

# Environmental and Social Report 2006



**TOKYO ELECTRON LIMITED**

# TEL Values

Tokyo Electron Limited (TEL) summarized the values and codes of conduct of the Tokyo Electron Group as TEL Values in April 2006. We will share these values with all employees of the Group around the world, which will drive us towards new growth in the future.



## TEL Values

### Pride

We take pride in providing high-value products and services.

- We offer our customers cutting-edge technological products, along with the highest level of quality and technical service, in the pursuit of total customer satisfaction.
- We consider profit to be an important measure of value in our products and services.

## TEL Values

### Challenge

We accept the challenge of going beyond what others are doing in pursuing our goal of becoming number one globally.

- We view changes as opportunities, and respond to them flexibly and positively.
- We are tolerant of failure, and consider it important to learn from the process and results.

## TEL Values

### Ownership

We will keep ownership in mind as we think things through, and engage in thorough implementation in order to achieve our goals.

- We always have an awareness of problems, and tackle challenges with enthusiasm and a sense of responsibility.
- We make decisions quickly, and do what we consider to be the best course of action.

## TEL Values

### Teamwork

We respect each other's individuality and we place a high priority on teamwork.

- We create a workplace with an open atmosphere and positive communication.
- We establish relationships of trust with our business partners in order to facilitate mutual growth.

## TEL Values

### Awareness

We must have awareness and accept responsibility for our behavior as respectful members of society.

- We strictly comply with laws and regulations and the rules of society.
- We give top priority to safety, health, and the global environment.
- We strive to become a company that local communities hold in high esteem.

## Corporate Profile

Company name: Tokyo Electron Limited (TEL)

Address: TBS Broadcast Center, 3-6 Akasaka  
5-chome, Minato-ku, Tokyo 107-8481, Japan  
Tel.: +81-3-5561-7000

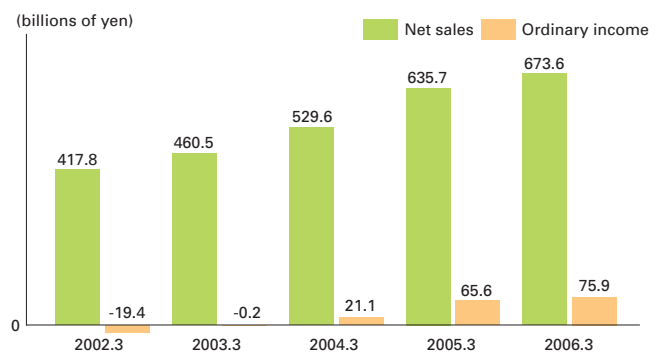
Established: November 11, 1963

Capital: ¥54,961,190,000 (as of April 1, 2006)

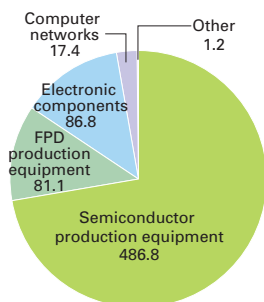
Main products: Semiconductor production equipment and flat panel display (FPD) production equipment.

Employees: 1,058  
(non-consolidated, as of April 1, 2006)

### Net Sales and Ordinary Income (Consolidated)

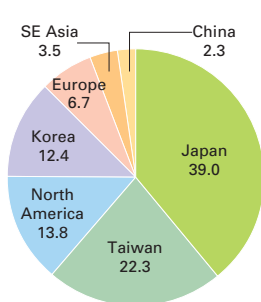


### Net Sales by Division (Consolidated) (billions of yen)



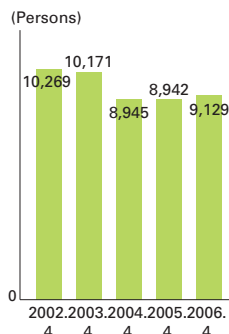
Year ended on March 31, 2006

### Net Sales by Region (Consolidated) (%)

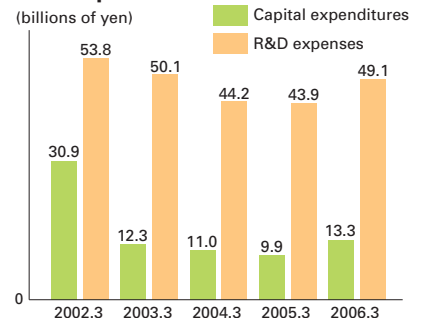


Year ended on March 31, 2006

### Group Employees



### Capital Expenditures and R&D Expenses



## Editorial Policy

We have prepared this environmental and social report to introduce our activities, in particular our environmental, health, and safety (EHS) activities, as intelligibly as possible. Key features of the report are as follows:

- In "Commitment by Top Management," the Chairman and President of TEL express their opinions on the roles of the IT and semiconductor industries and the social responsibilities that the Tokyo Electron Group should fulfill in those industries (see pages 4 to 7).
- We invited external stakeholders to a roundtable meeting on reducing the environmental impact of semiconductor production equipment, which is one of our priorities in fulfilling our social responsibilities (see pages 8 to 11).
- We report on supply chain management at two of our suppliers (see pages 24 and 25).

We hope that we can promote communication with all stakeholders of the Tokyo Electron Group through this report and incorporate their opinions into our future activities. We look forward to receiving your opinions and comments on this report.

In preparing this report, we referred to the *Environmental Reporting Guidelines (Fiscal Year 2003 Version)* issued by Japan's Ministry of the Environment and to the *2002 Sustainability Reporting Guidelines* published by the Global Reporting Initiative.

## Scope of Reporting

■ Organizations covered: Tokyo Electron Group  
<Japan>

Tokyo Electron Limited, Tokyo Electron AT Limited,  
Tokyo Electron Tohoku Limited, Tokyo Electron TS Limited,  
Tokyo Electron Kyushu Limited, Tokyo Electron Software Technologies Limited,  
Tokyo Electron FE Limited, Tokyo Electron Device Limited,  
Tokyo Electron BP Limited, Tokyo Electron Agency Limited  
<United States>

Tokyo Electron U.S. Holdings, Inc., Tokyo Electron America, Inc.,  
Tokyo Electron Massachusetts, LLC.

<Europe>

Tokyo Electron Europe Limited

<Asia>

Tokyo Electron Korea Limited, Tokyo Electron Korea Solution Limited,  
Tokyo Electron Taiwan Limited, Tokyo Electron (Shanghai) Limited,  
Tokyo Electron (Shanghai) Logistic Center Limited  
(Company names as of August 2006)

■ Period covered: Fiscal year (FY) 2006 (April 1, 2005 to March 31, 2006)

■ Areas covered: Environment, society, and economy

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## Environment and Safety Activity Milestones

May. 1994	Standardization, Environment and Safety Center (Environment, Health & Safety Center) established	Dec. 1999	"Health, Safety, and the Environment" added to the Management Philosophy
Mar. 1996	Product Safety Subcommittee (Tokyo Electron Group Product EHS Technical Committee) launched	Apr. 2000	Environmental accounting introduced
Apr. 1996	Environmental Subcommittee (Tokyo Electron Group EHS Committee) launched	Apr. 2000	Unified safety training system "Safety 2000" implemented
Dec. 1997	Sagami Office acquires ISO 14001 certification	Dec. 2000	First Tokyo Electron Group environmental report published
Feb. 1998	Tohoku Plant acquires ISO 14001 certification	Apr. 2001	Product life cycle assessments started
Mar. 1998	Saga Plant acquires ISO 14001 certification	Oct. 2001	Green procurement launched
Mar. 1998	Kumamoto and Koshi Plants acquire ISO 14001 certification	Oct. 2001	Environmental training introduced in facilities not yet certified under ISO 14001
May. 1998	Yamanashi Plant acquires ISO 14001 certification	Apr. 2002	Original TEL Eco-Activity (environmental management system based on ISO 14001) begun
Sep. 1998	Tokyo Electron Group Credo and Principles on Environmental Preservation established	Dec. 2002	Tokyo Electron Group Internal Assessment mutual auditing by environment or safety representatives from each facility started
Nov. 1998	Tokyo Electron Group Credo and Principles on Safety & Health established	Apr. 2003	Lead-Free Task Team activities started
Jun. 1999	Safety First policy established	Jul. 2004	Yokohama office of Tokyo Electron Device acquires ISO 14001 certification
Aug. 1999	Ozu Plant acquires ISO 14001 certification	Mar. 2005	Miyagi Plant acquires ISO 14001 certification
		Oct. 2005	Energy-Conservation Task Force starts activities to promote energy-saving products

## Commitment by Top Management

### Contributing to Solving a Variety of Problems in the World through Semiconductor Manufacturing Technology

#### Semiconductors and FPDs Used in Everyday Products as Part of Our Lives

Early in May 2006, I visited the United States to participate as a panelist in the World Congress on Information Technology (WCIT) held in Austin, Texas. Representatives of the world's leading information technology (IT) companies, including software companies, PC manufacturers, and semiconductor manufacturers, attended the congress to discuss topics such as the social roles to be played by the IT industry in the future.

I was impressed with the vision that the world's leading IT companies have clearly shown for their IT business in Africa, the Middle and Near East, and Eastern Europe as well as in the BRICs\*. In their vision, wireless networks, rather than wired networks, will become popular in those regions, because building wireless networks requires less cost and time. Also, by expanding IT networks all over the world, making it possible to access information wherever you are, even people living in remote areas will have access to IT for school education and medical diagnosis. The power of IT thus improves the quality of life.

In the 1980s, semiconductors were mainly used in general-purpose computers for industrial use. At the present, however, semiconductors are used in a variety of goods that are part of our daily life, including PCs, cell phones, game machines, automobiles, security systems for buildings, and home electrical appliances. I am very glad that semiconductor technology has contributed to society in such diverse ways, and at the same time I feel

a strong sense of responsibility for the further development of semiconductors as president of a company in the semiconductor industry.



**Tetsuro Higashi**  
Chairman & CEO  
Tokyo Electron Limited

A handwritten signature in black ink, which appears to read "T. Higashi".

#### Fulfilling Environmental and Social Responsibilities through Three Different Approaches

We have been implementing measures to reduce the environmental impact of our business operations and to provide more environment-conscious products. Recently, in the course of implementing these measures, it has become clear to us that we can fulfill our environmental and social responsibilities through three different approaches. First, we can help people change their lifestyles to more environment-friendly ones. Also, we can foster information sharing to contribute to society. For example, if real-time information sharing becomes possible by the use of semiconductor and FPD technology in the kinds of daily goods mentioned here, transportation distances will be decreased for both people and goods. Furthermore, this information sharing will be useful in education and medical care.

