Environmental Sustainability Report 2004

PEOPLE. TECHNOLOGY. COMMITMENT.™

TOKYO ELECTRON

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Editorial Policy

This Environmental Sustainability Report marks our fifth year of publication. We put this report together with the intention of making it easy to read, easy to understand and something to facilitate your understanding of Tokyo Electron (TEL)'s efforts in FY2004 in the areas of the environment, health and safety, as well as our social contribution activities. Here our president and CEO has also explained in his own words the view we take of CSR (Corporate Social Responsibility). We would like to enhance communication with all individuals engaged with TEL through this report. We welcome your comments and opinions so that we may reflect them in our future editorial policies.

We have referenced the Environmental Reporting Guidelines (2003), published by the Environment Ministry, and the 2002 Sustainability Reporting Guidelines, published by GRI (Global Reporting Initiative), an organization that formulates international sustainability report guidelines, in creating this report.

Scope

Organizations covered: Tokyo Electron Group

<Japan>
Tokyo Electron Ltd., Tokyo Electron AT Ltd.,
Tokyo Electron Kyushu Ltd., Tokyo Electron Software Technologies Ltd.,
Tokyo Electron FE Ltd., Tokyo Electron Device Ltd.,
Tokyo Electron BP Ltd., Tokyo Electron Agency Ltd.

<North America>
Tokyo Electron U.S. Holdings, Inc., Tokyo Electron America, Inc.,
Tokyo Electron Massachusetts, LLC.,
TEL Technology Center, America, LLC.,
Supercritical Systems, Inc., Timbre Technologies, Inc.

<Europe>
Tokyo Electron Europe Ltd., Tokyo Electron Italia S.p.A.,
Tokyo Electron Deutschland GmbH,
Tokyo Electron Nederland B.V., Tokyo Electron Ireland Ltd.,
Tokyo Electron Israel Ltd., Tokyo Electron France S.A.R.L.

<Asia>
Tokyo Electron Korea Ltd., Tokyo Electron Taiwan Ltd.,
Tokyo Electron (Shanghai) Ltd.,
Tokyo Electron (Shanghai) Logistic Center Ltd.

(Company names as of August 2004)

Period covered: April 1, 2003 to March 31, 2004 (FY2004)
Areas covered: Components of TEL's environmental management, as well as the social and economic aspects of corporate contributions to society and other activities.
We plan to publish an Environmental Sustainability Report annually.

Environment and Safety Activities Milestones

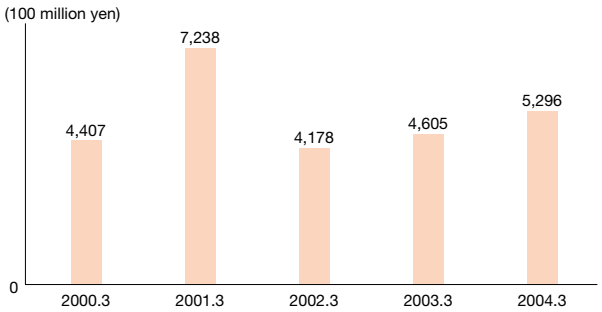
May 1994	Standardized, Environment and Safety Center (Environment, Health & Safety Center) established
Mar. 1996	Product Safety Subcommittee (TEL Product EHS Technical Committee) launched
Apr. 1996	Environmental Subcommittee (TEL EHS Committee) launched
Dec. 1997	Sagami plant obtain acquired ISO14001 certification
Feb. 1998	Tohoku plant obtain acquired ISO14001 certification
Mar. 1998	Saga plant obtain acquired ISO14001 certification
Mar. 1998	Kumamoto and Koshi plants obtain acquired ISO14001 certification
May 1998	Yamanashi plant obtain acquired ISO14001 certification
Sep. 1998	TEL Group Credo and Principles on Environmental Preservation established
Nov. 1998	TEL Group Credo and Principles on Safety & Health established
Jun. 1999	"Safety First policy" established
Aug. 1999	Ozu plant obtain acquired ISO14001 certification
Dec. 1999	"Health, Safety and the Environment" added to the Management Philosophy
Apr. 2000	Environmental accounting introduced
Apr. 2000	Unified safety training system "Safety 2000" implemented
Dec. 2000	First TEL Environmental Report published
Apr. 2001	Product life cycle assessments started
Oct. 2001	Green procurement launched
Oct. 2001	Environmental education introduced in facilities not yet certified under ISO14001
Apr. 2002	Original "TEL Eco-Activity" (environmental management system based on ISO14001) begins
Apr. 2003	Lead-free Task Team Activities start

Corporate Profile

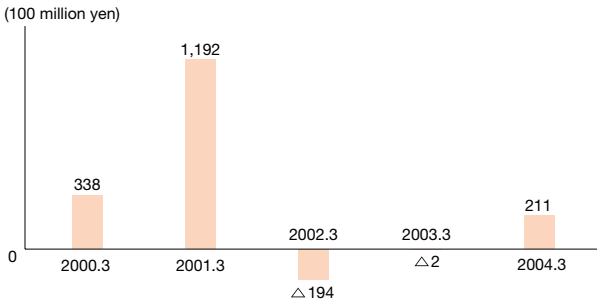
Company Name:	Tokyo Electron Limited (TEL)
Address:	TBS Broadcast Center, 3-6 Akasaka 5-chome, Minato-ku, Tokyo 107-8481
	TEL: +81-3-5561-7000
President and CEO:	Kiyoshi Sato
Established:	November 11, 1963
Capital:	¥54,961,190,000 (As of March 31, 2004)
Main products:	Semiconductor Production equipment and flat panel displays (FPDs) Production equipment, computer networks and electronic components.
Employees:	945 (As of March 31, 2004)

Tokyo Electron head office
(TBS Broadcast Center 15 -18th Floor)

Net Sales (Consolidated)

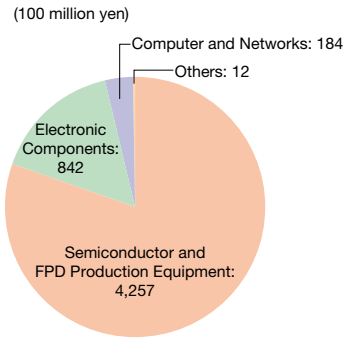


Ordinary Income (Consolidated)



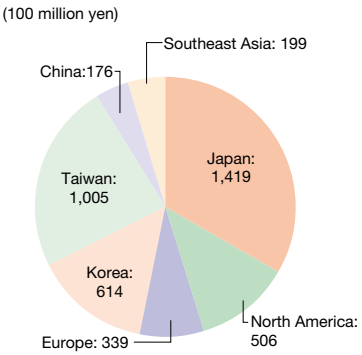
Net Sales by Division (Consolidated)

(fiscal year ended) March 2004

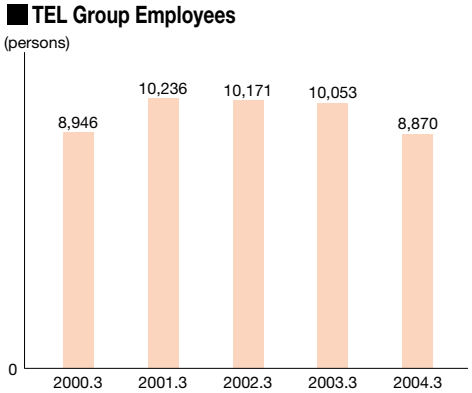


Net Sale by Region of Semiconductor Production Equipment Division

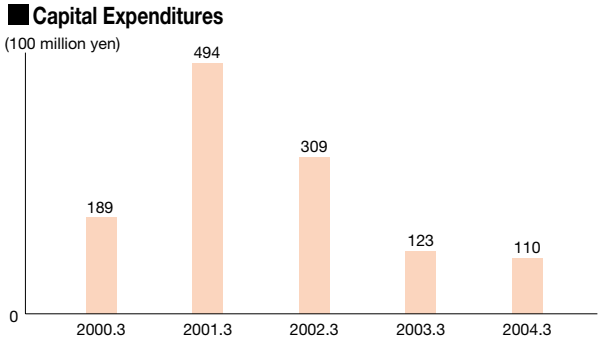
(fiscal year ended) March 2004



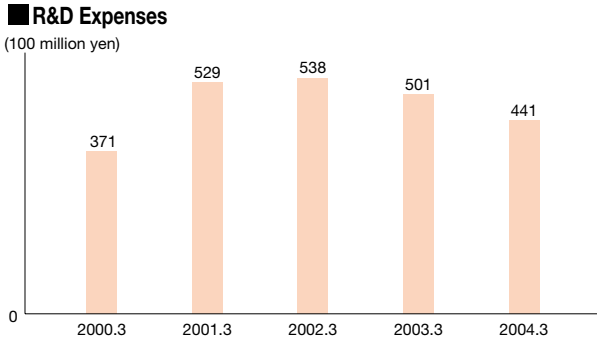
TEL Group Employees



Capital Expenditures



R&D Expenses



Toward Promoting Corporate Social Responsibility (CSR)

A corporation is a social entity and therefore it has a responsibility to work for the development of environmentally-sound society. I look at it as though from the perspective that TEL has been entrusted into my care by society, and I am to act by encouraging CSR-oriented management.

Kiyoshi Sato
President & CEO
Tokyo Electron Limited

Transparency of Management is Critical for Substantial Implementation of CSR

Since the day that TEL was founded, fair and honest management has been at the root of the company. With this in mind, I have been managing the company since my appointment as the president in June 2003.

In order to put fair and honest management into practice, it is important for corporate executives to have a clear vision of this, but at the same time, it is also imperative to have a system where a high level of ethical standards are maintained. At TEL, under the corporate governance scheme, which is fundamental to CSR, we have an Ethics Committee, a Compensation Committee and a Nomination Committee.

The Nomination Committee is an independent body that fulfills the task of nominating the company's next president, as the position is not nominated by the current president. In this way, the selection process of the corporate executive is given increased transparency. I myself was appointed President by this committee. In a nutshell, the most positive effect of this system would seem to be that it does away with any incentive to curry favor with company brass, and allows one to pursue a career by the virtues of his or her convictions.

The Compensation Committee is an independent body that decides the compensation of the President & CEO, while also aiming to increase the transparency of management. This system was introduced five years ago and the compensation for representative directors is disclosed on the invitations to shareholder's meetings.

The Ethics Committee was launched six years ago at the same time that our Code of Ethics was set out. The committee aims to examine the planning and the implementation of business ethics education and enlightenment activities, as well as the practice of business based on the Code of Ethics. We are determined to maintain a corporate culture rooted in the high level of ethics suitable for a global exellent company.

Japanese companies are learning from the Western governance model, and setting up committees as outlined above has become an increasingly popular trend. However, at TEL we have been putting this into practice for several years now.

At TEL, we have developed our operations globally, but it is no simple matter to correctly understand and comply with the different rules in each country and region in which we have operations. However, we take this matter very seriously and are making efforts to formulate a system that ensures that we are in compliance throughout the world. With this system, we are maintaining an environment in which all employees can work while guarding a high level of integrity.

Environment and Safety are Central to CSR for TEL

The main business of our company is the manufacturing of semiconductor production equipment. By providing better products to semiconductor manufacturers, we contribute to higher performance in production and better quality semiconductors. The two main elements of our company's CSR policy are to secure absolute safety in the user's operation of our equipment when used by customers and to minimize the environmental burden in any field in which our company is involved.

Whether we succeed in our environmental and safety efforts depends greatly on the ingenuity and the efforts of equipment developers. Our developers integrate precise performance requirement demands from customers into design on a daily basis. In the competitive world of today, it is not easy to "pack" the environment and safety into equipment design; however, we are aiming to achieve both through the investment of human resources and capital.

We Demonstrate Leadership in the Semiconductor Production Equipment Industry

The semiconductor industry is a younger industry, encumbered by fewer rules and conventions when compared with other industries. For that reason, it is imperative that each company actively works in order to solve various problems in the social and

My Eco-life

"I love fishing and go often go to the Okutama area or Aki River on holidays, and the river pollution always bothers me. I will do my utmost to keep our rivers clean and strive to protect the environment so that we can eat the caught fish safely."

the environmental sectors.

For example, the semiconductor manufacturing process requires the use of many chemical products; therefore, every time a new manufacturing process is invented, new chemical products are used. In some of these cases, although not legally banned, some chemical products are not suitable from the perspective of the environment or safety; this makes for difficult decisions on whether or not to use them. In these situations, our company holds safety in the highest regard. We think that a substance should not be used until a safe means of using it is established.

TEL is one of the largest semiconductor production equipment manufacturers in the world; consequently, we have an obligation to demonstrate leadership, not only in the industry, but also in society both in our decisions and in actions. While placing an emphasis on the pillars of our CSR policy, the environment and safety, we will forge stronger ties with customers, suppliers and all stakeholders in an effort to steadily implement solid measures.

In this document, we report on our approach to the environment and safety and the actual activities at the heart of TEL. Your voices are extremely important in making managerial decisions and I ask for your frank comments.

TEL's Credo on Environmental Preservation

< TEL's Credo on Environmental Preventation >

The Tokyo Electron Group believes that preserving and continuously improving the global environment is one of the most important objectives for mankind, as well as our business. Based on this credo, we are determined to expand our business by maintaining harmony with the global environment, and thus win the trust of our many customers, shareholders, employees and society in general.

