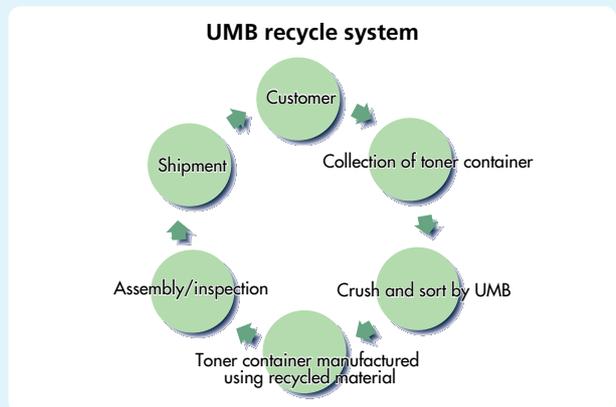


### Recycle box

The red recycle box collects the toner containers and the yellow one collects photo conductors, fuser rollers and blades.

## France

TOSHIBA TEC EUROPE IMAGING SYSTEM S.A. in France, which is the base for manufacturing the copiers and consumables, is implementing the collection and recycling system that is called Unité Mobile de Broyage (UMB). This system uses trucks equipped with a device where end-of-life toner containers are collected from customers can be ground.



This device is installed to a 40-foot container truck and can be transported anywhere in France. The plastics are recycled as plastic material for manufacturing toner containers, which achieves a closed recycling system.



Container truck equipped with a grinder

### Equipment in the container truck

Collected toner containers are separated from the labels and foreign materials, and then transferred to the grinder with the conveyor. Ground plastics are separated from the waste toner by the classifier. The equipment is capable of processing 500 kg per day.



Classifier

Grinder

Foreign material removing device

## Malaysia

TIM ELECTRONICS SDN. BHD. is the base for manufacturing copiers and facsimile machines. The company is moving forward with adopting a pulp mold as package cushioning material for small products, to reduce environmental impacts and cost.

The pulp mold material is currently used for packaging the products. Many aspects of the pulp mold material have been evaluated based on the product vibration testing, drop testing, and storage testing using trial products.

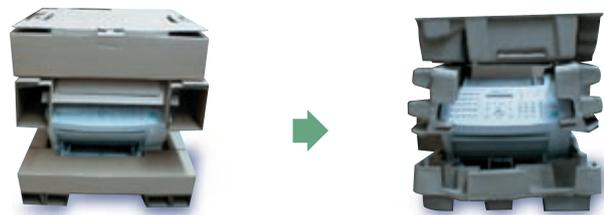
The use of Styrofoam was completely abolished. Pulp mold is used for 75% of the packaging of the products currently manufactured, and corrugated cardboard is used for packaging for the larger sized products. By facilitating recycling through using recycled materials and changing the cushioning material from corrugated cardboard to pulp mold, a complicated cushioning structure can be formed and reduction of the number of parts and amount of materials can be achieved. Pulp mold can be further recycled and does not emit dioxins or other toxic substances when incinerated. Pulp mold is environmentally friendly since it can be biodegraded after being buried in the ground as landfill. TIM ELECTRONICS SDN. BHD. will try to apply pulp mold to the large-sized products having a weight of 20 kg or more.



Vibration tester



Drop tester



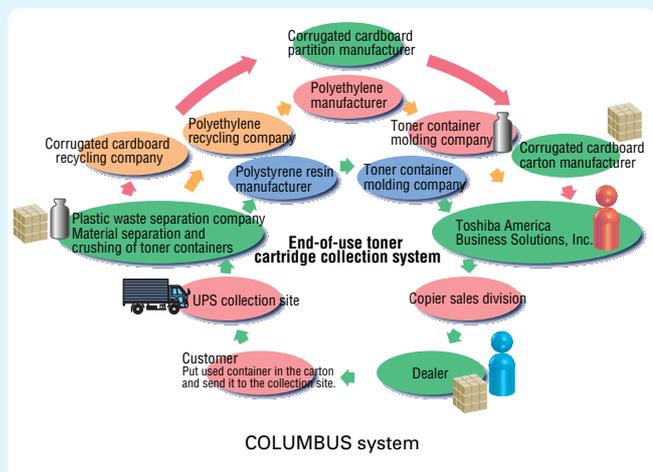
Example of changing from corrugated cardboard to pulp mold

## United States

The divisions in charge of copier sales and toner production of TOSHIBA AMERICA BUSINESS SOLUTIONS, INC. have been implementing a recycle program for toner containers used in the copier since February 1996.

This program is called COLUMBUS, which comes from COLlection of Used containers in the Market which Belongs to the US. The COLUMBUS system was established to achieve a closed system recycling that collects empty toner containers directly from customers or via dealers and recycles them in the exclusive recycle center. The toner package for the Toshiba copiers contains the United Parcel Service (UPS) label on which the address of the designated collection site is printed. The dealer or customer has only to put the used toner container in the original carton, attach the label on the carton, and then send it.

The used toner containers sent to the collection site are delivered to the recycle center where materials are separated and crushed into pellets. Pelletized plastics are reused as the toner container via the resin manufacturer and the toner container molder.