As I have already mentioned, the world is becoming more IT-oriented with an increasing use of semiconductors and FPDs. As a result, electricity consumption is surging on a global scale. In view of this, as the second approach, we can contribute to society by providing technology to reduce the amount of electricity consumed by semiconductors and FPDs. In the past, semiconductor and FPD manufacturers played a central role in the development of low-energy-consumption technologies. At present, however, they need to cooperate with semiconductor production equipment and materials manufacturers, who have been playing increasingly important roles in the technology used to produce semiconductors and FPDs.

Finally, as the third approach, we can contribute to the environment and society at large by manufacturing semiconductor and FPD production equipment that is more energy-saving, thereby supporting semiconductor and FPD manufacturers in manufacturing their products in a resource-saving manner. We are committed to taking these three approaches to fulfill our responsibilities.

#### Summarizing the Important Values Shared by Employees

In April 2006, we summarized the values shared across the Tokyo Electron Group as TEL Values. This is passing the corporate culture from generation to generation and ensuring that employees proactively respond to changes, keeping in mind how the Group has achieved today's growth.

I believe that "venture spirit" is the starting point for the Group's success today. Of course, it is not easy for the Group, which has now grown into a large entity, to overcome all the difficulties with a venture spirit. However, I expect every employee to contribute to opening up the new age, keeping TEL Values in their mind.

\* The BRICs are Brazil, Russia, India, and China.

## Taking Leadership in Our Industry in Efforts for the Environment and Safety

### Our Unique Technological Abilities Enable Us to Propose Environment- and Safety-Conscious Products

In recent years, the Tokyo Electron Group has been gradually changing its way of business. In the past, we provided products that met customers' needs in response to their requests. Now, we are more active in proposing new products to customers, based on our unique R&D and product development plans.

In our environmental activities, we aim to contribute to a reduction in global energy consumption by promoting energy-saving semiconductor products. CO<sub>2</sub> emissions from the semiconductor industry are lower than the emissions from the iron and steel and chemical industries. Semiconductor products, however, are used in multiple industries, consuming electricity in substantial amounts. We therefore cooperate with semiconductor manufacturers to propose even more environment- and safety-conscious products, thereby fulfilling our responsibilities as a member of society.

For displays, in addition to flat panel displays (FPD) that are more energy-saving than cathode-ray tube (CRT) displays, organic electroluminescence (EL) displays have been developed, which consume even less electricity than FPDs. I believe we can contribute to a reduction in energy consumption through these products. Also, I think it important to show employees the direction of the business and corporate responsibilities we should fulfill in society. We plan to promote R&D activities including those for lower energy consumption and we have an R&D budget of 55 billion yen for the current term.

### Producing More Energy-Saving Equipment and Reducing the Use of Regulated Chemical Substances

We clearly need to provide more energy-saving semiconductor and FPD production equipment. There are two ways to reduce the energy consumption of the equipment. The first method is to eliminate the waste of electricity in existing equipment by such measures as reducing the use of standby electricity. The second method is to drastically lower energy consumption through totally new technology, the R&D for which of course requires time and labor.

The market share of the Tokyo Electron Group's semiconductor production equipment has been rising. This means that we are having more influence over the world's semiconductor industry. Therefore, improvements in our products will have a spillover effect on the entire industry. We thus have major responsibilities in the industry.

We have long been implementing measures to reduce the use of regulated chemical substances contained in our equipment. We will further commit ourselves to reductions in line with the regulations implemented in Europe and other regions.

### Leading the Industry in Improving Safety at Work

We are leading the industry in promoting safety at work as well. In FY 2006, we worked with SEMI\*, which is a trade association, to formulate the industry's safety guidelines that outline the systems and rules to be followed by employees of different companies when they work together.


When our employees work at customers' factories, they are all committed to safety, something for which customers have expressed their gratitude. Some customers, evaluating our safety measures highly, have even asked us to instruct them on safety so that they may become role models for other companies.

We plan to expand our safety promotion activities that involve other companies. The Tokyo Electron Group has long been conducting environmental and safety activities and we have established the relevant departments. Based on this experience and expertise, we will continue to lead the industry in safety.

Recently, legislation has been implemented for internal control. However, I am afraid that employees will feel discouraged if their work becomes too regulated by laws and rules. It is important for us to build a flexible internal control system based on the minimum schemes and regulations required and take action based on a full understanding of how to manage the system. I will continue to devote myself to providing the necessary knowledge and information to employees and to improving their ethical standards.

\* Semiconductor Equipment and Materials International (SEMI) is an international trade organization of semiconductor/FPD equipment and materials manufacturers.

**Kiyoshi Sato**  
President & COO  
Tokyo Electron Limited



# H Highlights

## Connecting the World with State-of-the-Art Technology

The Tokyo Electron Group sees contributing to the development of the field of electronics as its essential role in society, so that everyone in the world can communicate with each other using advanced technology and have equal access to business opportunities, education, and medical services.

### Reduction in Environmental Impact in the Semiconductor and FPD Manufacturing Processes

The Tokyo Electron Group develops and manufactures semiconductor and flat panel display (FPD) production equipment and supplies it to semiconductor and FPD manufacturers around the world. Semiconductor and FPD manufacturers consume substantial amounts of electricity and gas to manufacture their products, and the world demand for semiconductors and FPDs is expected to further increase in the future. The Tokyo Electron Group sees as one of its social missions the provision of equipment that will contribute to reducing the environmental impact caused by semiconductor and FPD manufacturing processes, and is developing such equipment mainly in cooperation with its customers. (For the results of the roundtable meeting held with stakeholders, see "Reducing the Environmental Impact of Semiconductor Production Equipment" on pages 8 to 11.)

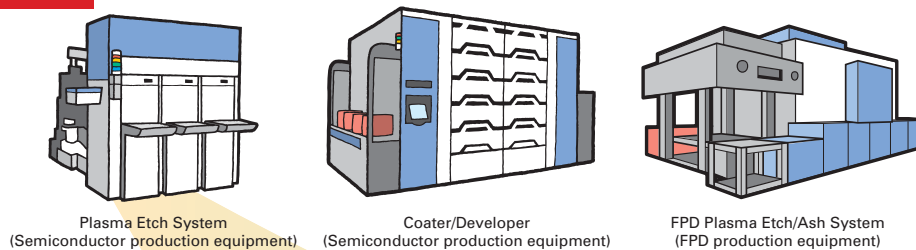
### Providing Energy-Saving and Efficient Semiconductors

The application of semiconductors and FPDs will be expanded and these products will be used in more diverse products. It is expected that the world's demand for semiconductors and FPDs will more than double in the future.

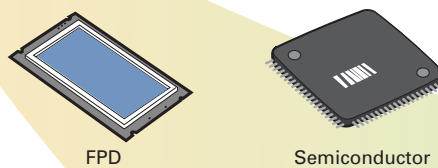
Semiconductors and FPDs need electricity to perform their expected functions, such as computing. At present, however, some electricity is wasted as heat. It is therefore important to reduce the consumption of electricity by improving the function and efficiency of semiconductors and FPDs.

The Tokyo Electron Group makes relevant proposals to its customers based on its know-how on semiconductor and FPD manufacturing processes built up over many years as a manufacturer of semiconductor and FPD production equipment, thereby supporting them in developing even more efficient semiconductors and FPDs that have no energy losses.

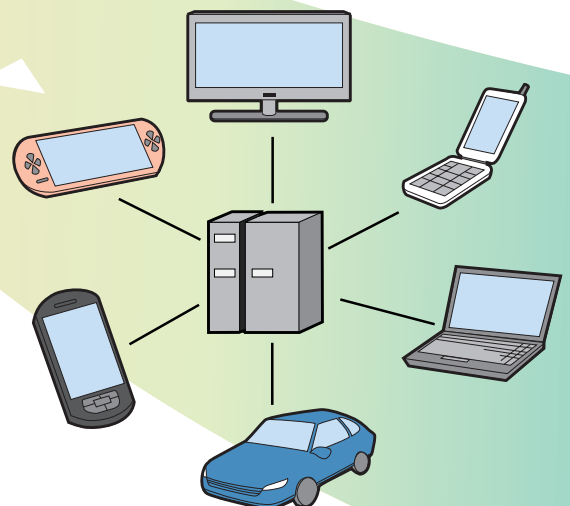
#### Our Products



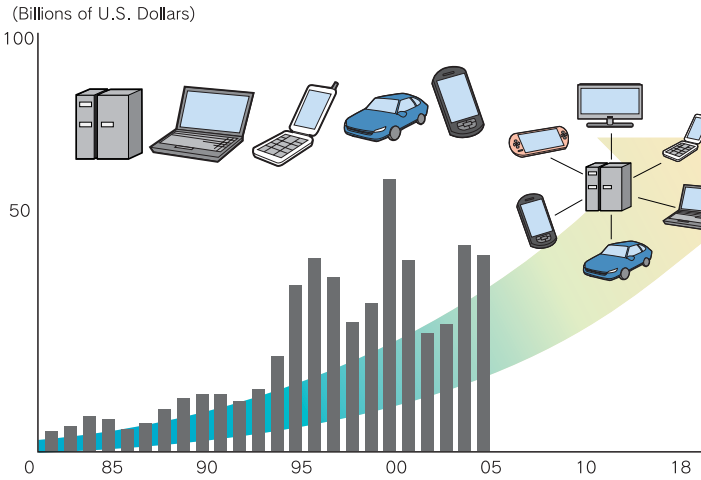
#### Products Manufactured with Our Equipment