< TEL's Principles on Environmental Preservation include: >

1. Continuous Improvement
TEL recognizes that the products we manufacture affect the environment, and therefore, we, with our customers and suppliers, shall continually strive to minimize the environmental impact of our processes and operations.

2. Knowledge
TEL continually strives to enhance its understanding of the impact that TEL's operations have on the environment, and the responsibility that this entails. In addition, TEL aims to gain a quantitative grasp of environmental factors, and the impacts resulting from our activities and operations.

3. Performance Criteria
As well as strictly observing mandatory environmental laws, treaties and agreements, TEL strives to enhance its own environmental management system and improve global environmental preservation programs by the proactive establishment of its own aggressive environmental performance criteria.

4. Disclosure
TEL shares information about its environmental concepts and principles, as well as the progress of our ongoing contributions toward environmental protection with employees and the general public.

5. Partnership
TEL actively participates in environmental protection activities practiced by our customers, suppliers and local communities.

September 25, 1998

TEL's Safety and Health Credo

< TEL's Safety and Health Credo >

Safety and health training are required for all employees and board members at TEL. Our profit delivery date requirements, and time limitations must not be met at the sacrifice of human life and the safety of our facilities and equipment.

< TEL's Principles on Safety and Health Preservation include: >

1. Continuous Improvement
TEL is conscious that the factors that affect the safety and health of customers and our employees exist at the stage of manufacturing, transportation, installation, use, maintenance and service of our products, and based on this awareness, we shall continually strive to eliminate factors that impede the safety and health of our products.

2. Knowledge
TEL continually strives to enhance our understanding of safety and health and improve these conditions for all people working in our sites. In addition, TEL aims to gain qualitative and quantitative grasps of safety and health factors on TEL Group activities and operations.

3. Performance Criteria
As well as strictly observing mandatory safety and health laws, treaties and agreements, TEL strives to enhance its own safety and health management system and improve global safety and health programs by the proactive establishment of aggressive safety and health performance criteria.

4. Disclosure
TEL shares information about its safety and health credo, policies and the progress of our safety and health activities with all board members and employees, and publish the general public our progress as the need arises.

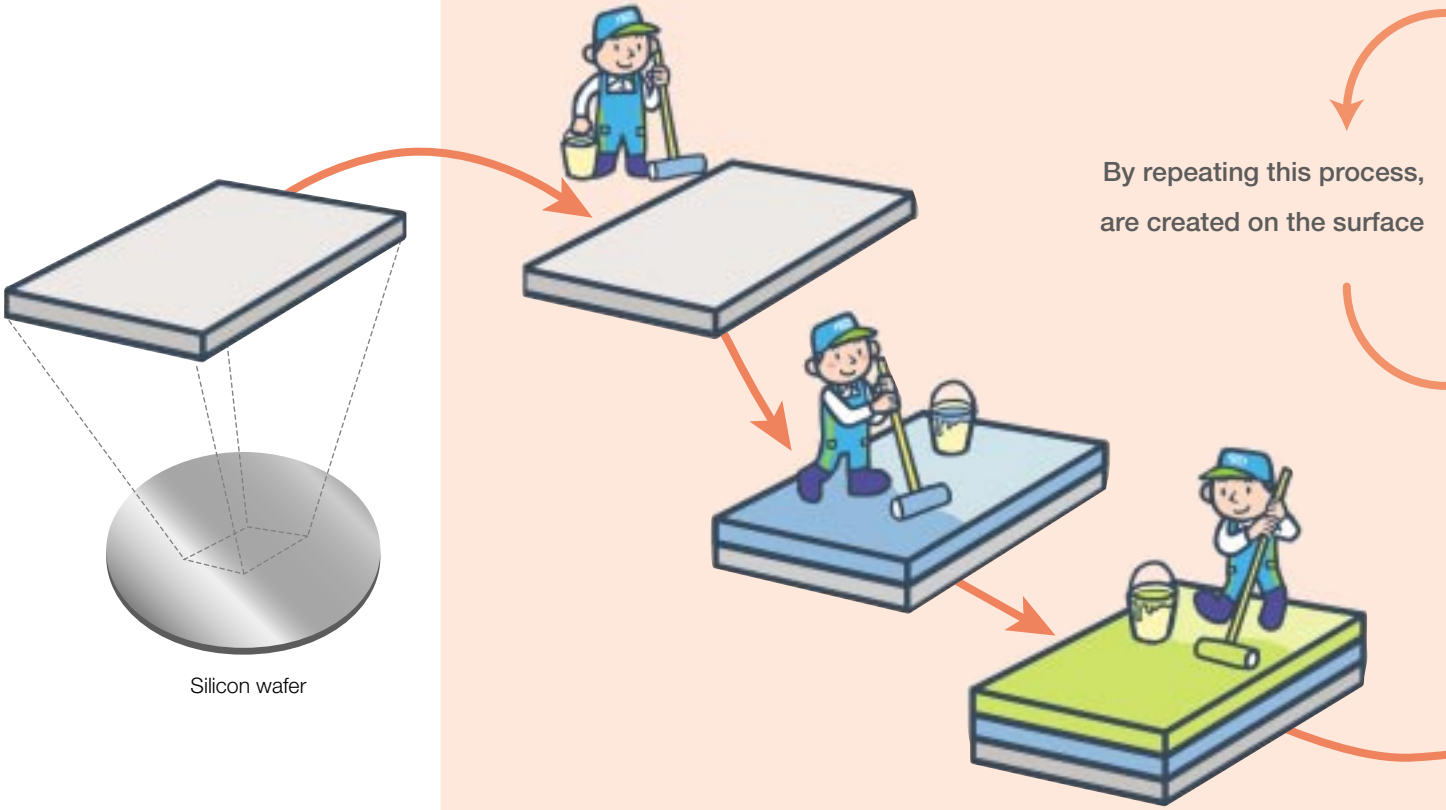
5. Partnership
TEL actively participates in safety and health activities practiced by our customers, suppliers and communities.

November 27, 1998

TEL's Products

We would like to explain the processes of manufacturing semiconductors by TEL's products.

The process for manufacturing semiconductors is thin film on the surface of the wafer.



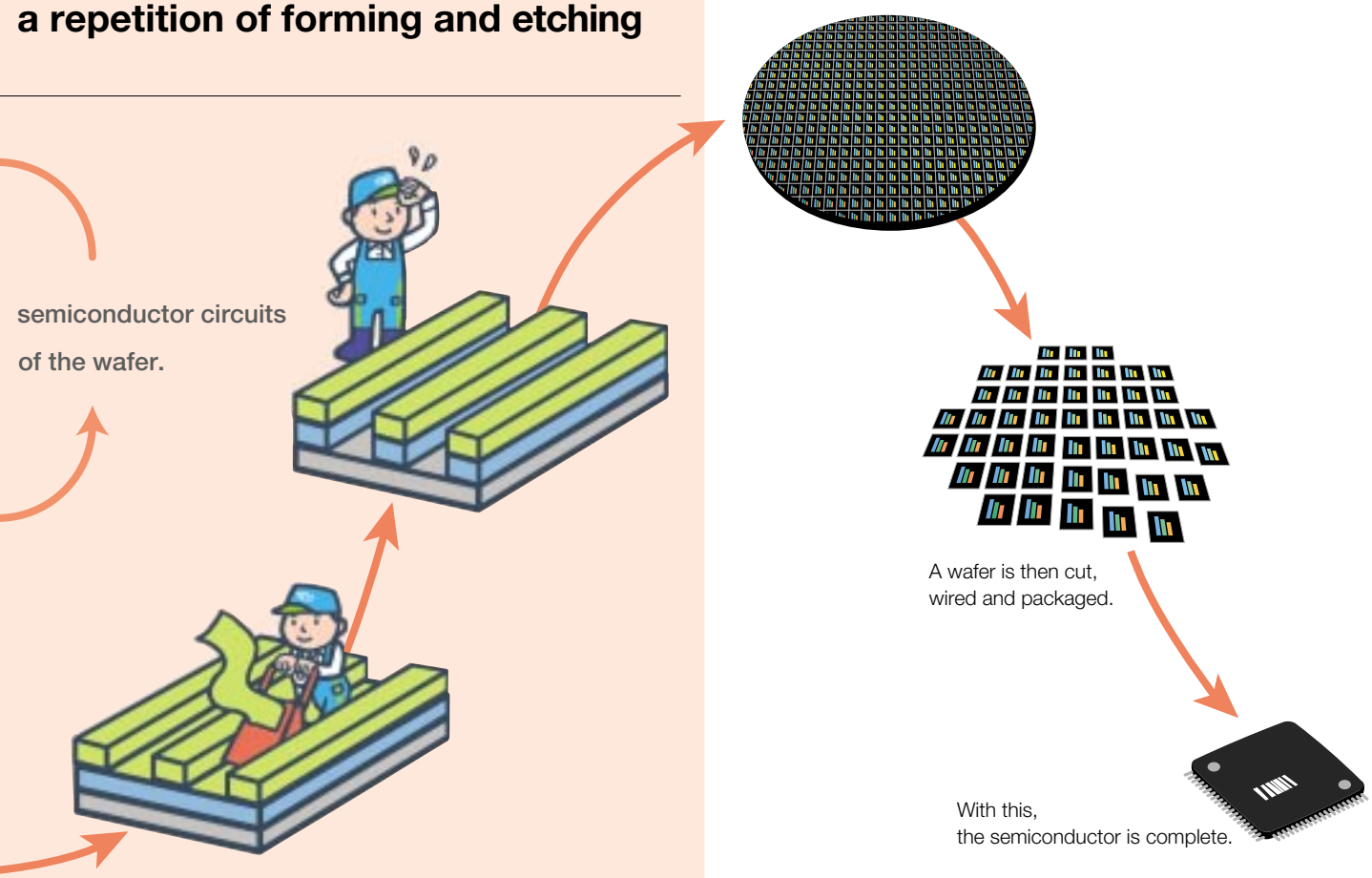
Manufacturing Semiconductors

Semiconductors are manufactured through the process of generating fine circuits using gas and chemical solutions on a thin disc called a silicon wafer. We form oxide film (Thermal Processing System), apply photoresist solution (Coater/Developer), perform pattern exposure through photo masks and grind down the oxide film using plasma (Plasma Etch System). Next, come the steps of ion implantation, metal coating, and wafer inspection, completing the manufacturing process. Next, the wafer is cut into pieces, wired and packaged, and the semiconductor is complete.

Other Lines of Business

Aside from manufacturing semiconductor production equipment, TEL is also engaged in the development and manufacture of equipment that produces FPDs (Flat Panel Displays). In addition, electronic components (handled by Tokyo Electron Device Ltd.), such as semiconductors and Internet technology products (handled by Computer Network Division) are also major pillars of TEL's business operations.

a repetition of forming and etching



Thermal Processing System

Coater/Developer

Plasma Etch System

TEL manufactures various types of equipment that form and etch thin film on the surface of wafers.

TEL's Business

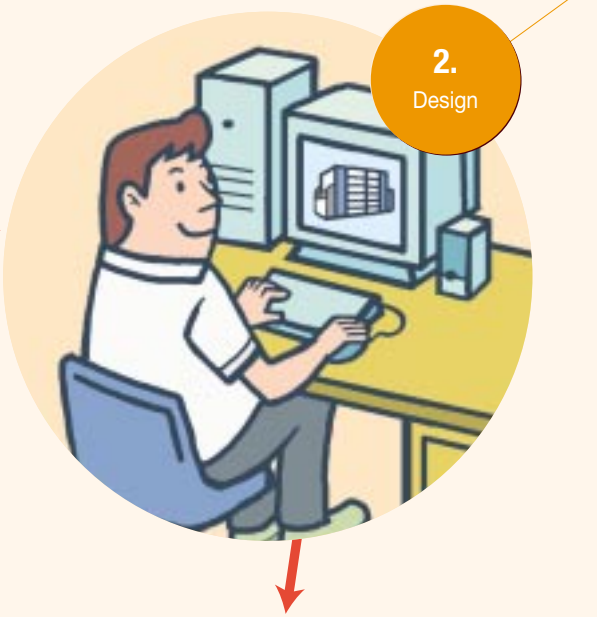
TEL's major product is semiconductor production equipment. Each product differs in specifications, as it is based on the requirements of each of our customers. We do our utmost to consider the environment and safety when manufacturing our products, in order to meet the technical and performance demands expected of us.

Semiconductor Production Equipment Manufacturing Flow

On these pages, we have provided an example of the stages of our operations — including specification meetings, design, manufacturing, shipping, start-up and inspection, as well as semiconductor manufacturing — for TEL's major product: CLEAN TRACK™ LITHIUS™. We also feature comments from on-site regarding the environment and safety. We are committed to placing a premium on the environment, safety and health in all stages of our work.

Tokyo Electron Kyushu Limited
Design Division

Specifications for each unit differ because each piece of equipment is custom-designed based on the destination country or the layout of the system. During the design process, we lavish attention on environmental and safety concerns in regards to manufacturing, operation and maintenance lifecycles. Lately, shifting to lead-free designs looms as a big challenge.



Tokyo Electron Limited
Sales Division

During our meetings with customers, we spend a great deal of time in setting delivery dates, price and the detailed specifications of products in meetings with customers. Our sales division understands that legal systems and regulations, as well as customers differ by region, and is so we are making ongoing efforts to acquire the appropriate legal and regulatory knowledge in regards to the environment and safety.