# Relationship with Local Communities and Social Activities

## Relationship with customers and local communities

Toshiba TEC is committed to preserving the environment through various activities, while maintaining good relationships with its customers and local communities.

### ● Social service activities in local areas

As part of the voluntary activities to deepen mutual reliance, the Toshiba TEC employees developed social activities that pleased local communities. The achievements are cleaning up local areas, visiting social welfare facilities, and repairing local facilities. The following are the activities represented.

#### ● Cleaning up the Genpei River (Mishima)

The employees clean up the Genpei River, close the Mishima Works. They collect trash in and near the river hence the river becomes cleaner year by year.



#### ● No-trash cleaning campaign at Shibusawa station (Hadano)

The employees participate in the No-trash Cleaning Campaign held in the early morning at the local station square.



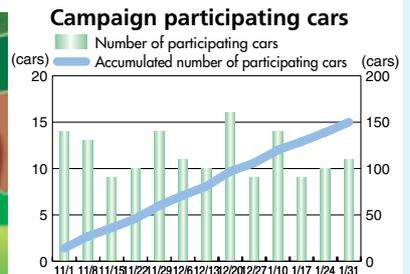
#### ● Greening at the nearby hospital (Ohito)

The in-house association of employees who have received education overseas carries out greening at the nearby hospital and clean-up campaign for the local community, twice a year.



#### ● Implementation of the no-car day campaign to help with air pollution prevention (Hadano)

The no-car day campaign has been implemented since 1997 to recover a clear sky. This campaign is conducted on Wednesdays from November through January. On these days, the employees are restrained from commuting by their own cars.

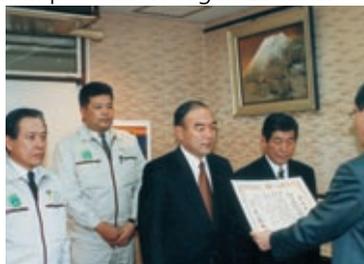


### ● Social contribution fund

The employees donate a portion of their salaries and bonuses to the Social Contribution Fund, along with a corporate contribution. Every year on the anniversary of the corporation, these contribution are given to the local social welfare and environmental protection organizations.



(Ohito)



(Mishima)



(Hadano)

● **Information disclosure**

As part of information disclosure, each business site enthusiastically accepts personnel in charge of environmental preservation, students and local residents who want to visit and observe the site.

● **Acceptance of site visit (Hadano)**

20 people from 16 companies belonging to the Environmental Action Study Team of the Isehara Chamber of Commerce and Industry, visited the Hadano Plant to study the Hadano Plant's commitment to actions against waste and environmental protection activities. During the visit, many questions and answers were made concerning management of the environment-related facilities and environmental protection activities to prove both parties' awareness about the environment.



● **Visit by personnel from the local government (Mishima)**

As part of the education regarding environmental protection conducted by Shizuoka Prefecture, the personnel in charge of the environmental protection in 21 cities in this prefecture, visited the Mishima Works. Their attention focused on the double-structured waste water treatment facility that allowed 6-sided inspection and was introduced in case of a great earthquake.

Visitors' questions also concentrated on promotion of recycling by thoroughly sorting waste and reduction of waste.



● **Environment-related supports**

With regard to accreditation with ISO 14001, Toshiba TEC provides supports to not only Toshiba TEC's suppliers and cooperating companies but also neighboring companies and organizations. The Ohito Business Center helped three companies to be certified so far, and will help another three or four companies to be certified in the fiscal year 2001.



(TEC IZU DENSHI)

● **Relations with local communities**

For the purpose of deepening relations with the local communities, Toshiba TEC holds various enjoyable events.



Summer festival (Hadano)



Summer festival (Mishima)



Summer festival (Ohito)

## Exhibitions

Toshiba TEC exhibited its environmental equipment in NEXPO 2000 and other exhibitions to show its commitments to global and local environmental protection.

### ● NEXPO 2000

NEXPO 2000 was held at the Tokyo Big Site from May 30 to June 2, 2000. Toshiba TEC exhibited waste processors and other environmental equipment. Over 2,300 people observed them. These units were exhibited in the Osaka exhibition site.



### ● Shizuoka Environment, Welfare and Technologies Exhibition

Toshiba TEC exhibited their equipment in the Shizuoka Environment, Welfare and Technologies Exhibition, held on November 23 to 25, 2000, at Twin Messe Shizuoka.

## Playing an active part in local communities

Toshiba TEC and its employees are playing an active part in local communities as Environmental Counselors certified by the Ministry of the Environment.

(No. of certified counselors)

	Head Office	Mishima Works	Ohito Business Center
Corporate	1	2	0
Citizen	1	0	2

## Commendations

Toshiba TEC won the following official commendations in the fiscal years 2000 and 2001.

### ● Mishima Works:

#### Commendation by Shizuoka governor

The Mishima Works received a prize from the Shizuoka prefectural governor for its continued achievements in promoting appropriate waste processing and local environmental protection activities.