#### Expanded use of semiconductors and FPDs



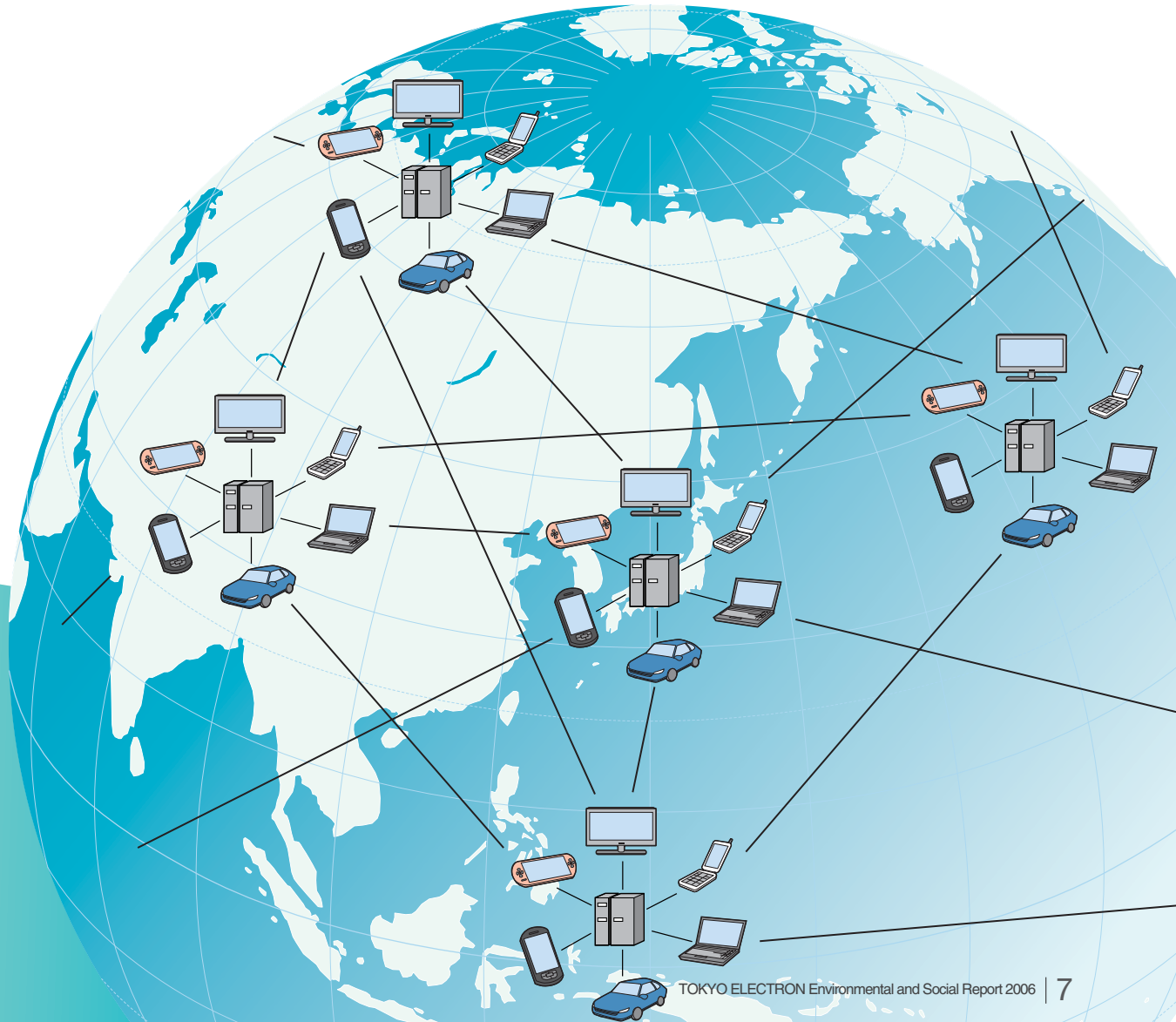
### Actual and Predicted Demand for Semiconductors



### Connecting the World through Advanced Technology

Today's world is made up of countries where people are receiving the benefits of advanced technology and countries where people cannot receive these benefits. In view of this situation, we believe that all the people in the world must be able to enjoy the benefits of technology and have equal access to business opportunities, education, and medical services. Semiconductor and FPD manufacturers, who are the Tokyo Electron Group's customers, produce CPUs, memory chips, and liquid crystal displays. These items are used in a wide spectrum of electronics products to improve the performance and energy efficiency of these products.

By supporting customers in manufacturing their products, the Tokyo Electron Group sees contributing to the creation of a global society in which everyone will have equal access to knowledge and information as its essential social role.



## Roundtable Meeting with Stakeholders Reducing the Environmental Impact of Semiconductor Production Equipment

The Tokyo Electron Group regards reducing the environmental impact of its semiconductor production equipment delivered to customers' factories as one of its major social responsibilities. We invited three people from semiconductor manufacturers who are our customers to attend a roundtable meeting with our employees engaged in sales and equipment development. At the meeting, participants discussed the Group's challenges and expectations from its customers, focusing on energy-saving equipment.

### Sharing Information with Semiconductor Manufacturers Is Essential for Developing Energy-Saving Equipment

**Mr. Ibuka (TEL):** In recent years, environment-conscious design has been attracting much attention. In particular, there are strong demands for improvements in energy efficiency, and so the Tokyo Electron Group is trying to contribute to the earth and society by providing more energy-efficient equipment. Today, we would like to ask you, the users of our equipment, for your honest opinions. We will incorporate your opinions into future product development.

**Mr. Kagino:** The semiconductor industry is committed to reducing its energy use in consideration of the environment. We, however, want to maintain the yield level while reducing our energy use. Accordingly, we started to improve the energy efficiency of peripheral facilities first, including clean rooms and air conditioners, which will not exert much influence over the yield. If we promote the use of energy-saving semiconductor production equipment in the essential manufacturing process, it might badly affect the yield, and so it is difficult for us to proceed. However, as we implemented more energy-saving measures for air conditioners, the percentage of the total energy use that the production equipment accounted for became more significant. The equipment is powered on even while it is not used for manufacturing semiconductors and this standby electricity is indeed a waste of energy. However, we cannot proceed with countermeasures, because it might lower the yield. I believe it is necessary for semiconductor manufacturers and semiconductor production equipment manufacturers to cooperate together to reduce energy use in the semiconductor manufacturing process.

**Mr. Yamanaka (TEL):** It seems difficult to obtain yield-related information from semiconductor manufacturers. For example, if we supplied improved equipment to you, would you let us know how

it contributed to energy efficiency and yield at your factory?

**Mr. Kagino:** Certainly there is a question of whether or not you can obtain that kind of information, and even if you did, other semiconductor manufacturers might not accept the same improvement method. There have been cases where an improvement initiative that worked well at Factory A for a certain semiconductor manufacturer did not work or was not accepted at the same manufacturer's Factory B. As the background to this, semiconductor production equipment is customized for each customer. However, I think that semiconductor manufacturers need to change their attitude to this.

**Mr. Tsuru (TEL):** Each customer's factory has different needs regarding manufacturing methods and energy saving measures, and we cannot provide a "one-fits-all" solution. If the customer can standardize the needs of all their factories and show them to us with other necessary information, we can press forward with energy saving more easily. Do you think that will be possible?

**Mr. Kagino:** I think that's the direction we must take from now on.

### Promoting Energy Saving for Existing Equipment

**Mr. Sakaguchi (TEL):** We manufacture and deliver new equipment mainly to new factories. However, there are machines that we delivered in the past and are currently in use at customers' factories ("existing equipment") and the number of those machines is more than ten times the number of new machines being delivered to new factories. For this reason, we think it necessary to focus on reducing the energy being used by existing equipment. However, it will need time, labor, and money to improve existing equipment. Would you give us your ideas on energy-saving measures for existing equipment?

**Mr. Kagino:** As a semiconductor manufacturer, we can implement energy-saving measures from two aspects: (1) to reduce the





total energy use and (2) to reduce the energy use per unit of production. The semiconductor industry is on a growth trend and so its energy use is increasing. It would therefore be difficult to reduce the total energy use. We have announced reductions in energy use per unit of production, i.e., per wafer or per semiconductor chip. In the future, however, we need to implement measures to reduce the total energy use, and the most effective way to do this is to make improvements to existing equipment. There may be a greater need to improve existing equipment than to provide new equipment. In my opinion, the best way to improve existing equipment is to apply the ideas used in new equipment to existing equipment. I would like you, as a manufacturer of semiconductor production equipment, to keep this in mind in developing new equipment, and to propose effective methods of improving existing equipment.

**Mr. Sakaguchi (TEL):** We do not have a clear picture of the semiconductor market in this respect. If we are assured that semiconductor manufacturers are willing to spend money for energy-saving equipment, we can launch a special task force to tackle this, because it will be feasible as a business model. In this case, however, as discussed earlier, we need to make customized responses to each manufacturer and to each factory. If we can overcome this problem, I think we can provide you with a satisfactory solution.

**Mr. Kagino:** I believe each manufacturer thinks it necessary to reduce the energy used by existing equipment. However, if we implement energy-saving measures focusing on existing equipment, it will take time and labor and those measures may not be practical. As I said earlier, I wonder if it is possible to adapt the energy-saving technology used in new equipment to improving existing equipment. It would be wonderful if the cost of doing this could be included in the cost of developing new equipment to keep the cost of improving existing equipment low. I would like to have existing equipment improved at the time it is overhauled, without spending too much time and money for it.

**Mr. Tada:** It costs a lot to improve the peripheral pipes and if it is possible to implement energy-saving measures concurrently with pipe improvements, we can afford to pay the extra cost. To do this, we need to cooperate with the department in charge of factory facility management.

**Mr. Takahashi:** With regard to factory facilities, in order to reduce exhaust gas emissions with high global warming coefficients, we need a device to recycle and reuse the gas.



**Mr. Tada:** How about recovering all the emissions, an idea that is now attracting much attention? It might be necessary to install a separate pipe, but it would be worth the cost if we could recover and recycle all the emissions, including fluorinated acid.

### Contributing to Higher Energy Efficiency through Semiconductors

**Mr. Tada:** It would be relatively easy to improve the energy efficiency of equipment by 20 to 30%. However, I want semiconductor production equipment manufacturers to completely review their development concept to come up with a technology that can substantially reduce the energy used by their products.

**Mr. Kagino:** I agree with you. It might be possible to reduce the energy that semiconductor production equipment consumes by 50% from the present levels. I would like equipment manufacturers to rack their brains to come up with energy-saving technologies for components, for example, by examining the interrelationship between the electrode structure and exhaust emissions.

**Mr. Ibuka (TEL):** You said that energy use per wafer is decreasing while total energy use is increasing. Towards the future, we must make efforts to contribute to higher energy efficiency for society at large by promoting the use of semiconductors, instead of just providing energy-saving equipment. To this end, semiconductor manufacturers and semiconductor production equipment manufacturers need to cooperate.

**Mr. Tada:** I am the leader of the LCA\* working group at the Japan Electronics and Information Technology Industries Association (JEITA). We use LCA to calculate the total environmental impact of semiconductors. It is true that manufacturing semiconductors has an impact on the environment because the process consumes large amounts of energy. Semiconductors, however, also contribute to reducing the use of energy when incorporated in state-of-the-art products used by consumers. We would like to calculate both the positive and negative impact of semiconductors with LCA.

\* LCA: Life cycle assessment is a method developed to assess a product's full environmental impact throughout its lifecycle, from procurement of materials to disassembly and disposal.