Tokyo Electron Kyushu Limited
Manufacturing Division

Our main task is unit assembly and inspections. In the past, we used a type of alcohol for shipping inspections, but we have switched to pure water, thus conserving resources.

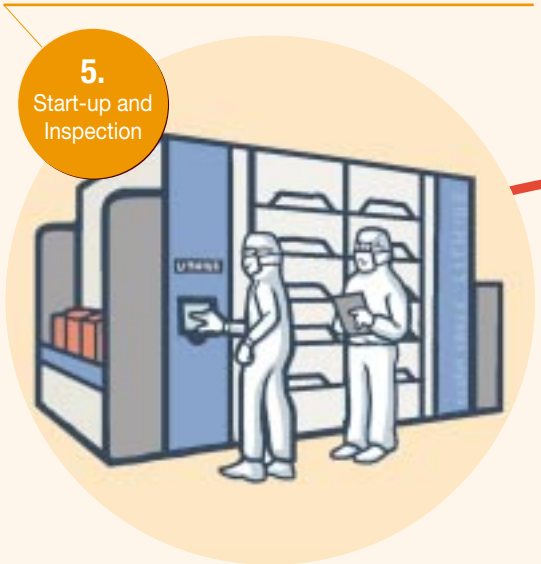
The basic concept behind the CLEAN TRACK LITHIUS, which went into mass production in January 2004, is reducing photoresist consumption and safe operation. Furthermore, the technology used in this equipment has made new levels of microfabrication possible. We believe that this will contribute to the further advancement of society.

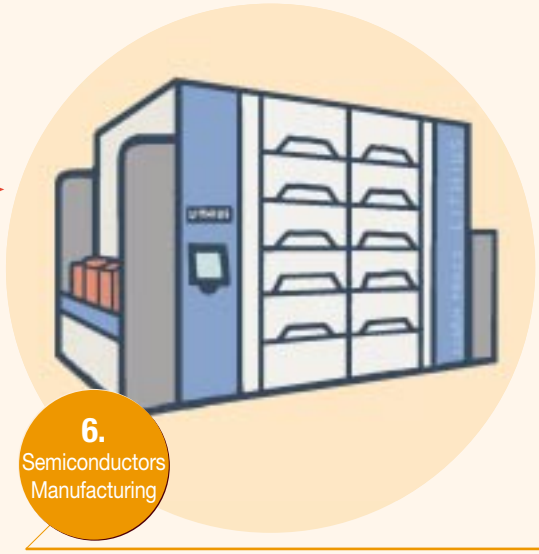
Hikaru Ito
VP & General Manager
Clean Track BU
Tokyo Electron Limited

Start-up work takes one to two months until the final inspection. This is an on-site operation at our customer's site. We pay great attention to organization and take care to avoid accidents, such as solution leakage.

Tokyo Electron Kyushu Limited
Engineering Services
Division

5. Start-up and Inspection





6. Semiconductors Manufacturing

For maintenance reasons, or in the event of equipment problems, we provide customer support by setting up support stations near our customers all over the world. We also recycle parts received during maintenance work.

Tokyo Electron FE Limited
Field Support Division

4. Shipping and Delivery

We use a special packaging in order to maintain a high level of cleanliness. We are considering safety to the utmost degree possible in regard to the increased risks in loading, transportation and installation of our equipment as they continue to get larger. We are also endeavoring to conserve resources and recycle by avoiding excessive packaging, without affecting product quality, and taking packaging materials with us after delivering a product .

Tokyo Electron BP Limited
Logistics Division

EHS Management

TEL Group has gone global with its EHS activities.

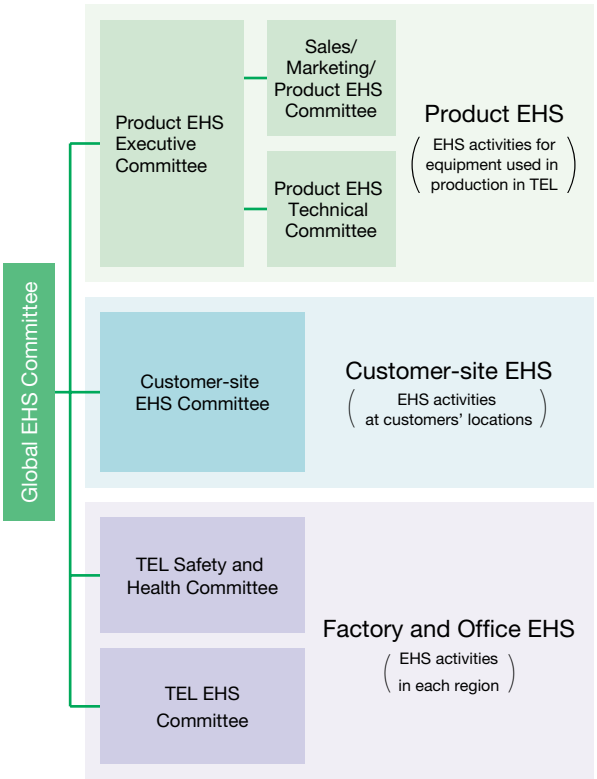
TEL's EHS

Based on the recognition that TEL's business activities affect the environment, we have been conducting environmental management and obtaining the certification based on ISO14001 at each plant since 1997. We also recognize that the need for every person involved in our business to continuously lead safe, healthy and satisfying lives is as vital as our attention to environmental issues. In order to clarify our position, we formulated the TEL Credo and Principles on Environmental Preservation and the TEL Credo and Principles on Health and Safety in 1998. We have also clearly articulated our positions on the environment, health and safety in our management philosophy and promoted implementation of our EHS (Environment, Health and Safety) system throughout TEL group companies.

EHS Promotion Structure

EHS-related activities are supported by the three pillars of: "Product EHS," "Customer-site EHS," and "Factory and Office EHS."

TEL's EHS Promotion System



EHS Management System

Each of the manufacturing plants have formulated environmental management systems and obtained certification based on ISO14001. Yokohama office of Tokyo Electron Device Ltd. and Miyagi plant of Tokyo Electron AT Ltd. are to be awarded certification in 2004. We are also forming a Occupational Safety and Health Management System based on OHSAS18001 and the guidelines of the Japan Ministry of Health, Labor and Welfare as a part of EHS management.

ISO14001-qualified plants and the plants to be awarded certification

Company name	Plant and office name	(Scheduled) Certification date	Certification number
Tokyo Electron AT Ltd. Tokyo Electron FE Ltd.	Sagami plant	December 10, 1997	1110-1997 -AE-KOB-RvA
Tokyo Electron AT Ltd.	Tohoku plant	February 19, 1998	1118-1998 -AE-KOB-RvA
	Yamanashi plant (Fujii/Hosaka area)	May 15, 1998	1124-1998 -AE-KOB-RvA Rev.1
	Miyagi plant	To be awarded in December 2004	
Tokyo Electron Kyushu Ltd.	Saga plant	March 12, 1998	1119-1998 -AE-KOB-RvA
	Kumamoto/Koshi plant	March 26, 1998	1120-1998 -AE-KOB-RvA
	Ozu plant	August 27, 1999	1414-1999 -AE-KOB-RvA
Tokyo Electro Device Ltd.	Yokohama office	To be awarded in July 2004	

EHS Activities Monitoring System

In order to strengthen our EHS Management System, TEL is striving to raise the monitoring standards. The monitoring of this system and its accomplishments are executed in parallel by the plants, within the TEL group companies and by third parties. The most actively promoted of these at present, is the TEL Internal Assessment, which is an interchange of EHS evaluations conducted by EHS representatives from each plant. It started in FY 2003. In FY 2004, it was performed at two plants. In FY 2005, we are bringing the standard higher by adding Environmental Performance and Legal Compliance and product EHS to the current Occupational Health and Safety and Work Safety as new items.

On-site inspection

Environmental Accounting

We are accurately determining the costs and benefits of environmental activities and using this knowledge in management.

Our Approach to Environmental Accounting

Environmental accounting is a tool that helps to determine the costs and benefits of a company's environmental activities. At TEL, we have introduced an environmental accounting system to determine quantitatively the costs of environmental protection activities among our corporate activities and to use this information to guide corporate activities.

For FY 2004, which marked the fifth year since the introduction of our environmental accounting system, we endeavored to improve the accuracy of data collection on the amount of the investment in equipment and costs of the environmental activities. We intend to make continuity an aspect of environmental protection activities.

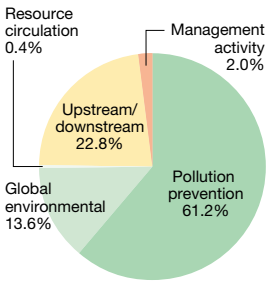
Our environmental accounting complies with the Environmental Accounting Guidelines (2002 edition) and the Environmental Accounting Guidebook published by Japan's Ministry of the Environment.

Environmental Preservation Costs

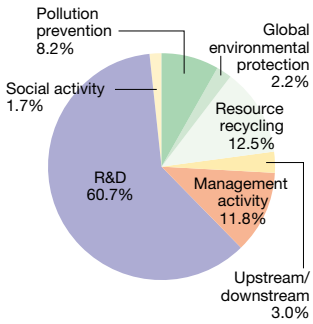
Environmental preservation costs (investments and expenses) for FY 2004 are outlined in the tables and figures below.

The scope of coverage of the data includes TEL plants and offices in Japan. The investment depreciations in facilities are calculated as expenses beginning with the investments made in FY 2000.

Breakdown of Investments



Breakdown of Expenses



Environmental Protection Costs in FY 2004

Scope: All TEL facilities in Japan (Sapporo, Tohoku, Miyagi, Akasaka, Fuchu, Yokohama, Sagami, Hosaka, Fujii, Amagasaki, Osaka, Saga, Kumamoto, Koshi, Ozu)
Period covered: April 1, 2003 — March 31, 2004

(1,000 yen)

Classifications of environmental costs		Scope of main initiatives (facilities, supplies, leases, depreciation, maintenance, etc.)	Investment amount	Expense amount
1. Business area costs			104,012	683,504
Itemization	1.1 Pollution prevention costs	Preventing air pollution, water pollution, soil pollution, etc.	84,609	246,112
	1.2 Global environmental costs	Global warming prevention, ozone layer protection, etc.	18,820	64,945
	1.3 Resource circulation costs	Efficient use of resources, waste reduction, etc.	583	372,447
2. Upstream/Downstream costs		Green purchasing, green procurement, etc.	31,575	88,606
3. Management activity costs		Environmental education, monitoring and measuring environmental impacts, etc.	2,770	350,993
4. Research and development costs		Product R&D, etc.	0	1,812,572
5. Social activity costs		Planting trees and vegetation, supporting local environmental activities, information disclosure, etc.	0	50,440
6. Environmental damage costs		Repairing damage to the natural environment, etc.	0	102
7. Other costs		Other	0	0
Total			138,357	2,986,217

Economic Benefits of Environment Protection Activities

The results of calculations for the economic benefits of environmental protection activities are shown in the table below.

The economic benefits of environmental protection activities are the only environmental accounting items covered in this report.

Economic Benefits of Environmental Protection Activities in FY 2004

Scope: TEL facilities in Japan (Sapporo, Tohoku, Miyagi, Akasaka, Fuchu, Yokohama, Sagami, Hosaka, Fujii, Osaka, Amagasaki, Saga, Kumamoto, Koshi, Ozu)
Period covered: April 1, 2003 — March 31, 2004

(1,000 yen)

Classifications of environmental costs		Details	Amount
Cost reduction	Benefits relating to electricity and other energy	Reduced electricity usage	78,613
	Water-related benefits	Reduced water usage	7,330
	Paper-related benefits	Reduced paper usage	9,095
	Resource-related benefits	Reduced crude oil usage	-1,066
	Other benefits		10,893
	Waste related benefits	Reduced waste volume	103,494
	Water and soil effluent benefits	Reduced waste volume	1,398
Cost reduction subtotal			209,757
Profits	Resource-related benefits		53
	Waste-related benefits		3,421
Profit subtotal			3,474
Grand total			213,232

EHS Activity Targets and Results

TEL has set targets based on our Credo and Principles on the Environment, Safety and Health and is acting on them.

TEL laid out our Credo and Principles on Environmental Preservation and Credo and Principles on Health and Safety in 1998 in order to clarify our view on the environment, health and safety. Based on these credos and principles, EHS activities are put into practice throughout the group. The plans and the achievements for FY 2004 and the plans and the objectives for FY 2005 onward are displayed in the table below.