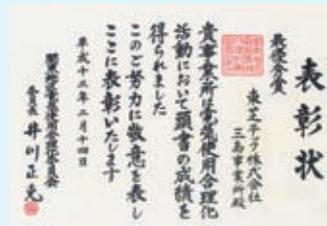
### ● Ohito Business Center:

#### Commended for the no-accident record



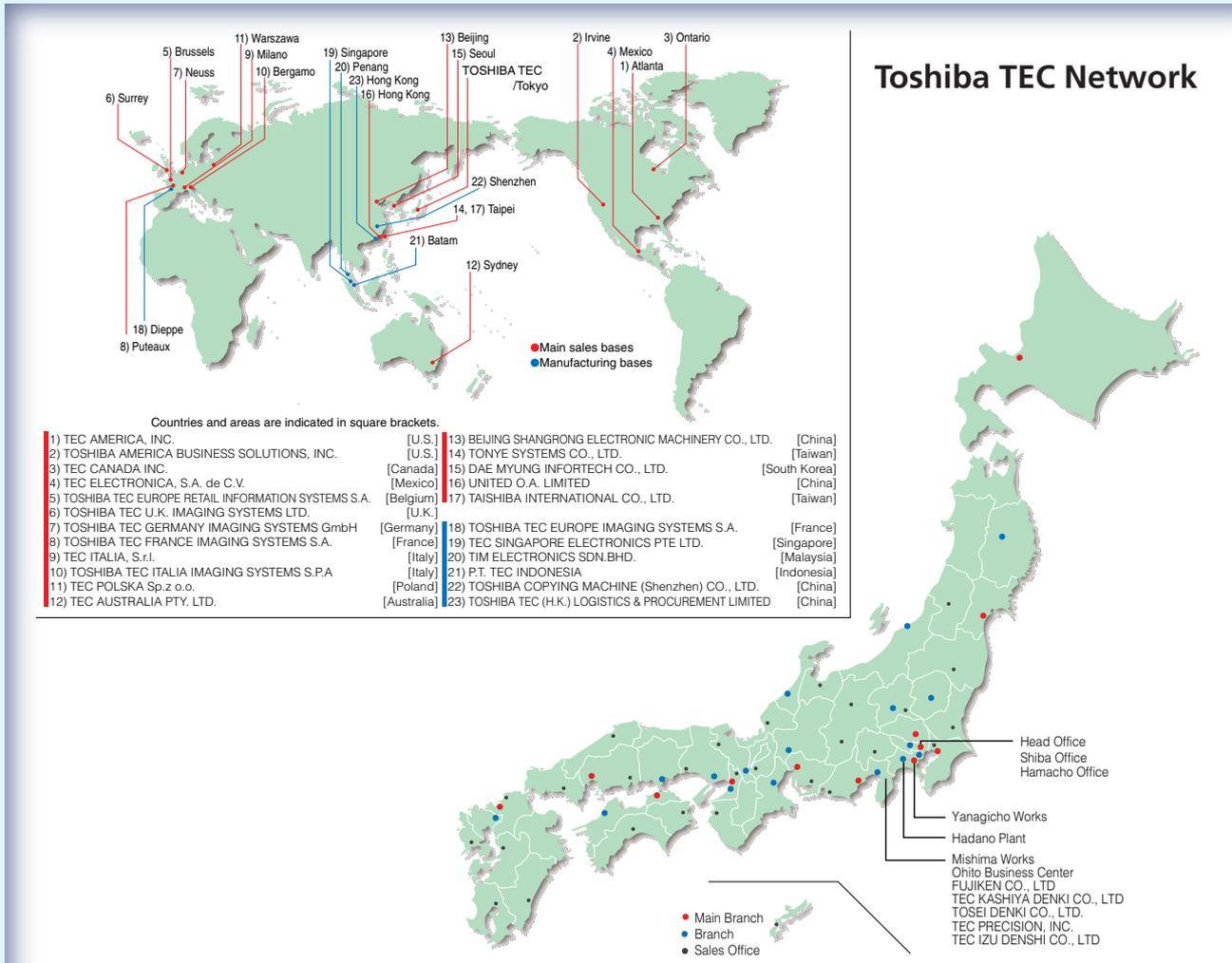
### ● Mishima Works:

#### Commended for saving energy



## Violation and penalty

Violations and accidents	None
Penalty/fine	None
Lawsuits	None
Complaints	1 (Night-time noise due to abnormal facility)



The following items could not be described in the Environmental Report 2001:

- Environmental impacts regarding inputs: total substances input and amount of recycled substances used (recycled resources and recycled parts)
- Number of suppliers that are accredited with ISO 14001 in the fiscal year 2001 (under investigation)
- Environmental impacts regarding transportation; total transportation (Transportation of some business sites was described.)

The Environmental Report 2002 will be published in November 2002.

**URL: <http://www.toshibatec.co.jp>**

**We welcome your comments and inquiries.**

We will continue to publish the environmental report. To improve the quality of our future environmental reports, we would like your comments and inquiries. Your comments will help us enhance our environmental reports.

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Please feel free to call, fax, or e-mail for inquiries or questions.



Toshiba Group Earth Protection Mark

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