**Minoru Kagino**  
Semiconductor Company  
Toshiba Corporation



**Kazuhiro Tada**  
Elpida Memory, Inc.



**Kenji Takahashi**  
Renesas Technology  
Corporation



**Munetsugu Yamanaka**  
Development Planning Dept.  
Tokyo Electron Limited



**Hajime Komatsu**  
ESD Quality Assurance 2 Dept.  
Tokyo Electron AT Limited

## Complying with the SEMI S23 Guide\* as an Industry Standard

**Mr. Komatsu (TEL):** I am in charge of EHS for the Group's factories. In the past, we endeavored to reduce our own energy use. In addition, we have now started to design environment-friendly products. However, it is difficult for a factory to pursue productivity and environment-friendliness at the same time. I am glad that I can listen to invaluable opinions directly from semiconductor manufacturers today. Maybe we should do more comparison of energy consumption for different types of equipment in addition to developing component technologies and building a new business model. If semiconductor production equipment manufacturers can show customers comparative data on the energy their equipment uses, i.e. how much it consumes under standard specifications and standard conditions, customers can decide which equipment to buy, and this will lead to further energy saving.

**Mr. Kagino:** That's exactly what we were aiming at. The SEMI S23 Guide has already incorporated comparative indicators, and if every equipment manufacturer refers to S23 in deciding the specifications of their equipment, semiconductor manufacturers can easily compare and choose equipment from different equipment manufacturers.

**Mr. Ibuka (TEL):** It is also important for larger numbers of semiconductor manufacturers to demand that the semiconductor production equipment manufacturers comply with S23. If the number of semiconductor manufacturers who demand this increases, the cost of the compliance imposed on equipment manufacturers will be smaller. So in a sense it is up to the semiconductor manufacturers.

**Mr. Ishida (TEL):** It would be easier for us to comply with the S23 Guide if the semiconductor industry as a whole, not just individual



manufacturers, regards the Guide as an industry standard.

**Mr. Kagino:** Specifications vary depending upon the manufacturing process. For energy saving, however, we want equipment manufacturers to promote relevant measures based on common criteria. All semiconductor manufacturers want to promote energy saving if it doesn't have harmful effects on yield. If equipment manufacturers voluntarily comply with the S23 Guide as an industry standard, semiconductor manufacturers will be able to accept it more easily.

**Mr. Yamamoto (TEL):** We would like to set an industry standard for energy saving, but it will be difficult to implement it without cooperation from the semiconductor manufacturers. In many cases, semiconductor manufacturers eventually choose equipment based on its cost. Some customers even tell us to remove the energy-saving function to lower the cost.

**Mr. Kagino:** However, once the function has become a standard, it would be rather costly to remove it. I want the function to be truly standardized.





**Tomohiko Sakaguchi**  
Etch Systems Dept.  
Tokyo Electron Limited



**Yuuichi Yamamoto**  
Clean Track Dept.  
Tokyo Electron Limited



**Seiki Ishida**  
Clean Track Development  
Dept.  
Tokyo Electron Kyushu Limited



**Motohiro Tsuru**  
Clean Track System Design  
Dept.  
Tokyo Electron Kyushu Limited



**Joji Hoshi**  
Environment, Health & Safety  
Center  
Tokyo Electron Limited



**Shigehito Ibuka**  
Environment, Health & Safety  
Center  
Tokyo Electron Limited

**Mr. Tada:** It might be better to incorporate the energy-saving function as an integral part of the equipment.

**Mr. Tsuru (TEL):** If the S23 Guide is more widely accepted as a standard, we will be able to promote energy saving more smoothly.

**Mr. Kagino:** Semiconductor manufacturers belonging to JEITA will all be adopting the S23 Guide in the near future. So it will be ideal if semiconductor manufacturers and semiconductor production equipment manufacturers cooperate to improve the S23 Guide and make it an industry standard.

\*SEMI S23: Guide for Conservation of Energy, Utilities and Materials Used by Semiconductor Manufacturing Equipment (prepared by the Semiconductor Equipment and Materials International (SEMI))

### Environment-Friendliness Now An Essential Elements

**Mr. Kagino:** Environment-friendliness, including energy saving, has been increasingly importance for equipment. At our company, we implement environmental assessment in developing products. We do not commercialize any products unless they have higher environmental efficiency than previous models. I think that some semiconductor manufacturers will buy energy-saving equipment that uses only half the amount of energy used by ordinary equipment and has equal performance, even if it costs more.

**Mr. Tada:** We are attributing more importance to energy saving. In the past, we didn't compare how much energy different types of equipment consumes when we chose equipment from among multiple products, but now, in addition to performance, we have included energy consumption among the selection criteria.

**Mr. Takahashi:** Semiconductor manufacturers are all implementing environmental assessment on their products. They are committed to reducing their environmental impact using comprehensive indicators.



Also, JEITA has established a system to compare products using LCA. For equipment as well, systems for standardization and comparison will be established. I expect that the S23 Guide will provide the driving force for the spread of energy-saving equipment, and that semiconductor production equipment manufacturers will make more efforts towards saving energy.

### In response to the roundtable meeting

We invited representatives from Toshiba, Elpida Memory, and Renesas Technology, which are our customers, to a roundtable meeting. This meeting gave a great opportunity to our staff engaged in marketing, design, development, and EHS to exchange information on energy-saving semiconductor production equipment with customers. We will continue to solicit our customers' opinions and incorporate them in design and development.

As for customers' requests to apply improvement technologies used in new equipment to existing equipment, we will

carry out in-depth studies, including deciding on specific methods. Also, the meeting highlighted the importance of identifying how much energy our products use based on the SEMI S23 Guide, thereby promoting higher energy efficiency and lower energy consumption. To meet customers' expectations and gain their trust in this, we will continue to take a leadership role in the industry.

**Masaki Kaneko** Director of Environment,  
Health & Safety Center  
Tokyo Electron Limited

## Corporate Governance

We are strengthening the corporate governance framework to increase corporate value for all stakeholders.

### Fundamental Policy Concerning Corporate Governance

Reflecting the ongoing globalization of management practices, our fundamental policy is to strictly observe standards for corporate ethics and comply with laws and regulations. We are also dedicated to establishing and reinforcing internal control and risk management systems, and to maintaining the transparency and objectivity of our business activities. The primary objective of this policy is to conduct management that prioritizes the creation of corporate value for the benefit of shareholders and all other stakeholders.

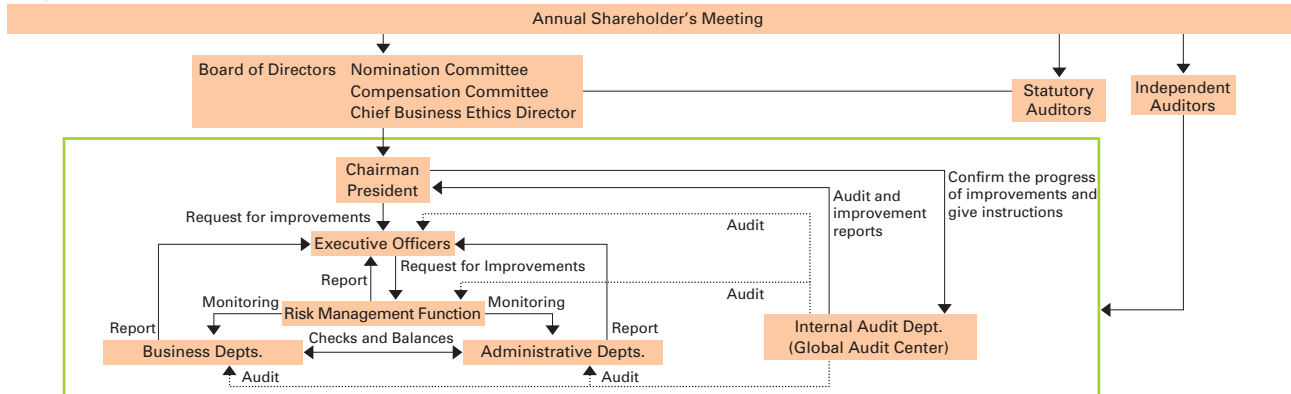
### Measures Concerning Corporate Governance Framework

We regard the strengthening of corporate governance as vital to increasing its corporate value and shareholder satisfaction. For this purpose, we concentrate on three aspects of corporate governance: 1) ensuring the transparency and soundness of business operations; 2) facilitating quick decision-making and the efficient execution of business operations; and 3) building an effective system for the timely and suitable disclosure of information.

### The Corporate Governance Framework

We have 11 directors, including two external directors. We have adopted the statutory auditor system, as we believe that statutory auditors are an effective means of conducting management that reflects the interests of shareholders. Accordingly, we have four statutory auditors, two of whom are from outside the company. In addition, we have separated the roles of the directors and the executive officers who oversee business operations. Additionally, we have established two committees on the board of directors. A Compensation Committee determines the remuneration paid to the Chairman & CEO and to the President & COO. The Nomination Committee selects candidates for directorships for submission to the annual shareholders' meeting, and a candidate to be elected as President by the board of directors. Through these measures we constantly work to improve corporate governance. The Compensation Committee and the Nomination Committee both have three members

### Corporate Governance Framework



each, excluding the Chairman & CEO and the President & COO.

### Internal Controls and Risk Management

All activities at the Tokyo Electron Group are based on adherence to the highest standards of corporate ethics and compliance with laws, regulations and international rules. To oversee and ensure this, a director has been appointed Chief Business Ethics Director. Ethical standards have been established and measures are taken to see that these standards are strictly observed. Reflecting the fact that we now place even greater importance on internal controls and risk management systems, we have upgraded the internal audit functions of the Global Audit Center. We have also added crisis management functions to the General Affairs Department, including measures involving business risk and operational risk. This department is responsible for establishing the necessary internal regulations for managing each category of risk, as well as for activities for training and raising employees' awareness of risk management.

### Remuneration for Directors, Executive Officers and Statutory Auditors

Part of the remuneration for directors and executive officers of TEL and its subsidiaries is linked to operating results, with an upper limit of 3% of consolidated net income. The remuneration is split between annual cash bonuses and stock option based remuneration at a ratio of almost two to one. We believe that this system incentivizes officers to improve the corporate performance and share price because they share with shareholders the risk of a decrease as well as the benefits of higher earnings and a higher share price.

### Remuneration for directors and statutory auditors

(Millions of yen)

Remuneration	Amount
Amount paid to internal directors	360
Amount paid to external directors	10
Amount paid to internal statutory auditors	51
Amount paid to external statutory auditors	26

\* The above amounts do not include annual bonuses and retirement allowances paid to directors.