EHS Activity Targets and Achievements in FY 2004

	Activity Plan for FY 2004	Results	Evaluation	Plans and Targets for FY 2005 Onward	See
Eco-products	Implementation of LCA (Life Cycle Assessment)	Implementation for newly-developed products	○	Continue execution	P16
	Promote the introduction of lead-free solder in our products	Initiated promotional organization and started activities	○	Started the single unit evaluation for lead-free solder components and the main circuit boards	P18
	Promote green procurement	Undertook supplier education	○	Determine the amount of prohibited chemical substances in TEL products	P19
Eco-factory	Promotion of zero-emissions	Accomplished at four Kyushu region plants, recycling rate for the entire group raised to 93 percent	○	Achieve zero-emissions by FY 2006 at the remaining manufacturing plants, and bring the overall recycling rate above 95 percent by FY 2006	P20
	Reduced energy consumption (CO_2 emissions by one percent per unit of sales, based on the Law Concerning the Rational Use of Energy)	As a result of the energy conservation activities in each region, we logged a 13 percent reduction from the previous fiscal year per unit of sales	○	Further promotion of energy conservation and bring per unit usage close to FY 1998 levels	P21
	Continue efforts to determine the amount of chemicals used that are subject to PRTR reporting	Determined amount of relevant substances used	○	Determine sites of emissions, usage reduction	P23
Occupational Health and Safety	Zero accidents that require employees to take off moretime off more than four days, and a 30 percent reduction in accidental injuries year-on-year.	Accidents that required employees to take the time off for more than four days occurred, and accidental injuries were reduced by 25 percent from the previous year.	△	Re-establish FY 2005 targets	P24
EHS Management System	Continue execution of environmental activities at offices facilities	Activities are ongoing	○	Obtain ISO14001 certification for Tokyo Electron Device Ltd.	P10
	Introduce occupational health and safety management systems at production facilities	Promoted risk assessment at plants where these have not yet been introduced	○	Definitive execution and confirmation of risk reduction plans	P10
	Establish EHS assessment system	Trained assessors and executed reciprocal assessments at two plants	○	Equipment EHS related items assessment, not only for the occupational safety, but also for environmental performance	P10
	Promotion of activities at overseas offices	Determined the activities of each region, and carried out EHS handbook education for the sales managers in some overseas regions	○	Review the implementation of environmental education, expand it to regions not yet carrying it out, and examine how to determine the status of education implementation, such as using the Internet.	P25

○Achieved target △Achieved 80 % of target ×Achieved less than 80 % of target

Satoshi Nakashima
Manufacturing Division
VP & General Manager
Tokyo Electron Limited

Considering environmental and safety factors from the design stage. The challenge is to build momentum and nurture this tendency.

TEL has until now clearly distinguished between the role of sales and engineers. However, the views and the knowledge regarding environmental burden and safety should be shared across these sectors so that activities can be based on the integrated knowledge and collective know-how of both those working in sales and those working at the factory.

From the perspective of reducing the environmental burden of the equipment TEL produces, it is important to look deeply into this issue. It is obvious that the abilities of the development engineers are one of the determining factors of the environmental and safety performance of equipment. We will pour our energy into human resources development to create employees who can select materials and design products while being conscious of the environment and safety measures.

Designing the products while keeping in mind waste disposal and recycling has been a practice at consumer electronics makers for a long time. There is no question that we need to firmly embrace this mindset at TEL. It is fair to say that creating this kind of momentum is a key challenge for the Environment, Health and Safety Center.

Our future tasks include taking steps toward lead-free production processes and for employees to take it upon themselves to inspect and confirm the safety of equipment within factories once again with their own eyes.

My Eco-life

"I come from a family of farmers and enjoy agricultural work on my days off."

Environmental Activities of TEL Companies

We would like to introduce you to the environmental and safety approaches, activities and policies of two of our companies.

Tokyo Electron Kyushu Limited

Haruo Iwatsu
President and
Representative Director

Reducing the Loss and Environmental Burden by Improving Performance

The main business of Tokyo Electron Kyushu Ltd. is research and development, design, manufacturing, and start-up of semiconductor/FPD production equipment based out of Kumamoto. The biggest environmental challenge that we are facing right now is the prevention of waste production. We are reducing the number of defective units by improving quality and reducing the amount of energy used at the factory by improving the efficiency. If we can improve yields by enhancing the performance of our product, the environmental and cost benefits will be immense. It is our belief that we should, of course, make efforts to conserve energy, but at the same time, we should do our best to boost performance throughout manufacturing activities.

In order to realize heightened performance for our customers, we have been evaluating our semiconductor production equipment at five sites. In the future, we plan to review this situation, integrate all the manufacturers' evaluations of products at five sites, and reduce the use of electricity and chemical solutions from an aggregate point of view. We would also like to review the relationship between the cleanliness of the clean room and equipment performance from a technical point of view, and attempt to reduce the environmental burden as much as possible while maintaining product performance.

My Eco-life

"Kumamoto has delicious water and air. My house is surrounded by trees in the middle of nature where we grow chemical-free vegetables and tea."

Tokyo Electron AT Limited

Hiroki Takebuchi
President and
Representative Director

We Promote EHS Activities Under Our "Quality-ism" Ideology.

Tokyo Electron AT Ltd. made its start in April 2004 by integrating functions that were separated between the Yamanashi and Tohoku areas with the dual aims of boosting morale and efficiency. At the same time, we are also participating in a company-wide campaign that is promoting the theme of "Quality-ism."

The word "quality" carries with it a strong connotation of "safety." Based on the belief that no company can exist in society without establishing security or safety, we are running safety-oriented corporate activities by allocating human resources to evaluating safety from the development phase.

We also focusing on paring the amount of exhaust gas and electricity used from the design phase and make efforts to reduce the factory's amount of final waste, starting from the procurement phase.

In recent years, semiconductor production manufacturers have come to require semiconductor equipment makers, like TEL and other companies, to perform thorough tests before shipping products so that they can save time by avoiding their own test-runs themselves and jump immediately into mass-producing products. As a result, the environmental burden of activities at our company is increasing, and it has to be said that it is more difficult for us to trim energy consumption. On the other hand, conversely, this is reducing waste and energy consumption for our customers.

Today energy conservation has become a major mission for home electronics makers. We continue to take great pride in the fact that the devices made from the semiconductors manufactured with our equipment will be used to produce environmentally-friendly products.

My Eco-life

"On my days off, I like to take walks in the nature and practice Qigong exercise breathing techniques for my health."

Roundtable Opinion Exchange with TEL Representatives

Considering safety and environmental issues at the product development and design stages is key to the TEL's environment and safety activities.
For this special feature, we had those employees in charge of product safety and environment issues gather and discuss the current state of affairs and future challenges. We hope to parlay this discussion into an opportunity to continue with these cross-cutting discussions that transcend the boundaries of business units.

Satoru Inoue
CT Quality Assurance Dept. Tokyo Electron Kyushu Limited

Yukitsugu Kazuno
Environmental Occupational Health & Safety Center
Tokyo Electron AT Limited

Toshihiro Kobayashi
ESD Quality Assurance Dept. Tokyo Electron AT Limited

Yuji Maeda
FPD Quality Assurance Dept. Tokyo Electron AT Limited

Kenji Soejima
CS Administration Dept. Tokyo Electron Kyushu Limited

Seikou Ueno
TPS Engineering Control Dept. Tokyo Electron AT Limited

(From left to right)

Safety has reached a fairly high level. We have taken our first step in assuring environmental quality, and now it's time to mount a full-scale effort to tackle this issue.

Kobayashi Our development engineers have always put the highest priority on the safety of our equipment when used by customers. At this point in time, I think we've achieved quite a high level. I believe this holds true for all equipment. In the case of the environment, we have also made certain gains in areas where customers clearly voice demands, such as in the realm of energy conservation, as well as in areas where there are clear-cut regulations, such as the lead-free movement, which makes it easy to set targets.

Ueno There needs to be a process where we can set and achieve qualitative targets for those things pertaining to the environment that have no concrete standard. We need to further promote product EHS road map* for the goal.

*Product EHS road map: A product EHS target. It includes the following items: input and output required for or generated by the product during use, LCA, green procurement, lead-free, recycling, etc.

Kazuno Not only the safety of customers, but occupational safety within TEL is also an important issue. A work environment where people can work comfortably raises productivity and improves quality. On the other hand, it's probably because of a lack of clear environmental standards for equipment, unlike those we have for safety, that it is difficult to create a big increased in awareness or the view of it as something essential. I think the determining factor is the demands placed by the customers.

Soejima We are getting an increasing number of requests for our equipment's environmental burden data as well as inquiries related to the environment. We are really seeing a swell in the interest of customers in TEL equipment's environmental considerations.

Maeda What we spend the most time on in terms of safety for FPD production equipment is occupational safety. After all, we are dealing with production equipment that weighs 60 tons, so we pay a lot of attention to where we work. Compared to semiconductor production equipment, there seem to be fewer requests from FPD production equipment customers regarding the environment, but we believe these will grow in the future.

Our Environmental Approach Taking the Lead in the Environment

Inoue In making the shift to lead-free production equipment, we followed instructions from the top of our company and established a company-wide team to review the strategy and allocated a budget. With all of the company working toward one theme, it makes me think that the TEL has taken another step forward in environmental initiatives. As a company that

in Charge of Product Environment and Safety

Product EHS Road Map Reduction Targets for Inputs and Outputs During the use of Semiconductor Production Equipment

	FY 1998 Standards*1	FY 2000 Standards*2	FY 2006 Targets		FY2008 Targets
	200 mm equipment	300 mm equipment	200 mm equipment	300 mm equipment	300 mm equipment
Energy consumption	1*1	1*2	0.8	0.5	0.4
Water consumption (coolant water, etc.)	1*1	1*2	0.8	0.4	0.4
Water consumption (ultra-pure water)	1*1	1*2	0.65	0.7	0.6
HAPs*3 emissions	1*1	1*2	0.35	0.4	0.35
VOCs*4 emissions	1*1	1*2	0.35	0.4	0.35

*1 FY 1998 is the standard for consumption and emissions per unit area for 200mm equipment and equal to a value of one
*2 FY 2000 is the standard for consumption and emissions per unit area for 200mm equipment and equal to a value of one
*3 HAPs (Hazardous Air Pollutants)
*4 VOCs (Volatile Organic Compounds)

produces industrial equipment, I think our company is at the forefront of the lead-free movement.

Soejima ▶ The difficult aspect in the case of the environment is that the type of the environmental burden varies with each piece of equipment. Lead was easy to gain consensus on as it's common in all equipment, but I think it would be difficult to establish company-wide targets for other items.

Inoue ▶ I think it is important to set environmental targets for each piece of equipment and create an atmosphere throughout the company where each member of TEL is aware of this and has the attitude "I'm taking efforts to protect the environment" so that development engineers will be able to allot a maximum of energy to devising environmentally-conscious designs.

Furthermore, there is the message from our President calling on us to "Show leadership when it comes to the environment." I think it is important to spread this thinking throughout TEL.

Ueno ▶ In order to take leadership in terms of the environment, not just development engineers need to pay attention to the environment when it comes to equipment performance. Another idea is to create a specialized department for environmental technology, which would collaborate with development engineers to develop equipment.

Kobayashi ▶ Unlike equipment safety technology, with environmental technology you have to be familiar with elemental technology or you can't do anything. I believe that it is important for employees in charge of environmental management to collaborate with development engineers in accruing elemental technology and providing that as feedback to design engineers.

Inoue ▶ For example, what do we address in terms of harmful substances after we have tackled lead? I suppose that it is probably most realistic to narrow down the substances to be targeted in phases. I would like to see us advance our environmental approach one step at a time.

Summary

Below is the summary of the discussion conducted. At TEL, we will continue concrete discussions on how we can resolve these issues.

1. Environmental considerations in making equipment are of central concern for TEL in its approach to the environment and safety.
2. It is necessary to spread awareness among each and every employee that this is an important topic.
3. We will continue to hold discussions on the merits and need to create a specialized department to deal with environmental technology.
4. We will continue to hold discussions on theme common in TEL companies, as with the movement to go lead-free.

Product-related Environmental Initiatives

TEL is eagerly executing Life Cycle Assessments (LCA) on an ongoing basis.

Reducing the Environmental Burden of Products

TEL has strived to incorporate suggestions from customers into its products and promoted the reduction of environmental burdens during semiconductor production, as well as eliminated harmful substances from materials used to make equipment. We respect and have placed great importance on the need for customers to know about the environmental burden of products throughout their life cycles. As a result, we work as quickly as possible to collect and compile data relating to these impacts during each stage of a product's lifecycle, manufacture, use and disposal. Currently, by effectively applying the LCA data and the product design data that we have accumulated, we have reached the top position in our industry. Furthermore, we are constantly striving to incorporate environmental considerations into our business from all and any angles possible, such as our initiative to conserve energy by reducing heat released to the clean room.

Organization for Lowering Environmental Burden

TEL has clarified items that can be uniformly addressed as well as listed priority items for the entire group in relation to reducing environmental burden in equipment, while at the same time striving to enhance performance from an environmental perspective. We have also created an Eco Design Working Group (WG) under the Product EHS Technical Committee (see page 10), which is focusing on energy and resource conservation.

In terms of LCA, currently in each Business Unit (BU) and Division, we are compiling data on the environmental burden of newly-developed equipment and using findings to improve equipment or next-generation machines. In addition, we have also established a Lead-Free Task Team with the aim of implementing a lead-free policy from production in 2006.

In addition to internal activities, we have also established a Green Procurement WG, which has clarified TEL procurement standards — based on the need to consider the environmental burden in purchasing materials for equipment production — and conveyed these to suppliers.

We investigate the environmental approaches of our suppliers, and, when necessary, provide them with environmental education to support their environmental activities.

In TEL equipment, EHS related items have become required by customers, and it is an important task to integrate the EHS concept from the development and design phase of the products at an early stage. Furthermore, as the globalization of our company advances, adapting to local legal systems in various countries is increasingly necessary. To respond to these demands we are actively pushing ahead with Design For EHS.

TOPICS

Implementing LCA for Newly-Developed Equipment

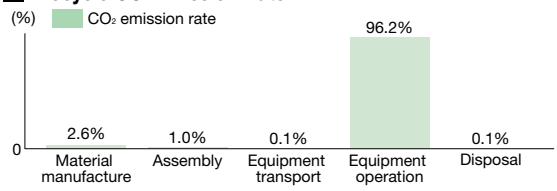
We are carrying out LCA as a means of objectively evaluating the environmental burden of our products via the TEL.

The equipment that we are showing you here is the Trias™ SPA. This is a wafer nitridation and oxidization film deposition system that was jointly developed with the support of Japan's Ministry of Economy, Trade and Industry and Tohoku University. As the miniaturization of semiconductor processing advances, the damage caused by conventional plasma processing can no longer be ignored. Trias SPA employs SPA (Slot Plane Antenna) to perform plasma processing without damaging the wafer while satisfying the demands of producing high-density plasmas at low electron temperatures. TEL performs LCA for equipment that uses new technology, such as this, and determines the environmental load per life cycle. By feeding back these evaluation results into new, next-generation equipment development, we are striving to reduce the environmental burden. TEL was also awarded the Prime Minister's Award for the Trias SPA at the second conference on promoting of Industry-Academia-Government Collaboration held in Kyoto in June 2003.

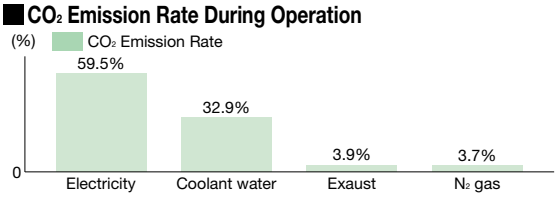
Trias SPA

Prime Minister's Award certificate and plaque

Lifecycle CO_2 Emission Rate



CO_2 Emission Rate During Operation



Conserving Energy in Clean Rooms

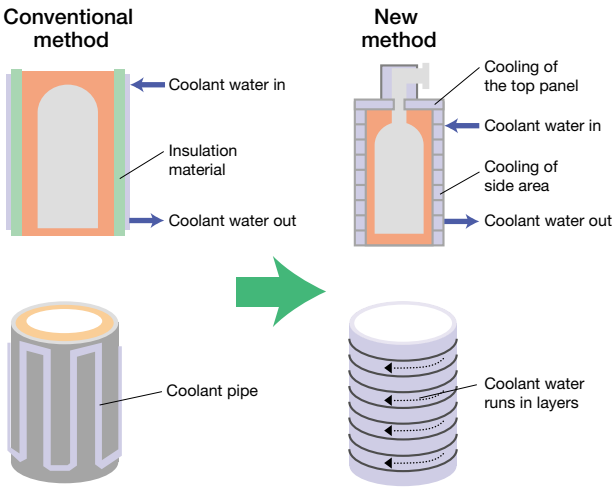
A Shift in Heat Sources and Cooling Methods

One of TEL's main products, the Thermal Processing System, conducts film deposition on wafers during the manufacturing of semiconductors at very high temperatures. In the clean rooms, where this process takes place, the amount of particles (microscopic dust, etc.), the temperature and the humidity are controlled with a special air conditioner. The high temperature processing in the clean room makes these air conditioners work extremely hard and consequently increases the consumption of the energy. In order to reduce energy consumption, TEL's new product TELFORMULA™ uses a new method.

In conventional systems, the heat generated inside the equipment while processing a wafer is released to the outside via coolant water running through pipes located on the outer rim of the heat generating area, and thus heat is directly released from the surface of the equipment to the clean room and controlled. TELFORMULA is structured so that the coolant water runs in layers and inside the top panel, improving the heat absorption rate. With the realization of this new method has arisen the possibility that we can greatly cut electricity consumption in clean rooms.

TELFORMULA

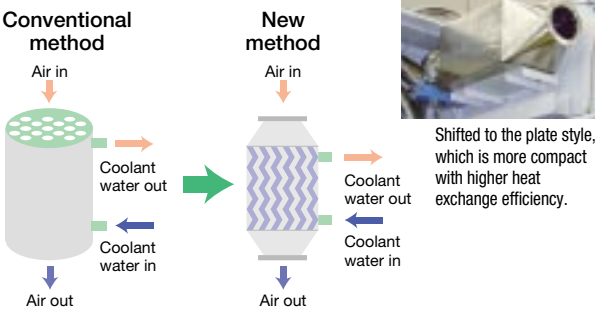
Change in Heat Source Cooling Method



Shifting to More Efficient Method of Heat Exchange

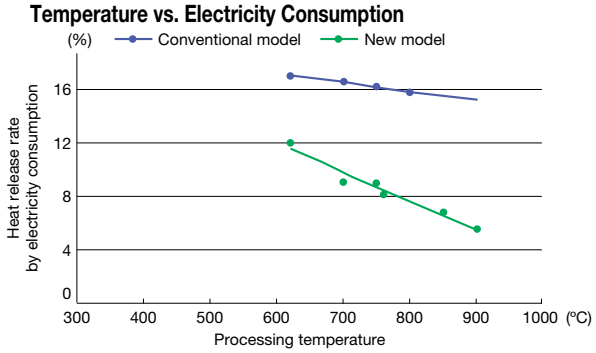
To realize better heat absorption efficiency than available via conventional heat exchangers, we have adopted a plate-style device that is more compact. As a result, the burden placed on the clean room by the heat released from the heat exhaust pipes has been reduced.

Heat Exchanger Change



Shifted to the plate style, which is more compact with higher heat exchange efficiency.

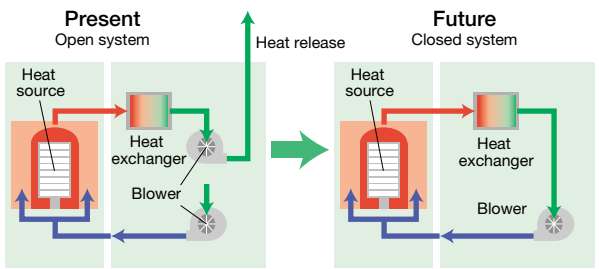
Heat Release Rate and Processing Temperature vs. Electricity Consumption



Coming Initiatives

Based on these new methods and system developments, we are considering a closed system employing a quick cooling system as a means of countering heat release for the next generation.

Creating a Closed System with the Quick Cooling System



Product-related Environmental Initiatives

Lead-free Initiative

The use of harmful materials such as lead, mercury and cadmium in consumer electronic products will be banned come June 2006 in the European Union (EU) under WEEE*1 and RoHS*2. Although semiconductor production equipment does not fall under the scope of these directives, TEL endeavors to take preventive measures against pollution and is forging ahead with efforts to realize lead-free processes.

TEL has established a Lead-free Task Team composed of representatives from each company, BU and Division to implement lead-free solder. Specifically, in FY 2004 they investigated the current situation with our suppliers. In FY 2005, we intend to clarify the major issues and tasks with suppliers, formulate technical standards, review introducing this methodology into the manufacturing processes, decide the items for the unit evaluation and execution, and to decide the assembly evaluation items and the unit, while responding as an organization.

*1 WEEE: Waste Electrical and Electronic Equipment

*2 RoHS: Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

■ Lead-free Implementation Plan

Targets	FY 2004				FY 2005				FY 2006				FY 2007	
	Apr.	July	Oct.	Jan.	Apr.	July	Oct.	Jan.	Apr.	July	Oct.	Jan.	Apr.	July
Formation and launch of Lead-free Task Team and its activities	→													
Policy announcements (to suppliers)	→													
Consideration of technology and materials to be adopted	→													
Supplier survey, cooperation and action plan	→													
Cooperation on countermeasures with OEM makers					→									
Evaluations of module units, boards						→								
Evaluation embedding modules, boards								→						
Production preparation									→					
Production								To be implemented after 2006				→		

TOPICS

Large Reduction in Developing Solution Consumption

TEL focuses on reducing environmental burden as well as costs, and we are making efforts to reduce the consumption of chemical solution used when operating equipment.

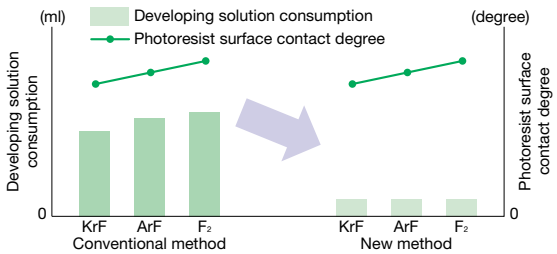
During the lithography process, a pattern is transfered onto the wafer surface by applying an organic photosensitive chemical, known as photoresist; then, the developing process is performed. The most common developing process uses TMAH (tetramethylammonium hydroxide) water solution. Miniaturization of semiconductor technology tends to make the surface of the photoresist more prone to shed water. The conventional paddle developing method uses a larger amount of the developing solution due to the increased water-resistance of the photoresist surface.

TEL has invented a new nozzle and a developing method that reduces the developing solution consumption to one-fifth of the conventional method, regardless of the photoresist surface water-resistance. We are currently pushing ahead with plans to adapt this method to our coater/developer technology for our main product line, the CLEAN TRACK LITHIUS and CLEAN TRACK ACT™ series.

CLEAN TRACK LITHIUS

■ Developing Solution Consumption

The graph indicates the developing solution consumption needed for one wafer (one developing). Currently, the most advanced process uses ArF photolithography and more developing solution is consumed than with the conventional KrF method. This tendency is expected to continue to the F_2-laser photolithography, which is being considered for the next generation.



Our Stance on Green Procurement

We procure raw materials and parts from outside TEL to be used in our main products — semiconductor and FPD production equipment. In order to reduce the environmental burden of TEL's business activities, the procured parts and the raw materials need to be produced with the environment in mind. For that reason, TEL procures materials from suppliers that are actively engaged in activities to reduce the environmental burden based on the green procurement guideline*. In the future, we plan to limit our procurement only to the suppliers that meet certain environmental standards.

* Green Procurement Guideline: Standards and targets for chemicals and energy conservation, packaging, resource conservation, recycling, and information disclosure.

Green Procurement Guideline

Green Procurement Action Plan

Theme	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Green procurement for equipment and parts					
Supplier surveys and instruction in improving environmental management	Survey/ Improvement guidance	Survey/ Improvement guidance	Survey/ Improvement guidance	Survey/ Improvement guidance	Survey/ Improvement guidance
Reviewing supplier relationships	Reviewing supplier relationships				
Compose lists of materials prohibited from use in products	List composition				
Collect data and request cooperation on materials prohibited from use in products	Data collection/Establish master parts registration				
Replace parts containing prohibited materials	Promote designs that do not use materials prohibited from use in products				

Clarifying Materials Prohibited or to be Reduced in Products

TEL has formulated a list of materials contained in product parts and materials beyond those chemicals regulated by law, while clarifying which substances are being used and promoting the reduction or substitution of chemicals with our Guidelines for Chemicals Banned from Use in Products or to be Reduced. We have begun surveying our suppliers to determine whether they are using any of these substances. We also plan to build a system where all chemical substances contained in parts and materials are registered in an integrated database so that a search of the product or check at the time of ordering will yield all necessary information.

List of Materials Prohibited from Use in Products

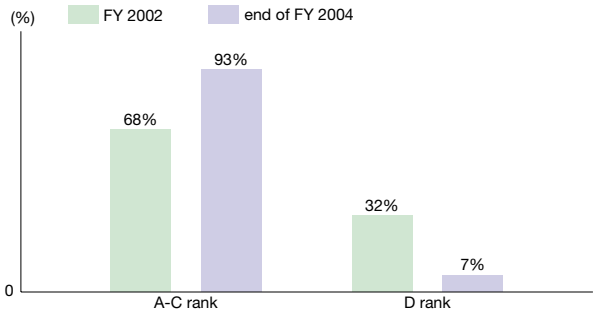
Material groups	
Asbestos	Hydrogen fluoride and its water-soluble salt
Cadmium and its compounds	Beryllium and its compounds
Hexavalent Chromium compounds	PCB's (polychlorinated biphenyls)
Cyanides	Ozone depleting substances
Mercury and its compounds	Halogen fire retardants
Organotin compounds	Specific bromine fire retardants (PBB, PBDE, etc.)
Selenium and its compounds	Polychlorinated naphthalenes (more than three chlorines)
Dioxins	Organic chlorine-based substances
Arsenic and its compounds	PFOS* and its homologs

* PFOS: Perfluorooctane sulfonate
PFOS is an intermediate used to create the final compounds

Results of FY 2004

We evaluated our suppliers on a four-tiered scale of environmental consciousness in FY 2004 and worked with the suppliers that needed to make improvements. As a result, the number of D rank suppliers (those that need to be more environmentally considerate) has decreased. We will continue to work with our suppliers and reduce the environmental burden by integrating the green procurement evaluation results into the supplier quality evaluation.

Suppliers' Environmental Activities Survey Results



Plant / Office Initiatives for the Environment

TEL is making efforts to reduce the environmental burden at all production plants and offices based on the EHS management structure.