## Compliance

**The Tokyo Electron Group is determined to carry out sound business activities in accordance with its corporate ethics and compliance with the law.**

### ■ Approach to Corporate Ethics and Legal Compliance

Trust is and will always be the lifeline of the Tokyo Electron Group. The fundamental requirements for maintaining trust are rigorous conformity to our ethical standards and compliance with the law, by our employees as individuals, and by each of our organizations. We give first priority to compliance with high ethical standards and laws in conducting our business operations.

### ■ Establishing Ethical Standards

We believe that common standards must be applied throughout our divisions in order to create the globally excellent company that we envision. In 1998 we established a Code of Ethics, which concretely describes our basic views. At the same time, we established the Ethics Committee as an organization for actual operations.

### ■ Measures to Strengthen the Compliance System

We established our Compliance Regulations in 2004. The Regulations, which provide for basic matters concerning compliance based on the Code of Ethics, are designed to help those engaged in the business operations of the Tokyo Electron Group understand fully the relevant laws, regulations, and international rules as well as in-house rules and act accordingly at all times.

In 2005, we conducted an awareness survey on our Code of Ethics and compliance measures targeting approximately 9,000 employees from both our domestic and overseas Group companies. Based on the survey results and according to the Whistleblower Protection Act of Japan enacted in 2006, we revised the Compliance Regulations to make our hotline (system for reporting noncompliance with the Code of Ethics and laws) more effective, including the prohibition of disadvantageous treatment of whistleblowers, protection of privacy in the process of handling noncompliance reports, and ensuring confidentiality.

### ■ Protection of Personal Information

Leakage of personal information has become a social concern in recent years and companies are required to manage the personal information they hold in an appropriate manner. In Japan following enactment of the Act on the Protection of Personal Information in April 2005, the Tokyo Electron Group formulated its basic policies and rules on the protection of personal information. We educate employees on the implementation of policies and rules, endeavoring to make them more aware of these policies and rules. Furthermore, in Japan we investigated personal information stored on approximately 11,000 PCs leased to employees and created a ledger of personal information to be managed by each Group company and department. Also, we installed servers to be used exclusively for storing personal information and prohibited employees from storing important personal information on their PCs. In addition, we added some rules to the guidelines on enhanced safety measures for the protection of personal information. These rules include those on the management of particularly important personal information, such as information about business partners, personnel-related information, and general affairs-related information, as well as rules on the use of cell phones.

## EHS Management

The Tokyo Electron Group revised its Credo and Principles on Environmental Preservation in FY 2007. We will conduct more advanced environmental, health and safety (EHS) activities based on the revised principles.

### Basic Idea for EHS Activities

The Tokyo Electron Group conducts EHS activities based on the idea that giving first priority to safety, health, and the environment will lead to gaining trust from the public in its business operations and to increasing its profit on a long-term basis.

In TEL Values established in April 2006, in which we summarize our values and action guidelines, we also state, "We give top priority to safety, health, and the global environment" and "We must have awareness and accept responsibility for our behavior as respectful members of society."

### Updating Tokyo Electron Group Credo and Principles on Environmental Preservation

In May 2006, we revised Tokyo Electron Group Credo and Principles on Environmental Preservation that were established in 1998, in order to show our direction and ideas more clearly. The revised version makes it clear that the Tokyo Electron Group will

develop products in line with a clearly defined environmental roadmap for its products, while verifying the environment-friendliness of the products at their design, manufacturing, and use stages. Also, it clearly states that the Group will disclose the results of verification and other relevant information to stakeholders via environmental reports and other means.

## TEL Values Awareness

We must have awareness and accept responsibility for our behavior as respectful members of society.

- We strictly comply with laws and regulations and the rules of society.
- We give top priority to safety, health, and the global environment.
- We strive to become a company that local communities hold in high esteem.

### The Tokyo Electron Group Credo and Principles on Environmental Preservation

#### <The Tokyo Electron Group Credo on Environmental Preservation>

The Tokyo Electron Group believes that preserving the global environment and constantly improving it is one of the most important objectives for mankind as well as its 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.

#### <The Tokyo Electron Group Principles on Environmental Preservation>

1. Continuous Improvement  
The Tokyo Electron Group is conscious that products manufactured by the Group affect the environment, and based on this awareness, we, with our customers and suppliers, shall continually strive to minimize the impact of processes and operations on the environment. We will develop products consistent with a clearly defined environmental roadmap for the Group products, verifying the appropriateness of efforts during design, manufacture, and use. To further confirm the appropriateness of such efforts, we will undertake activities that fully take into account regulatory and industry requirements and the needs of customers and other stakeholders.
2. Knowledge  
The Tokyo Electron Group continually strives to enhance its understanding of the impact that the Group has on the environment and the responsibility that this entails. In addition, the Group aims to gain a quantitative grasp of environmental factors, and the impacts resulting from its activities and operations.
3. Performance Criteria  
In addition to strict adherence to environmental laws, treaties, and agreements, the Tokyo Electron Group will also promote conservation of the global environment by formulating activity plans that take into account industry standards and various other environmental requirements.
4. Disclosure  
In addition to ensuring that all employees clearly understand our environmental concepts, policies, the state of company contributions toward environmental protection, and the state of product-related environmental efforts, as well as improving levels of awareness, we will disclose relevant information to those outside the company via environmental reports and other means.
5. Partnership  
The Tokyo Electron Group actively participates in environmental protection activities practiced by its customers, suppliers, and communities.

May 26, 2006

### The Tokyo Electron Group Safety and Health Credo and Principles

#### <The Tokyo Electron Group Safety and Health Credo>

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

#### <The Tokyo Electron Group Safety and Health Principles>

1. Continuous Improvement  
The Tokyo Electron Group is conscious that the factors that affect the safety and health of customers and its employees exist at the stage of manufacturing, transportation, installation, use, maintenance, and service of its products. Based on this awareness, we shall continually strive to improve the safety and health of our products and eliminate factors that affect human health.
2. Knowledge  
The Tokyo Electron Group continually strives to enhance its understanding of safety and health and improve these conditions for all people working at its sites. To that end, the Group aims to gain a qualitative and quantitative grasp of safety and health factors on its activities and operations.
3. Performance Criteria  
As well as strictly observing mandatory safety and health laws, treaties, and agreements, the Tokyo Electron Group 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  
The Tokyo Electron Group shares information about its safety and health credo, policies, and the progress of its safety and health activities with all board members and employees, and will publish its progress to the general public as the need arises.
5. Partnership  
The Tokyo Electron Group participates in safety and health activities practiced by its customers, suppliers, and communities.

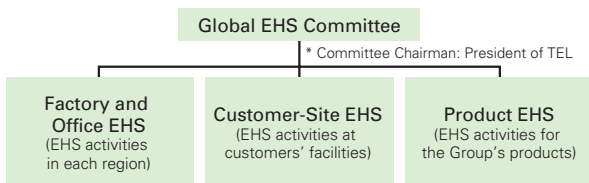
November 27, 1998

## ■ EHS Promotion System

Our EHS system takes the form of three pillars: Product EHS, which advances EHS priorities in our products in general; Customer-Site EHS, which advances those priorities during and after start-up of our products; and Factory and Office EHS, which concerns our facilities.

The Tokyo Electron Group companies, in particular TEL's manufacturing subsidiaries, started developing and implementing environmental management systems based on ISO 14001 in 1997 to obtain ISO 14001 certification.

### Tokyo Electron Group's EHS Promotion System



### ISO-14001-Certified Plants and Offices

Company name	Plant/office name	Certification date	Certification number
Tokyo Electron AT Limited. Tokyo Electron FE Limited.	Sagami Office	December 10, 1997	1110-1997-AE-KOB-RvA
Tokyo Electron Tohoku Limited	Tohoku Plant	February 19, 1998	1118-1998-AE-KOB-RvA Rev.3
Tokyo Electron Kyushu Limited	Kumamoto/Koshi/Ozu/Saga Plants	March 26, 1998	1120-1998-AE-KOB-RvA Rev.2
Tokyo Electron AT Limited	Yamanashi Plant (Fuji/Hosaka region)	May 15, 1998	1124-1998-AE-KOB-RvA
	Miyagi Plant	March 1, 2005	01245-2005-AE-KOB-RvA
Tokyo Electron Device Limited	Yokohama Office	July 14, 2004	EC04J0144

## ■ EHS Activities Monitoring System

In order to strengthen our EHS management system, we are increasing the level of monitoring that verifies the system function and results. Monitoring is done from multiple viewpoints within plants and offices, within the Group, or by third parties. We are especially focusing on the Tokyo Electron Group Internal Assessment, a program of mutual EHS evaluations by representatives of many plants and offices, which was instituted in FY 2003. In FY 2005, the three topics of Product EHS Compliance, Product EHS Performance, and Environmental Performance and Legal Compliance were added to the earlier programs, which focused on labor safety and health. These measures have reinforced our ability to check the environmental and safety performance of individual pieces of equipment as well as to allow plants to check each other's environmental management. We will increase the number of departments to be monitored and further strengthen the EHS activities monitoring system.

## ■ EHS Risk Management

At manufacturing subsidiaries of TEL, environmental and safety risks are estimated based on ISO 14001 and OHSAS 18001 standards for labor safety and health management systems. These subsidiaries are implementing measures to eliminate higher risks first. Also, they are endeavoring to reduce some risks although they are not yet legally required to do so. We believe it most important to implement anti-global warming measures in line with the Kyoto Protocol targets in future EHS risk management.

## ■ Abiding by the Law

The Tokyo Electron Group operates in strict obedience to the law. We closely track new environmental laws and emissions regulations and for some substances have enacted independent standards that are stricter than legally required. In FY 2006, we were not subject to legal actions of any kind with regard to environmental accidents, violations, fines or complaints.

## ■ EHS Training

The Tokyo Electron Group offers EHS training under the principle of "the necessary training for the necessary people." Training courses are grouped by rank and are open both to Group employees and to employees of cooperating companies who work at TEL's facilities. An EHS training program is also a required part of the curriculum for new hires. In FY 2007, we changed the content of advanced safety training according to recommendations made by SEAJ\* and the training is now in compliance with the SEMI Safety Guideline for Training Semiconductor Manufacturing Equipment Installation, Maintenance and Service Personnel (S19-1102). In addition, in order to further facilitate EHS activities, we provide training on team resource management focusing on communication within a team (see "TOPICS" on page 31).

\* SEAJ: Semiconductor Equipment Association of Japan

### EHS Training

- Special training (for internal environmental auditors, special training on key environmental aspects of work)
- ISO 14001-based environmental training (for manufacturing plants)
- Training on environmental activities (for office facilities)

#### Environment

- Equipment-specific training
- Customer-specific site entry training
- Safety training for employees traveling overseas
- Advanced safety training
- Basic safety training

#### Health and Safety

## EHS Activity Goals and Results

The Tokyo Electron Group has set goals for EHS activities and is promoting those activities throughout the Group.