Our Stance on Waste Reduction and Recycling

"Produce no waste. Recycle any waste that is produced. Properly dispose of any waste that cannot be recycled." Based on these principles, TEL is working to minimize the waste generated by our business. With a shortage of waste disposal sites in Japan and landfill costs on the rise, efforts to reduce waste not only help to minimize environmental burden, but also lead to lower production costs. Namely, we are sorting waste for collection, finding new recycling services, managing the certification of the waste processing service contractors, periodically checking final disposal conditions, and shifting to processes that do not generate waste. We are also displaying information on how to sort waste near waste and recycling receptacles in four languages for our foreign visiters and employees, so that they can sort the waste easily. We are minimizing our environmental burden through these activities.

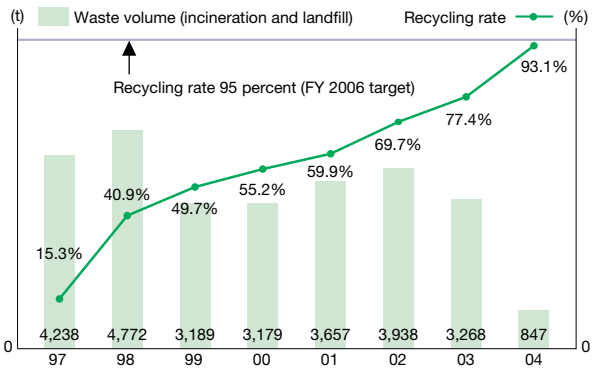
Waste sorting chart displayed in four languages

Total Waste and Recycling Ratio

The amount of TEL waste that reached landfills and our recycling rate are summarized in the graph below. As a result of our efforts to use resources efficiently, the recycling rate has been rising year after year.

Our initial plan was to achieve a 90 percent overall recycling rate by FY 2006, but we reached 93 percent in FY 2004, ahead of schedule. We subsequently established a new target and are now aiming for a recycling rate of 95 percent or higher by FY2006.

Recycling Rate and Waste Volume



Zero-Emission

At TEL, we have been promoting waste reduction and recycling and we call those plants that achieve their target "zero-emission plants." Specifically, zero emission plants are those that incinerate or send less than two percent of total waste to landfills. As a result, the four plants of Tokyo Electron Kyushu Ltd. (Saga, Kumamoto, Koshi, and Ozu) reached the status of zero-emissions in FY 2004.

TEL aims to achieve zero-emissions at all manufacturing plants in Japan by FY 2006.

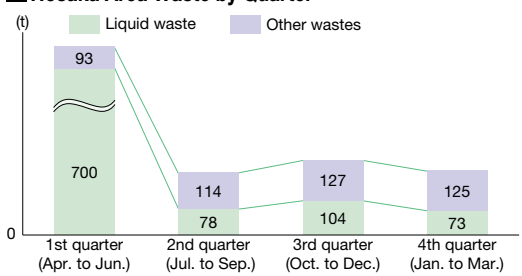
TOPICS

Introduction of Waste Processing Facilities at Yamanashi Plant Hosaka Area

Highly concentrated hydrofluoric acid waste solutions resulting from wafer and quartz cleansing at Hosaka area cannot be processed by existing facilities. Conventionally, they have been stored in waste solution tanks on site, which were then transported by contractors and the disposal commissioned. However, in June 2003 we introduced a hydrofluoric acid treatment system that can process these waste solutions. As a result, approximately 300 tons per month of the waste solution produced at the Hosaka area can now be processed in-house, which resulted in a system that allows us to slash the amount of waste solution produced as waste. Moreover, while we have greatly reduced the environmental burden of our plant activities, we have also saved the money used on waste transport and fees paid for outsourcing the waste processing.

Waste solution processing facility

Hosaka Area Waste by Quarter



FY 2004

Our Stance on Preventing Global Warming

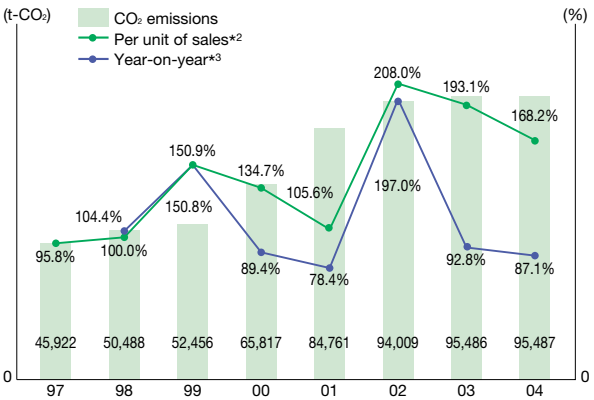
TEL is making efforts to prevent global warming by reducing energy consumption.

Most manufacturing plants are classified as Type 1 Designated Energy Management Factories under Japan's Law Concerning the Rational Use of Energy. As the law dictates, these factories have established and observed control standards based on certain criteria, appointed an energy manager, and set up institutional controls on energy consumption. Each of our plants is implementing energy conservation activities, having set energy-saving targets for lighting and office equipment as well as controlling the setting of air conditioning temperatures. In addition, facilities that are involved in product manufacturing and development conduct systematic shutdowns during extended holidays and work to increase the efficiency of each type of work procedure and reduce energy consumption.

Energy Consumption

In FY 2004, with the rise in the utilization rate at the manufacturing plants in the second half of the year, both manufacturing and sales increased from FY 2003. At the same time, the energy consumption in terms of CO_2 equivalent stayed roughly the same, resulting in emissions per sale unit that were 87 percent of FY 2003 levels. This was a major improvement and we exceeded our target of a one percent cut. However, unfortunately, this emissions per unit of sales figure, when compared against FY 1998 as the base year is in fact a 168 percent increase. We will continue our energy conservation activities and try to prevent global warming through reducing energy consumption.

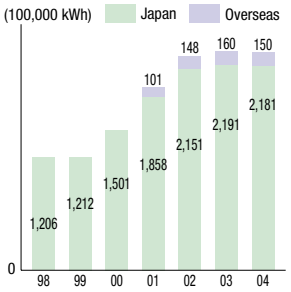
Total energy use (CO_2 equivalent*1)



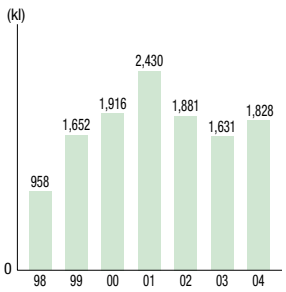
*1 For CO_2 equivalent, see the Ministry of the Environment's "Environmental Activity Evaluation Program."
*2 Unit of sales = energy consumption/sales (FY 1998 = 100 percent)
*3 Year-on-year ratio = current year unit of sales/previous year unit of sales

(Plants in Japan and overseas)

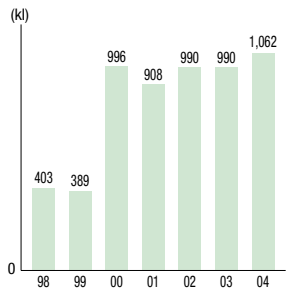
Electrical Consumption



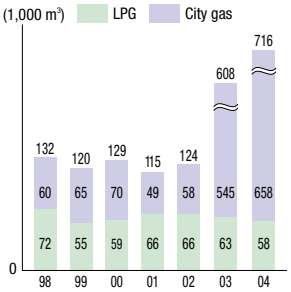
Heavy Fuel Oil Consumption



Kerosene Consumption



Natural Gas Consumption



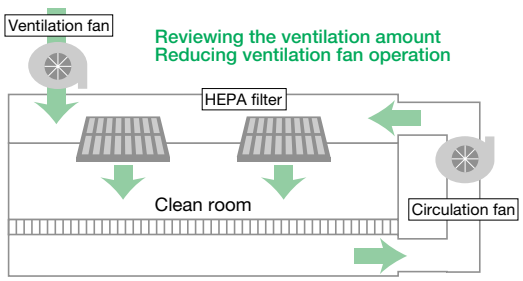
(Plants and offices in Japan and overseas)

TOPICS

Clean Room Energy Conservation

In clean rooms where semiconductor and FPD production equipment assembly take place, air purifier systems that remove even the tiniest particles of dust from the air are operating continuously. There is data that indicates that the amount of electricity used for this accounts for more than half of the electricity consumed at a plant. At TEL's Koshi plant, energy conservation is realized through meticulous energy management, such as revising and alternating the frequency of ventilation outside of operation hours, as well as intermittent operation of ventilation and circulation fans to the extent that it does not affect the cleanliness of the room. Moreover, electricity consumption was reduced by 2.4 million kWh (approximately 15 million yen) by cutting unnecessary plant power usage and switching off lights when people are not present.

Clean Room Energy Conservation



Reducing the operation of the ventilation fan by half during the night and holidays

Plant / Office Initiatives for the Environment

Our Stance on Resource Conservation

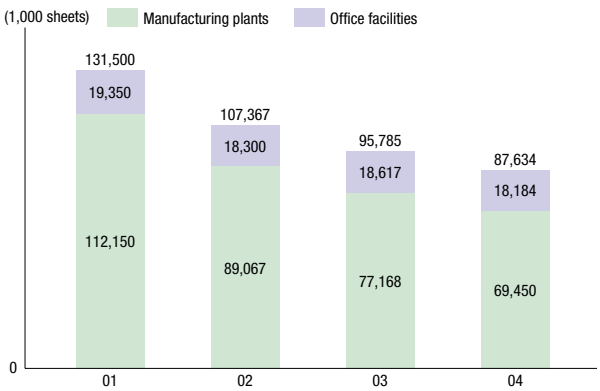
To continue our efforts in reducing the amount of resources we use, we are also conducting green purchasing. To promote resource conservation, we work to reduce the amount of water, copy paper and stationery that we use or purchase, are proactive in our purchasing of green products, and work with office suppliers to have them collect the items we no longer need.

Efforts to Reduce Paper Usage

All companies in TEL are working to reduce paper consumption. For example, employees are encouraged to use both sides of paper and to reduce the size of copies. In addition, we are making efforts to share information without using paper, such as by using electronic means to circulate documents and notices. As a result, we reduced the amount of copy paper consumed from FY 2003 by nine percent and used about 8 million fewer sheets of paper in FY 2004. Except for in particular cases, we try to use recycled paper, and will continue to reduce paper consumption by revising our operations and keep the use of paper to the minimum for necessary records and forms. We are also contributing to the conservation of forest resources by substituting non-wood resource paper cups made of kenaf.

Promotional poster calling for reduced use of copy paper

Copy Paper Consumption

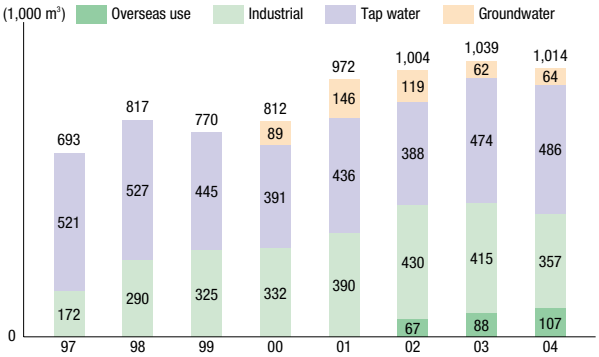


(Plants in Japan)

Efforts to Reduce Water Usage

Our manufacturing plants are undertaking various activities to reduce water consumption. With the help of special circulation equipment, we are reducing water usage by recycling industrial water used in all stages of operations, such as coolant water used for manufacturing, development, testing, shipping, inspection, etc. Furthermore, we have installed automatic flushing toilets at each plant to prevent needless consumption as well as prevent people from neglecting to turn off the water or other needless use of water.

Water consumption



(Plants and offices in Japan and overseas)

TOPICS

Efforts at Office Facilities

At the Sapporo office of Tokyo Electron Software Technologies, we have stopped using disposable plastic cups as a part of our resource conservation activities, and employees now bring their own cups. We are also encouraging employees to use both sides of the paper to reduce the consumption of copy paper.

In order to further our resource conservation activities, we are awarding employees and groups that make outstanding efforts in their activities. In FY 2004, we awarded two individuals, one group and one floor for their efforts.

Encouraging employees to use their own cups

Award certificate

Our Stance on Environmental Risk Management

When we introduce a new gas or chemical solution at the time of a product evaluation, we perform a risk assessment prior to using it and take measures when necessary.

We have learned from accidents that have befallen other companies, and in FY 2004, we performed a survey of our disaster prevention system, checking the disaster prevention organization, facilities and equipment, emergency contact network, and management structure among contractors in each manufacturing plant. All shortcomings were budgeted for and rectified as necessary.

Abiding by the Law

We are working to comply with environmental legal, emission standard. However, on December 2, 2003, an on-site inspection (water quality analysis) at our Miyagi Plant resulted in an advisory notice calling for us to improvement the BOD figures for our wastewater, as they exceeded acceptable levels. We suspect the cause to be poor functioning of microbes used to treat water brought on by an increase in employees working during the weekends. We have switched the operation of the aeration blower to match suitable work conditions and filed a report announcing improvement in the situation on January 6, 2004. We also received complaints about abnormal odors coming from localized organic solvent emissions and the various emission tanks coming from the cafeteria as a result of repair work in the Yamanashi plant. We have taken countermeasures and corrected the situation. Apart from these cases, we have had no environment-related accidents, violations, fines, complaints, or related lawsuits, ground pollution, economic sanctions or advisory notices from the government.

Controlling Chemical Substances

TEL is strictly controlling and continuously keeping tabs on chemical substances as set out by the law. Moreover, in the way of PCBs, we have two transformers and four capacitors and have them securely stored them away.