### Goals and Results for EHS Activities in FY 2006

	Action item	Goals for FY 2006	Results	Achievement level	Plans and goals for FY 2007 onward	Page in report
EHS management	Promotion of EHS activities in domestic and overseas plants and offices	-	Started to identify energy consumption and the amount of waste generated at field stations in Japan	-	Continue to obtain data	-
	EHS mutual assessments	Perform EHS mutual assessments at plants and offices	Conducted EHS mutual assessments at two sites and made corrections based on the findings		Increase the number of departments to be monitored and expand the scope of monitoring	P15
Product initiatives for the environment	Energy-saving equipment	Achieve the TEL Roadmap indicators	Achieved for five products out of six 200mm products Achieved for two products and nearly achieved for three products out of six 300mm products		Achieve the FY 2008 and FY 2011 goals	P18, 19
	Measures to reduce the use of regulated chemical substances in equipment	Clarify the targeted chemical substances and the policies	Included Pb, Cd, Cr <sup>6+</sup> , Hg, PBB, and PBDE in substances to be eliminated		Achieve the TEL Roadmap indicators	P20
	Lead-free products	Start to manufacture lead-free production equipment in January 2006	Achieved the goal		Achieve the TEL Roadmap indicators	P21
Environmental activities at each plant or office	Saving energy	Reduce energy consumption (1% decrease in CO <sub>2</sub> emissions per unit of sales, as based on the Law Concerning the Rational Use of Energy)	Achieved the goal by decreasing CO <sub>2</sub> emissions per unit of sales by 8.1% from FY 2005 level		Continue to reduce CO <sub>2</sub> emissions per unit of sales by 1% annually Start the calculation of energy consumed in transportation and check the legal regulations and obligations imposed on shippers	P26
	Waste reduction	Continue zero emission efforts at manufacturing plants	Achieved zero emissions at all manufacturing plants except one The recycling rate of the entire Group was as high as that in FY 2005		Continue zero emission efforts and examine reduction in the total amount of waste	P27
	Proper management of chemical substances	-	Identified the use and emissions (into the air, water, etc.) of chemical substances regulated under the PRTR system	-	Continue to obtain data	P29
Health and safety	Reduction in the number of injury accidents	Reduce the number of accidents requiring four or more days off work to zero and reduce other injuries accidents by 30% from the FY 2005 level	The number and rate of accidents requiring four or more days off decreased from the FY 2005 levels and the total number of injuries accidents also decreased by 10%	×	Continue to pursue the goal concerning injury accidents for FY 2006 and reduce the number of ergonomically caused accidents by 25% from FY 2006	P30, 31

Achieved target    Achieved 80% of target    × Achieved less than 80% of target    - Item for which no goal was set



We need to develop components that are environment-friendly

#### Kengo Kuroiwa

Corporate Director  
Tokyo Electron Limited

We were able to improve our environmental and safety activities in FY 2006.

Customers are increasingly demanding us to implement environmental and safety measures. Accordingly, as a premise for the sustainable growth of our business, we need to give more consideration to the environment and safety and conduct high-quality EHS activities.

To make our products more environment-friendly, we must implement relevant measures on a long-term basis, from as early as the stage of developing components. At the design stage, we already have a system to check if the product is environment- and safety-conscious. The development and engineering staff are now more aware of the importance of these matters.

For safety, we design our products based on the safety

standards implemented in each country and in compliance with the SEMI Safety Guidelines. In training employees in safety, we have introduced an educational and training program for team resource management, which includes working at elevated places and on-site training. As in FY 2005, we had no serious accidents in FY 2006, but will continue to analyze the causes of past accidents and implement drastic measures to prevent the recurrence of similar accidents, while enhancing education and training for employees.

We revised the Credo and Principles on Environmental Preservation in FY 2007 to replace the abstract expressions contained in it with more specific ones, thereby clarifying our measures. Based on the credo and principles, we will create a roadmap and press forward with our efforts.

#### My Eco Life

Whenever I have time, I spend it in the wild near my parents' house collecting edible wild plants and mushrooms.





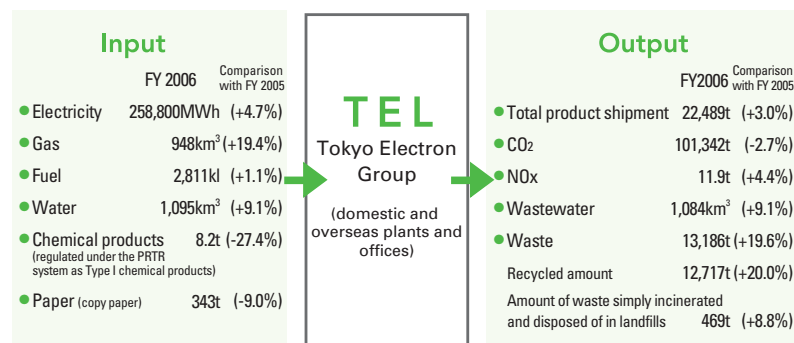
## Details of Environmental Impact/Environmental Accounting

We fully understand the details of environmental impact caused by our business operations and obtain accurate environmental accounting data to utilize them in our business management.

### ■ Details of Total Environmental Impact

The Tokyo Electron Group uses a large amount of natural resources in conducting its business. As shown on the right, manufacturing plants and office facilities of the Group have material flows that can be characterized by large environmental impact caused in the process of evaluating products. This is because we evaluate our products (semiconductor production equipment) using electricity and diverse chemicals in the form of gases, as in the actual semiconductor manufacturing process.

### Input-Output



### ■ Environmental Accounting

Scope: Major plants and offices in Japan (in Sapporo, Tohoku, Miyagi, Akasaka, Fuchu, Yokohama, Sagami, Hosaka, Fujii, Amagasaki, Osaka, Saga, Kumamoto, Koshi, and Ozu)

Period covered: April 1, 2005 – March 31, 2006

We conduct environmental accounting according to the Environmental Accounting Guidelines 2002 and the Environmental Guidebook II issued by the Ministry of the Environment.

### Environmental Protection Costs in FY 2006

(In thousands of yen)

Item	Main initiatives	Capital investment	Expense
1. Business area cost		189,127	753,803
Itemization			
1.1 Pollution prevention costs	Prevention of air pollution, water pollution, soil pollution, etc.	65,719	330,228
1.2 Global environmental costs	Prevention of global warming, protection of the ozone layer, etc.	123,408	35,364
1.3 Resource circulation costs	Efficient use of resources, reduction of waste, etc.	0	388,211
2. Upstream/downstream costs	Green purchasing, green procurement, etc.	5,538	89,474
3. Management activity costs	Environmental education, monitoring and measurement of environmental impacts, etc.	12,852	183,974
4. Research and development costs	Product R&D, etc.	0	1,721,077
5. Social activity costs	Tree planting and vegetation, supporting of local environmental activities, information disclosure, etc.	0	79,134
6. Environmental damage costs	Repairing of damage to the natural environment, etc.	0	0
7. Other costs	Other	0	0
Total		207,517	2,827,462

### Economic Benefits of Environment Protection Activities in FY 2006

(In thousands of yen)

Classifications of environmental costs	Details	Amount	
Cost reduction	Benefits related to electricity and other energy	Reduced electricity usage (e.g. benefits from adopting an inverter system on refrigeration equipment)	126,763
	Water-related benefits	Reduced water usage (e.g. circulating of cooling water)	1,953
	Paper-related benefits	Reduced paper usage (e.g. encouragement of duplex copying and use of electronic media)	732
	Resource-related benefits	Reduced use of heavy oil and gas	-734
	Other benefits	Reduced use of liquid nitrogen and copying toners	103,240
	Waste-related benefits	Reduced waste volume	-168,242
Cost reduction subtotal		63,712	
Profits	Waste-related benefits	Profits obtained from selling recyclable waste, etc.	2,389
Profit subtotal		2,389	
Grand total		66,101	

## Product-Related Initiatives for the Environment

We take a variety of measures to reduce our environmental impact, including the provision of energy-saving production equipment and reductions in the use of regulated chemical substances.

### Our Approach to Reducing the Environmental Impact of Our Products

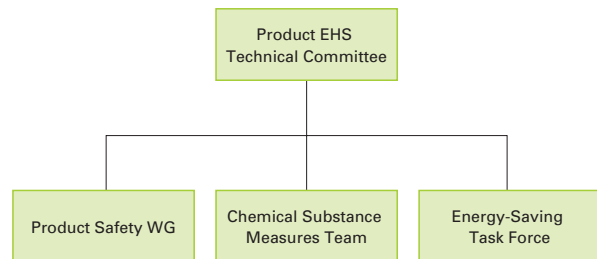
We believe it is extremely important to promote environment-conscious designs, as we have clearly stated in the revised Tokyo Electron Group Credo and Principles on Environmental Preservation. We give priority to the provision of energy-saving equipment and to reducing or finding substitutes for the regulated chemical substances contained in our products.

### Organization for Reducing Environmental Impact

We have three units established under the Product EHS Technical Committee. The Product Safety Working Group is responsible for conducting activities to improve product safety. The Chemical Substance Measures Team is responsible for reducing and finding substitutes for regulated chemical substances contained in equipment parts and components. The Energy-Saving Task Force, which was founded in October 2005, is responsible for implementing measures to improve the energy efficiency of our products.

Recently, there are increasing expectations from various quarters for us to continue our environmental, health and safety (EHS) measures. Accordingly, it is becoming more and more important for us to design and develop products that incorporate EHS. In accordance with the globalization of our business, we also need to pay more attention to the legal regulations of each of the countries we do business in. We will continue to promote "Design for EHS."

### Organizational Structure to Promote EHS Measures for Products



## TOPICS

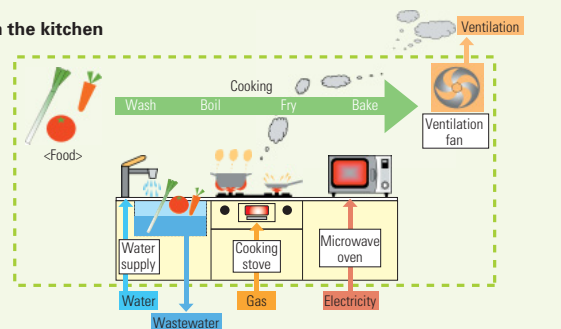
### Calculating the Energy Used by Semiconductor Production Equipment: SEMI S23

We have traditionally measured and calculated the electricity consumed by the equipment itself. However, semiconductor production equipment uses a range of resources, including water, dry air, and cooling water, and generates waste heat, and its peripheral devices (vacuum pumps and cooling equipment) also consume energy. The type of energy used also differs with the equipment type. In view of this, SEMI established the S23 Guide for Conservation of Energy, Utilities and Materials Used by Semiconductor Manufacturing Equipment. We now calculate the electricity consumed by our products comprehensively by using appropriate energy coefficients in compliance with the Guide.

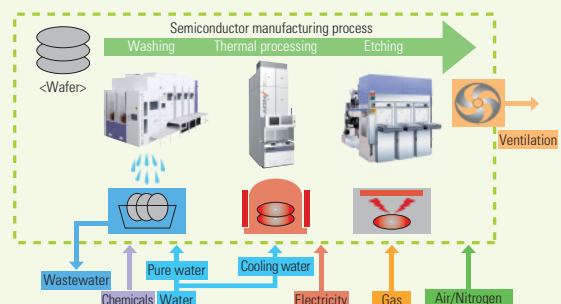
The Tokyo Electron Group took the initiative and played a central role in the formulation of the Guide. Its Energy-Saving Task Force calculates the energy consumed by each product based on the Guide. The figures on the right compare how energy is used in the kitchen (upper right) and by semiconductor production equipment (lower right).

### Various Energy Sources Used at Different Stages

#### ● In the kitchen



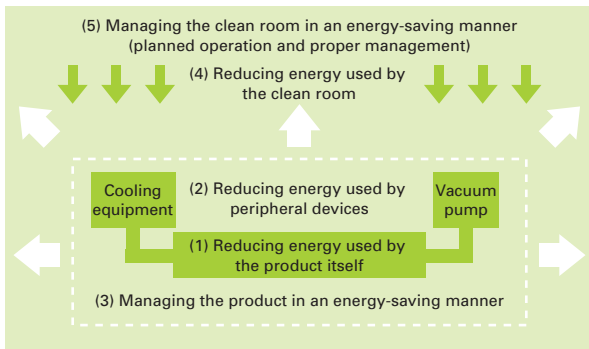
#### ● By semiconductor production equipment



## Energy-Saving Measures for Products

To reduce the energy that our products consume when they are used by our customers, we are examining measures to achieve the following five targets and will develop the necessary technologies: (1) reducing energy used by the product itself; (2) reducing energy used by peripheral devices; (3) managing the product in an energy-saving manner; (4) reducing energy used by the clean room; and (5) managing the clean room in an energy-saving manner (planned operation and proper management). For energy-saving management of the clean room, we will cooperate closely with customers and the manufacturers of clean rooms. In addition, we will identify how much energy our products consume in reference to the SEMI S23 Guide and implement the necessary measures.

### Approach to Energy Saving



## Energy-Saving Examples

We implement energy saving for each of our products according to the types of energy sources used and the amount of energy consumed.

### Example 1. Reducing the amount of nitrogen gas used by the thermal processing system

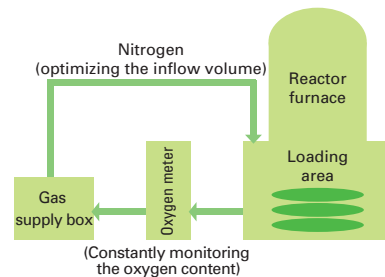
In the loading area of the thermal processing system, where wafers are loaded for input into the reactor furnace, the oxygen content is kept at a low level by injecting nitrogen to prevent the surface of the wafer from oxidizing naturally. In the previous model, the inflow volume of nitrogen was kept at a certain level, but for TELINDY™, we have made it possible to constantly monitor the oxygen content in the loading area to control it,



TELINDY

and so we can optimize the inflow volume of nitrogen according to the oxygen content at each of the wafer processing stages. This has enabled us to reduce the use of nitrogen by approximately 60% compared with the amount used by the previous model.

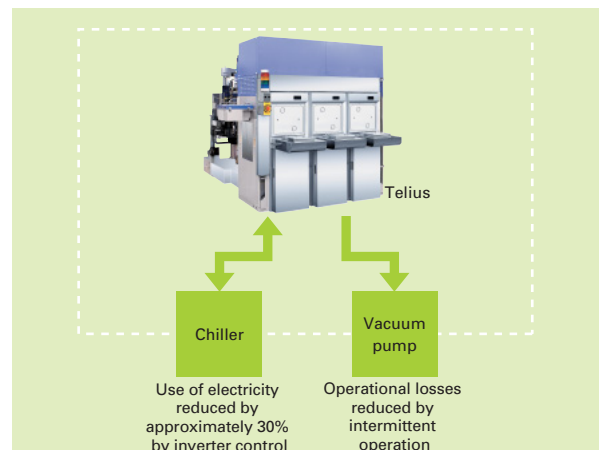
### Reducing the amount of nitrogen used by the thermal processing system



### Example 2. Reducing the amount of energy used by peripheral devices for the Plasma Etch System

Our Telius™, a plasma etch system, uses a lot of energy for the chiller (the device that cools the refrigerant and the inside of the system) and for peripheral devices such as the vacuum pump, which maintains a vacuum in the chamber. We implemented measures to reduce energy used by these peripheral devices. By controlling the chiller with an inverter, we reduced the use of electricity by 30%. Also, we eliminated energy waste by operating the vacuum pump intermittently according to the operational status of the system.

### Reducing energy used by peripheral devices in the Plasma Etch System



## Product-Related Initiatives for the Environment

### Our Commitment to Reducing the Use of Regulated Chemical Substances in Products

Against the backdrop of growing concerns over the impact that harmful substances contained in parts and materials have on the environment and ecosystem, an increasing number of countries are regulating the use of these substances in automobiles and electrical products in recent years. In particular, the WEEE<sup>1</sup> and RoHS<sup>2</sup> directives implemented in Europe and China's RoHS<sup>3</sup> are attracting much attention from related industries. These directives have a considerable influence on the products of the Tokyo Electron Group, and we have started reducing the use of regulated chemical substances in our products to meet the requirements of the directives even before they are actually implemented.

The RoHS directive is applied to products put on sale in Europe in or after July 2006, and the use of the following six chemical substances in products is prohibited: lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyls ether (PBDE). China's RoHS, which is scheduled to come into force in March 2007, also prohibits the use of these six substances. Accordingly, we have decided to give priority to discontinuing the use of these substances, as shown in the table below.

1. WEEE: Waste Electrical and Electronic Equipment
2. RoHS: Restriction on the use of certain hazardous substances in electrical and electronic equipment
3. China's RoHS: Officially called "Management Methods for the Prevention and Control of Pollution from Electronics Information Products"

#### Chemical Substances to Be Reduced

##### First Priority

Cadmium	Pigments, stabilizers, and resins
Hexavalent chromium	Chrome plating
Lead	Solders, paints, electrical wire coating, and free-cutting metal
Mercury	Batteries and fluorescent lamps
PBBs	Resin parts
PBDEs	Resin parts

##### Second Priority

Substances designated as Level A substances in JIG\*  
(We have already implemented measures for many of these substances.)

\* Joint Industry Guide for Material Composition Declaration for Electronic Products (JIG) was prepared by Japanese, American, and European private trade associations and this Guide lists the chemical substances for which measures should be implemented. The Guide classifies the substances into Level A and Level B: 16 substances are listed as Level A substances, including cadmium, hexavalent chromium, lead, mercury, PBBs, and PBDEs, and more than 400 substances are listed as Level B substances.

### System to Reduce the Use of Regulated Chemical Substances

The Tokyo Electron Group's Chemical Substance Measures Team is responsible for reducing the use of regulated chemical substances. The team comprises representatives from TEL's headquarters and its

manufacturing subsidiaries. We share relevant information through this team and are asking our suppliers to cooperate with us in replacing parts and materials that contain regulated chemical substances with alternatives that do not contain them. Two of our manufacturing subsidiaries have also founded special teams to implement measures for regulated chemical substances. These special teams decide the implementation schedule and roles to be shared by each department and individuals, and conduct regular reviews to ensure that the measures are implemented without delay. The Chemical Substance Measures Team discusses any problems that are difficult to improve or solve through the special teams alone, and identifies the measures that can be implemented.

### Survey on the Use of Regulated Chemical Substances

We surveyed the use of regulated chemical substances targeting approximately one million registered parts, using the JGPSSI Format, which is an industry standard format.

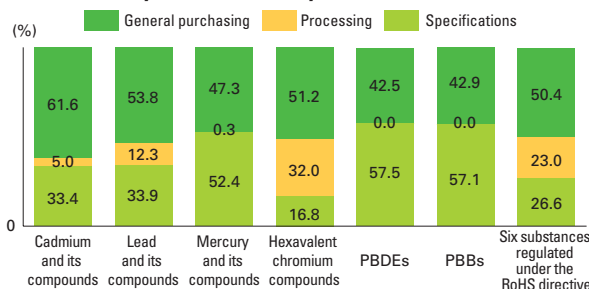
JGPSSI Format

A survey conducted at Tokyo Electron AT, one of the manufacturing subsidiaries of TEL, has revealed that regulated chemical substances are contained in the following parts:

- Lead and its compounds: Solder used for circuit boards and components
- Hexavalent chromium compounds: Coating of terminal blocks
- Cadmium and its compounds: Connectors and joints

Based on the survey results, we are continuing to educate employees and suppliers on the importance of reducing the use of these substances and sharing relevant information with them with a

#### Results of Survey Conducted at Tokyo Electron AT (June 1, 2006)



view to introducing alternative replacement parts and materials that do not contain these regulated chemical substances. All of our departments, including those in charge of development, design, manufacturing, materials, quality assurance, and safety and the environment, are making concerted efforts to achieve the goal.

### Lead-free Initiatives

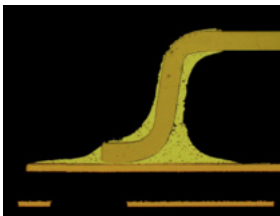
We started to implement measures to discontinue the use of lead in our products before taking measures for other regulated chemical substances.

The Tokyo Electron Group's products are equipped with a variety of complex electronic circuit boards for advanced control functions, and with cables and harnesses that supply power to and exchange information with the boards. We use solder to connect these components electrically. In replacing lead solder with lead-free solder, it is necessary to evaluate the reliability of alternative materials from multiple aspects, and it is especially important to ensure that the alternatives connect the components electrically in a proper manner.

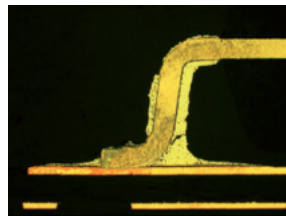
In FY 2006, we started to adopt lead-free solder after examining the reliability test results, especially focusing on the reliability of the electrical connection. As a result of the examination, we were assured that lead-free solder is just as reliable as lead solder.