PRTR* Law Class 1 Designated Chemical Substances Consumption

(Units: kg)

Legally assigned number	Name of Class 1 Chemical Substances	Total
43	Ethylene glycol	9,144
172	N,N-dimethylformamide	309
283	Hydrogen fluoride and its water-soluble salts	4,558
311	Manganese and its compounds	450
Total		14,461

*PRTR (Pollutant Release and Transfer Register): A framework for controlling chemical substances that may be hazardous to ecosystems and human health. It involves determining, compiling and reporting on the amounts of chemicals used, released into the environment and contained in waste transferred off-site.

Use of Global Warming Substances

TEL releases CO_2 through the use of energy and PFC group chemicals and SF_6, types of greenhouse gases, during processes, such as dry etching or cleansing. The total consumption and emission of these substances was equal to 10,000 tons CO_2 equivalent. We will continue to make efforts to manage and reduce the consumption of these substances.

Greenhouse Gas Consumption

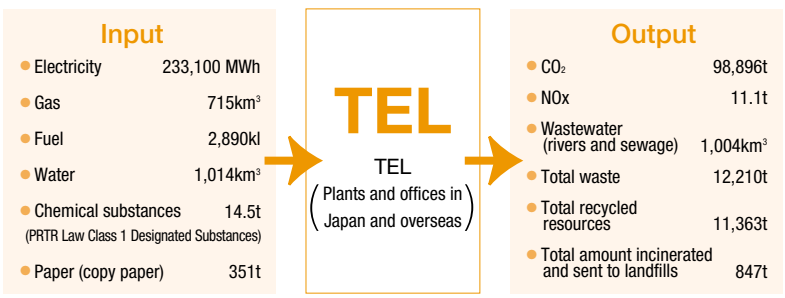
(Units: t-CO_2)

HFCs	PFCs	SF_6	Others	Total
1,140	1,284	6,682	56	9,162

TEL Inputs and Outputs

The material flow of TEL is summarized in the chart on the right. Each number is the combined total for manufacturing plants and office facilities. The distinguishing characteristic of TEL is the large environmental burden at the time of equipment evaluation. This is because we are evaluating the equipment using the same processes as employed during semiconductor production, using electricity, various gases and solutions.

TEL's Substance Flow



Health and Safety

Health and safety are corporate social responsibilities and the basis for a comfortable work environment. We are supporting Health and Safety in every aspect of our corporate activities by giving high priority to the health of our employees and customers, and ensuring the safety of our equipment.

For the Safety of Everyone

Based on our view of the importance of Health and Safety, we have integrated these ideals into our management philosophy. TEL thinks that the good health and safety of our employees, customers and all the people involved in our corporate activities are one of our social responsibilities as a company and a policy that translates into good business. In other words, the safety of people, equipment and facilities must never be compromised by profits, delivery date deadlines or time limitations.

In addition, in order to convey our view on this topic to customers and a wide range of other stakeholders, we have printed a brochure, "Introducing Safety First Culture Awareness."

"Safety First" poster

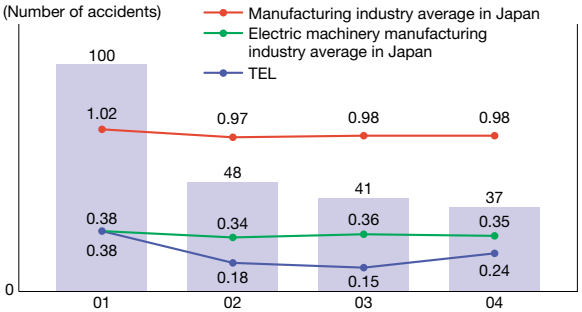
The "Introducing Safety First Culture Awareness"

Handling of Accident Reports

Any accident involving TEL employees is reported to our headquarters. When the accident report is received, the seriousness of the incident is judged based on a set of criteria (human injury, fire/explosion, gas/chemical leak, degree of damage to the customer, etc.) Accidents with a strong element of urgency are reported to top management and TEL companies immediately.

The following graph indicates the frequency rate of accidents, not including first aid case accidents. It reveals a lower figure for the entire TEL than electric machinery manufacturing industry average in Japan.

Number of Accident and Frequency Rate



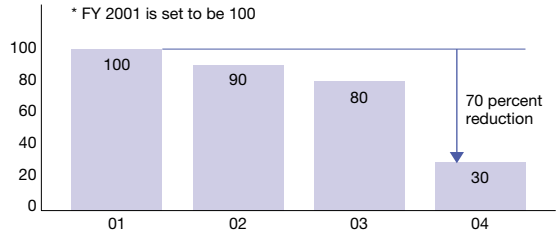
* Frequency rate: Number of occupational accidents per one million labor hours
Number of accidents that required the employee to miss work for more than 4 days/total labor hours x 1,000,000
* Number of accident injuries in FY 2001 is considered to be 100

TOPICS

Requiring personal protective equipment (helmet and inner helmet, safety glasses and safety shoes)

In order to prevent accident injuries, it is important to formulate danger reduction strategies ahead of time through safe design of equipment and improved work procedures based on risk assessments. However, there are some cases where employees are exposed to unexpected dangers; namely those encountered by producing and installing large-sized new equipment in special areas such as clean rooms. In order to prevent accidents and minimize damage, TEL encourages wearing protection gear while working at TEL's manufacturing plants as well as customer sites. Apart from the conventional helmet used for the head, an inner helmet is worn inside clean suits. We actively encourage safety/protection glasses be worn to protect the eyes and safety shoes for the clean room be worn to protecting the toes. As a result, the number of incidents of injury resulting in cuts to the head, or damage to the eyes or toes is decreasing.

Incidents of Head Injury over the Past Four Years



Safety glasses

Safety shoes for clean rooms

Inner helmet

Product Safety

1) Risk assessment

All of our products are tested prior to shipment using our own risk assessment criteria based on SEMI standards. At the time of the completion of the product, people including designers, equipment maintenance service specialists and others gather to identify the dangerous areas of and evaluate the risk of the product. There are many risk assessment methods, such as SEMI S10, EN-1050 and LACS, and we keep taking countermeasures and evaluating the equipment until it is deemed safe. We have recently started performing risk assessments at the design and development phase with the aim of building safe equipment.

SEMI S-10 Risk Ranking Matrix

Risk Ranking Matrix		Likely				
		Frequent A	Likely B	Possible C	Rare D	Unlikely E
Severity	Catastrophic 1					
	Severe 2					
	Moderate 3					
	Minor 4					

Risk Assessment Categories (RAC)

5 Very High 4 High 3 Medium 2 Low 1 Very Low

2) Compliance (SEMI S2 & CE Marking)

In order to secure the safety of the equipment we sell, TEL has adopted the SEMI S2 standard, a semiconductor industry safety standard, for producing our equipment. Furthermore, to demonstrate our level of safety, TEL has third parties perform inspections and certifications for SEMI S2 standards. For exports to European regions, we declare that we are in compliance with the CE Marking European safety standards outlined in EU directives and apply a CE Mark on our products prior to shipping. This compliance declaration can only be executed when it is reviewed and approved by the CE Marking review team, our in-house auditing body.

Equipment CE Mark seal

CE Mark approved equipment

TOPICS

Product EHS Training for Sales Representatives

TEL has distributed and publishes the "Product EHS Handbook for Sales People," which summarizes product EHS knowledge relevant to equipment for sales representatives. Basic knowledge about EHS for existing equipment is essential for sales representatives to be able to discuss EHS specification needs with plants in order for new equipment to be developed. We have also executed training for all sales representatives so that they can effectively use this handbook. The actual contents of the training book includes compliance and industry required items, explanations for product EHS requested by customers, RFQ (Request for Quotation) handling, understanding of product EHS for sales representatives and providing feedback on product EHS design.

Cover page of Product EHS Handbook

Sales representative training

EHS Education

**It is TEL's duty to work for the protection of the environment, health and safety.
We implement a variety of educational and awareness-raising programs on the principle of providing the necessary education to the people who need it.**

Our Stance on EHS Education

TEL has a policy of providing the necessary education to all the appropriate personnel regarding the environment, health and safety. We conduct the necessary education and training at different personnel levels — for our own employees and employees from partner companies who work in-house at TEL companies. When new employees join TEL, the environment, health and safety are among the required topics of their training.

EHS Education

Environment

- Expert training (Special training for internal environmental auditing and for important environmental aspects)
- Environmental training based on ISO14001 (for manufacturing plants)
- Environmental education for TEL Eco-Activity (office facilities)

Health and Safety

- Equipment-specific training
- Training for employees who go to customer sites
- Safety training for employees on overseas business trips
- Advanced safety training (see Topics)
- Basic safety training

Other education and training: emergency lifesaving classes (CPR, first aid skills), legal education (supervisor training, special operations, etc.).

Implementing Safety Education

In order to promote "safety first" at TEL, we are conducting safety education specific to the nature of jobs, for personnel who work in the office, in clean rooms and at customer sites. The validity of this safety training is given an expiration date and the personnel are required to take a renewal course within a certain time period. The renewal of the basic safety training and the advanced safety training are conducted through the online learning on our intranet and can be done at any time. The curriculum is unified throughout TEL and is being implemented overseas as well, particularly being extended in Asia.

Online safety training

In addition, we hold emergency lifesaving lessons (CPR, first aid methods) so that employees can acquire the skills necessary in the event of a disaster or an emergency.

Emergency lifesaving class

Implementing Environmental Education

At TEL's office facilities of TEL, we provide standard environmental education to all employees, including sales and administrative staff, field engineers, and part-time and temporary employees.

At production plants, as a part of training education based on ISO14001, we provide all employees education with central emphasis on the objectives of each plant. We are also providing special training to those employees involved with important environmental burden of plants.

Environmental education for new employees

TOPICS

Hands-on LOTO Training with the Actual Kit

The risk of handling electricity or moving machinery, such as the drives of robots in semiconductor and FPD production equipment, is increasing as the sizes of the wafers and glass substrate are becoming larger. To protect ourselves from this risk, TEL has adopted and provided training in the Lockout*1-tagout*2 (LOTO) method which is common in the US.

We are providing hands-on training, such as on locking and tagging circuit breakers, to workers in charge of each operation using custom-made actual equipment so that they can familiarize themselves with LOTO procedures. We also introduce a few true examples of events to demonstrate the importance of executing LOTO.

Custom-made training kit

*1 Lockout: The following of a set procedure to shut down the flow of energy to equipment using a lockout device (such as a key). Until the lockout device is removed the energy flow is stopped and the equipment cannot operate.

*2 Tagout: To place a warning tag (label) on shutdown switches or energy shutdown or restraining devices, to ensure that energy flow to the equipment is not restored.

Communication with Stakeholders

At TEL, we believe that promoting communication with all of our various stakeholders will lead to the growth of TEL.

Our Stance on Communication

We actively encourage communication with all stakeholders. We think that it is essential to have interaction with all of the people involved in our business activities by sharing as much information as possible and gaining feedback in order to advance our efforts on the environment, health and safety.

TEL has been publishing an environmental report since 2000. We are also making efforts to disclose information through our website related not only to the environment, but also on health and safety. We will continue to proactively disclose environment, health and safety related information in order to facilitate two-way communication with stakeholders.

The Environmental Sustainability Report 2003

http://www.tel.com/eng/about/ehs/ehs.htm

Publication the EHS Times and Using our Intranet

TEL publishes a bimonthly in-house magazine, the "EHS Times," focused on EHS and introducing in easy to understand terms a variety of information, such as the deliberations of each committee as well as initiatives in each company and region. Such EHS-related newsletters are also being made by each company and in each region and play an important role in heightening awareness among the employees. Also each company and region is actively using our intranet to post and exchange information.


EHS Times


Our intranet

EHS Promotion Activities in the Semiconductor Production Equipment Industry

TEL is actively pushing many EHS promotional activities in the semiconductor production equipment industry. In FY 2004, we participated in the EECA (The European Electronic Component Manufacturers Association) sponsored ISESH (International Semiconductor Environment, Safety and Health) Conference (June 29, 2003 to July 3 in Noordwijk, Holland) hosted by ESIA (European Semiconductor Industry Association) and presented our efforts on considering the environment in making our products.

We explained in detail our efforts through the "development of our gas supply/emission system" by way of an analogy describing the gas supply of our Thermal Processing System TELFORMULA as the upstream of a river and the emissions system as being the downstream of the river.


Presentation at ISESH

TOPICS

Establishing a Liaison Conference for Companies Collaborating on EHS

We have created a "Liaison Conference for Companies Collaborating on EHS" as a forum for communication for supporting companies among TEL's manufacturing plants.

The purpose of this conference is to deepen communication with supporting companies to counteract the growing number of people working within TEL plants, increasing diversity and complexity of the operations involved and outsourcing of operations.

TEL employees have always been made aware of the rules and relevant matters to be transmitted at our company through in-house training. However, the establishment of this conference has strengthened the regular exchange of information and encouraged an active exchange of opinions.


EHS Liaison Conference

Communication with Stakeholders

EHS Seminar in Taiwan

As in the past year, TEL held a "TEL EHS Seminar" in Hsin-chu with our Taiwanese customers.

The main themes we dealt with this time were overarching EHS issues and product EHS topics presented by representatives from each BU and Division.

General topics covered included TEL's stance on the environment, health and safety, and analysis of various accidents. We also had a special guest speaker from the Japan Institute of Human Factors who used case studies of accidents to explain the mechanism that causes accidents and the relationship with human factors.

TEL EHS Seminar Pamphlet

Under the topic of product EHS, representatives from each BU and Division introduced lead-free solder related policies, LOTO energy management methods, and the SEMI S10 matrix risk assessment method, which is a standard method used in the semiconductor production equipment industry. In conclusion, the EHS concept as applied to the latest thermal processing system TELFORMULA was explained and compared with the conventional system.

Our customers gained a heightened understanding of TEL's EHS activities at the seminar and evaluated the event highly, giving us positive feedback and leaving us with comments like: "I really understood TEL's attitude toward EHS" and "This provided me with a lots of new ideas and inspirations."

EHS seminar

EHS staff of Tokyo Electron Taiwan

TOPICS

SEMI Akira Inoue EHS Award in 2003

The Akira Inoue EHS Award is administered by SEMI, an international industrial association for semiconductor material makers and the semiconductor and FPD production equipment manufacturers in the world. This award was established in commemoration of the former president of TEL, the late Akira Inoue, who was also a former board member of SEMI, and a great advocate of the environment and safety with major achievements in EHS activities. The selection process is conducted by SEMI's subcommittee and the award is given to groups or individuals that make great contributions to EHS development in the semiconductor industry or in society.

This award was created in 2000, and in 2003, the award's fourth year, it was awarded to the President & CEO of Seiko Epson Corporation, Mr. Saburo Kusama. The award was given to Mr. Kusama in recognition of his achievements in the advancement of EHS activities, including energy conservation as well as the reduction of waste and greenhouse gas emissions. Under the direction of Mr. Kusama, Epson has pursued the "Co-Existence" concept in all of its business operations and products.

The inaugural award in 2000 went to the CEO of ST Micro Electronics, Mr. Pasquale Pistorio, the second award went to the CEO of Intel Corporation, Mr. Craig Barrett, and the third award went to Dr. Farhang Shadman of the University of Arizona.

First award (2000)

Mr. Pasquale Pistorio

ST Micro Electronics CEO

Second award (2001)

Mr. Craig Barrett

Intel Corporation CEO

Third award (2002)

Dr. Farhang Shadman

University of Arizona

Fourth award (2003)

Mr. Saburo Kusama

Seiko Epson Corporation President & CEO

Our Stance on Social Contributions

Our management philosophy states that "we always want to abide by the law and have a cooperative attitude toward society" and that "it is our duty to cooperate for the healthy development of the society."

Under this philosophy, all TEL companies are building trustful relationships with the government and local society, while undertaking various activities to preserve the environment and contribute to society. Recognizing above as an important mission and element of being a corporation, we would like to advance with our customers and society while further enhancing these activities.

Our Social Contributions in Japan

Local clean-up

TEL companies in each region help keep local neighborhoods clean as well as trim greenery as a part of local clean-up activities.

In Ozu town in Kumamoto Prefecture, "Ozu environment beautification campaign day" has been set for two days each year. On these days, beautification and landscaping activities are performed. Our Ozu plant has participated in this event since the plant was opened and cleaned places like the Kumamoto Central Industry District. A total of 49 employees from our companies and our suppliers participated in the activities during the first half of 2004.

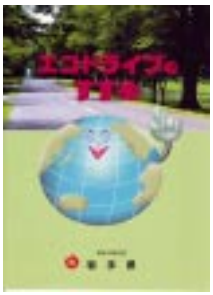
Environmental clean-up activities

Eco-drive

Based on a keen awareness of the need to prevent global warming, we are implementing campaigns to stop the idling of vehicles at each of our plants.

At our Tohoku plant, in order to educate our employees about the need to stop vehicles from idling when driving at work and the value in commuting to work, we have displayed Iwate Prefecture Eco-drive Advisory posters and distributed booklets to each department.

At our Yamanashi plant, stopping vehicles from idling is company policy. For example, all the cars entering and exiting the plant are encouraged at entrance the security station not to leave their vehicles idling in order to reduce CO_2 emissions and raise awareness about not leaving vehicles idling.



Iwate Prefecture's "Eco-drive Advisory" poster

Social Contributions Outside Japan

TEL is actively making social contributions in other countries as well, especially in the United States.

Award-winning Environmental Campaign

Tokyo Electron America (Head Office in Austin, Texas) was awarded the National Citation of Merit in the Keep Texas Beautiful environmental contest in 2003. We have been actively providing many kinds of assistance, such as educational assistance, particularly in science and mathematics, health assistance for needy local residents, and improvements to make the community easier to live in, as well as landscaping and beautification activities. This award was based upon recognition of our assistance in programs in Austin, such as recycling activities at local schools, nature education programs for local residents, road administration by our employees and waste management programs.

Environmental Campaign Award

TOPICS

A Message from Barry Rapozo, Chairman of Tokyo Electron America, Inc.

Barry Rapozo
Tokyo Electron America, Inc.
Chairman & CEO

What we aim to do is not only to run our business smoothly, but also to serve the welfare of local people. Toward that end, we are making contributions to the local community through various volunteer activities and providing financial support to the extent that it is possible. By expanding what has been done inside the company to the local community, and by working with the community residents, the level of activities is sure to rise steadily. These activities also boost our employee satisfaction levels and translate into higher productivity. We hope to continue with a variety of activities while improving the living standard of the community as a whole.

Comments from Stakeholders

We have received many comments on our environmental reports and business activities. Mr. Ito is a customer using our products. Mr. Saito is the head of Esashi city's office in charge of industrial development and he has been involved with our Tohoku plant. We hope to incorporate these opinions into our activities in the future.

NEC Electronics Corporation

Naoya Itoh

Manager, Eco Products
Environmental Management Division

(1) Thoughts on TEL's Environmental Sustainability Report

I read TEL's Environmental Sustainability Report and was impressed with how rich it was in content. The inclusion of safety, health and social activities made it especially clear that it was composed with a CSR report in mind.

However, to further improve the report I would appreciate it if the following points were taken into account.

1. I hope that TEL can add pages clarifying its priorities for reducing environmental burden. I think a chart outlining priority issues and TEL's position in relation to overall environmental burden is needed.
2. It seems that TEL is putting emphasis on reducing the environmental burden of products, but by adding an explanation clarifying why the environmental burden of products and why LCA is being pursued, I think the overall direction of activities as a whole will be made clear.

(2) Comments on TEL's EHS Activities

It seems that EHS activities are being pursued on a broad scale, both domestically and abroad, as might be expected of a global business of TEL's stature, and I respect that. I personally have worked in a semiconductor plant overseas and have been on the receiving end of TEL's support. Reading about the environmental considerations and actions in your report reminds of the high level of awareness of environmental activities you have as a company.

(3) Impressions of TEL from NEC Electronics

As a timely development of cutting-edge technology, you are an irreplaceable business partner for us and I want to maintain and build upon our friendly ties in future.

Your company's aggressive efforts to minimize the environmental burden of your products translates into a lessened environmental burden for our company during production and in my mind, this makes you a very reliable partner.

(4) Hopes and Expectations for TEL

I hope that TEL continues to encourage product design based upon LCA and continues to show results in developing products that conserve energy.

I also hope that TEL can find a way to apply results in newly designed products to older products. I would like to see you keep announcing positive results to users of your products, such as ourselves. While it isn't a topic that has received much attention, I get the sense that the parts used in semiconductor production equipment have a large environmental burden at the time of disposal. I would like to anticipate that you will turn your attention to and take action on this topic.

Esashi-city, Iwate Prefecture

Ryuji Saito

General Manager,
Industrial Development Department

(1) Thoughts on TEL's Environmental Sustainability Report

I have read your 2003 Environmental Sustainability Report and would like to offer a few thoughts from the perspective of municipal government.

First, I am strongly impressed by your faithful observance of guidelines in your efforts. If I were to make three requests, they would be the following.

The first point is in regard to your FY 2003 plans and results. For example, I think that by including a specific figure in the plan, such as committing to green procurement above a set percentage, you enhance accountability and the ability to review your pledges.

The second point has to do with your waste reduction and recycling activities outlined under your Topics article. Here it indicates that your Tohoku plant has made great strides in the waste and recycling area. I expect that if you published an environmental report for the site that it would have a significant educational effect.

The third point has to do with CSR (Corporate Social Responsibility). In local areas, interest is rising, especially in regard to the status of compliance among corporations. I would like to have you introduce more concretely what regulations are to be complied with, and in what manner for each plant.

(2) Impressions of TEL's EHS Activities

I appreciate your leadership in activities such as Industrial Campus Clean Campaign as a core firm of Esashi's Industrial Area Conference.

(3) Impressions of TEL from Esashi-city

We are very grateful for your presence and activities due to the local employment and economic activities they engender.

(4) Hopes and Expectations for TEL

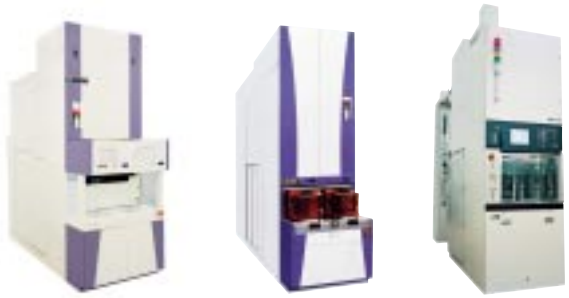
TEL's Tohoku plant chairs Esashi's local industrial district association and conducts visits between plants as well as seminars about environment issues. As Esashi-city will do all it can to cooperate with TEL in the hope that TEL will continue to be a front-running corporation in the region and continue to demonstrate leadership.

Site Report: Tohoku Plant

The location of TEL's Tohoku plant, Esashi-city located in central southern Iwate Prefecture, is a lush area blessed with an abundance of nature, known for producing rice and apples and has even been used as the location of an historical television series filmed by NHK. This plant was established in 1985 and its major product, Thermal Processing Systems, boasts the largest share of the global market.

Material Flow for the Tohoku Plant in FY 2004

In this Site Report, we will outline the environmental burden during the lifecycle of Thermal Processing Systems made at the Tohoku plant using a variety of data. In FY 2004, the percentage of equipment made for 300 mm wafers compared to 200 mm wafers rose as did the total number of products shipped. However, the amount of energy used and wasted created during plant operation either decreased or was on par with the year before.



TELFORMULA α-303i α-8SE

Thermal Processing Systems being produced at the Tohoku Plant

FY 2004 Total product shipment volume 2,134 t (+43.6% year-on-year)

Input

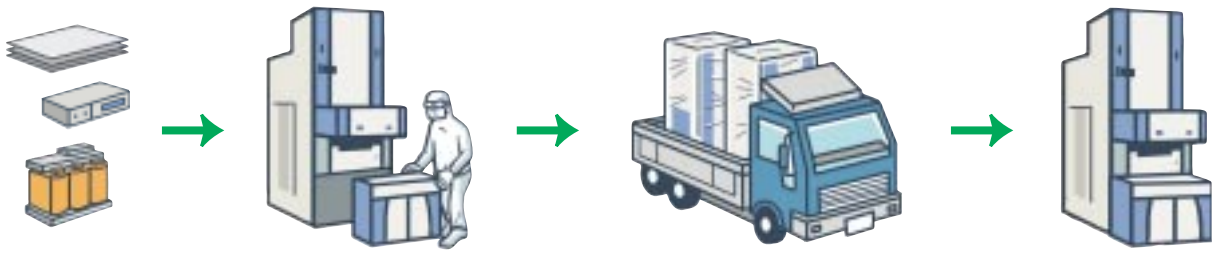
	FY 2004	Year-on-year
Material input	2,134 t	+43.6%
Electricity	8,640 MWh	+0.7%
Gas	9.80 km^3	-1.2%
Fuel	968 kl	-2.9%
Water	52.6 km^3	-16.6%
Chemicals (PRTR Law Class I Designated Chemical Substances)	0.276 t	-28.7%
Paper (copy paper)	32.4 t	-31.3%

Tokyo Electron AT Ltd.
Tohoku plant

Output

	FY 2004	Year-on-year
CO_2	5,996 t	+0.1%
NOx	1.43 t	-3.4%
Wastewater	52.6 km^3	-16.6%
BOD	0.44 t	+25.7%
Waste	537 t	+0.2%
Incineration / Landfill	16 t	-15.8%
Recycled materials	521 t	+0.7%

■ Lifecycle (CO_2 equivalent, FY 2004)



Procurement	Manufacturing and Assembly	Delivery	Use
14,505 t-CO_2	5,996 t-CO_2	736 t-CO_2	832,873 t-CO_2

Cooperating with Locals

An executive of our plant is the chairman of Esashi's local industrial distinct association conference. In February 2004, we held a lecture on the topics of corporate responsibility in regard to environmental initiatives and what is necessary for the disposal of industrial waste. A large number of local businesspeople, administrative officials, NPO members and others turned out to consider principles in undertaking environmental activities and how industrial waste disposal should be carried out and principles in undertaking environmental activities.

Lecture

Future Policy

We are actively promoting environmental activities based on ISO14001 and safety and health through our Health and Safety Committee. We are scheduled to achieve zero-emissions in FY 2005. While earning the cooperation of local businesses, we will introduce examples of progress we have made while aspiring to become a corporation in which local companies, citizens and our employees can place their trust.

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