In the examination, we conducted a temperature cycle test to study the impact of thermal changes on parts. We checked how the outer appearances, electrical functions, and adherence of the soldered parts were influenced by these changes, and examined cross-sections of soldered parts. In the temperature cycle test, we repeated the cycle 1,000 times to simulate over 20 years of use.

#### Photos Showing Cross-sections of Soldered Parts (after 1,000 cycles)

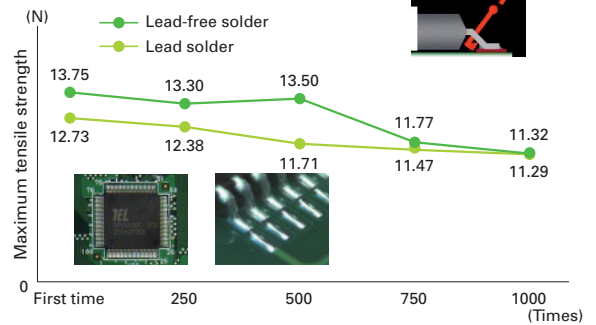


Lead-free solder

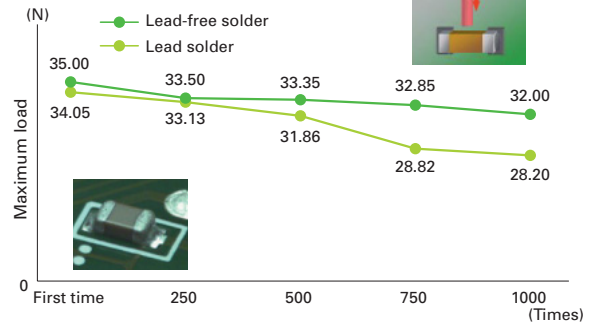


Lead solder

#### Tensile Strength Test on Soldered Parts



#### Shear Test on Soldered Parts



In January 2005, we started to use lead-free solder for cables and harnesses on our CLEAN TRACK™ LITHIUS™, which is our major coater/developer for immersion lithography. Subsequently, in March 2006, we adopted lead-free electronic control circuit boards. The changeover to lead-free cables and boards has also been implemented for other products manufactured by Tokyo Electron Group companies, including thermal processing systems, plasma etch systems, surface preparation systems, and wafer probers.

In ever-closer cooperation with its suppliers, the Group will implement measures to discontinue the use of lead in diverse parts and materials, such as glass and resin parts, as a part of its efforts to reduce the use of regulated chemical substances, thereby making its products even more environmentally friendly.



CLEAN TRACK LITHIUS

## Product-Related Initiatives for the Environment

### Asbestos

We checked the use of asbestos in all our products. As a result, it was revealed that asbestos was used in power cables for thermal processing systems produced in or before April 1985. We notified this fact to the users of these systems in July 2005. We then measured the amount of asbestos in the air on the site with the users' consent and confirmed that the asbestos does not spread into the air as long as the cables are used and maintained in a proper manner. We therefore reported to our users that the cables containing asbestos pose no threat to their health.

We also asked employees, including retirees, engaged in the manufacture of these cables to undergo medical checkups, and all of them had been through a checkup by the end of March 2006. According to the results, none of them have health problems caused by asbestos. However, we intend to give them medical

checkups on a continuing basis.

We checked the use of asbestos in all our parts as well. Some gaskets and sealing materials used in some OEM products contained asbestos, but we confirmed that the asbestos does not easily spread into the air and will not cause any health risks as long as the parts containing it are used and maintained in a proper manner. The use of asbestos in these parts is not regulated under Japan's domestic laws. However, we discontinued the use of these parts starting with the products scheduled to be shipped in or after January 2006.

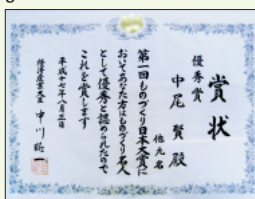
We also checked the use of asbestos in our plant and office buildings and confirmed that none of the buildings contained sprayed asbestos that can easily spread into the air. When renovating or demolishing parts of buildings that might contain asbestos, we take drastic measures to ensure that it does not easily spread into the air.

### TOPICS

#### TELFORMULA™ Wins the Prize for Excellence from Japan's Ministry of Economy, Trade and Industry

In August 2005, we received the Prize for Excellence for our semiconductor thermal processing system TELFORMULA from the Ministry of Economy, Trade and Industry at the first award competition held by the Ministry to encourage manufacturers to pass on and continue to develop Japanese manufacturing skills that support Japan's industry and culture. The Ministry pronounced that we had developed a product that enables highly productive and high-quality thermal processing.

TELFORMULA has the following features: (1) a cycle time that has been shortened to one-fourth compared with the previous model; and (2) introduction of new technology to clean the equipment using gas, whereas in the previous model you had to detach the reactor tube from the equipment to wash it in a liquid agent. Because of these features, the major semiconductor manufacturers of the world have chosen this equipment for their semiconductor manufacturing lines.



Certificate of Commendation granted by the Ministry



TELFORMULA

#### New Features of TELFORMULA

##### 1. Shortened heating time

The quartz reactor tube, where thin insulating films are formed on wafers, needs to be kept at a high temperature with a temperature variation within  $\pm 1$  degree Centigrade. With TELFORMULA, which adopts a newly-developed heater, the time required for heating is reduced to one-fourth compared with the previous model.

##### 2. Shortened film forming time

It is necessary to reduce the internal pressure when thin films are formed inside the reactor tube. By adopting a new, rapid ventilation valve, we have reduced the time required for this to approximately one-fifth compared with the previous model.

##### 3. Shortened wafer delivery time

With TELFORMULA, wafers are delivered to and removed from the reactor tube using an automatic wafer transporter at high speed and within a short time without any damage to wafers from vibration. The delivery time, which was 18 minutes for the previous model, has been shortened to only one minute.

#### Environmental Considerations

In the thermal processing process, the equipment has to wait until the next wafer is delivered to it. In the past, if the equipment was turned off during this wait time, it would take time to heat up to the correct temperature, which meant lower productivity. However, you can turn off TELFORMULA during the wait time because it can soon be reheated to the correct temperature. As a result, you can save approximately 20 kWh of energy per hour.

## Environmental Initiatives in Transportation

The Tokyo Electron Group is committed to reducing the environmental impact caused by the transportation of its products through energy saving and effective use of resources.

### Our Approach to Environment-Friendly Transportation

In April 2006, Japan's Law Concerning the Rational Use of Energy ("Energy-Saving Law") was revised and regulations on transportation were strengthened, reflecting an increasing demand for reductions in the environmental impact caused by transportation to prevent global warming.

In response, the Tokyo Electron Group has been actively reducing the environmental impact caused by the transportation of its products. For example, we introduced low-emission trucks to transport our products and started to use returnable containers for their delivery. Also, we give first priority to driving safely in delivering products to customers.



Introducing a low-emission truck

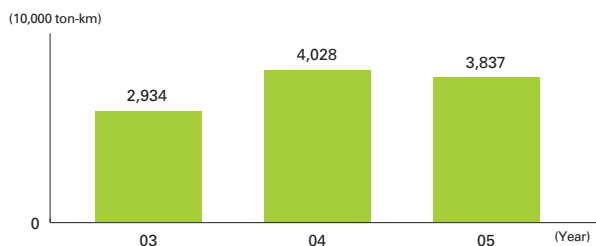
### Environmental Impact of Transportation

The revised Energy Saving Law designates shippers who transport 30 million ton-kilometers or more a year as specified shippers and demand that they reduce CO<sub>2</sub> emissions from the transportation of their cargos.

The amount that the Tokyo Electron Group transports (in freight ton-km: weight of major products transported multiplied by their transportation distance) as a whole has been increasing over the years, although it has slightly decreased in FY 2006 over FY 2005, because of an increase in the number of shipments and an increase in the weight per product (see "Changes in Product Weight" shown on the right).

The Group delivers precision machines to customers and has to transport them carefully. We will measure the transportation amount and distance and CO<sub>2</sub> emissions from the transportation of our products in a more accurate manner, while examining measures to reduce our CO<sub>2</sub> emissions, including a modal shift. In FY 2006, we started to identify the use of gasoline and diesel oil by vehicles owned by Group companies in Japan.

### Freight Transportation Amount



(Calculated for major domestic products and based on a given load per vehicle)

### Changes in Product Weight

The Group's products have been getting larger and larger. For example, our FPD production equipment weighed approximately 11 metric tons about 15 years ago and could be transported on four trucks. The total weight of our latest model, however, is approximately 170 metric tons, requiring a special truck and a lot of other vehicles to transport the product. The product has become this large because of the increase in the size of FPD circuit boards manufactured using the product.



Special truck for transporting FPD production equipment

## TOPICS

### Reducing the Use of Packaging Materials at Shipment and Reusing Casters

In the past, we placed each product accessory to be delivered to the customer in a separate plastic container and then packaged each of the containers. Now, however, we place the plastic containers on a rack, package the entire rack, and deliver it to the customer. As a result, we have reduced the use of packaging materials by half and the use of buffer material to one-tenth. We were also able to shorten the loading time at shipment. In addition, the space that the customer needed for storing the cargo was also reduced and it has become easier for the customer to keep the cargo in good order.

Furthermore, we now remove the casters attached to the body of an etch system for delivery and reuse them for subsequent deliveries.



Delivery rack



Container for reused casters

## Suppliers' Environmental Initiatives

The Tokyo Electron Group collaborates with suppliers to reduce the environmental impact of its products.

### ■ Suppliers Cooperate in Reducing Environmental Impact

The Tokyo Electron Group needs to use environment-conscious parts and materials as the basis to reducing the environmental impact of its products. Accordingly, we established our own green procurement guidelines for the materials and parts that we procure from suppliers to manufacture our semiconductor/FPD production equipment. The guidelines set out environmental impact reduction criteria and voluntary targets that are referred to by our suppliers. We will continue to cooperate with our suppliers using these guidelines and by conducting surveys on suppliers' environmental activities, exchanging information with them, and giving them instructions, in our efforts to reduce our environmental impact as part of our supply chain management. In this section, we introduce two of our suppliers who are committed to reducing their environmental impact.

### ■ Supplier's Environmental Efforts

#### —Aval Nagasaki Corporation

##### Procurement from Aval Nagasaki

Aval Nagasaki Corporation develops, designs, manufactures, and sells its own electronic devices and OEM products. In 1988, the Tokyo Electron Group started to procure printed board assemblies for control units for use in semiconductor/FPD production equipment from Aval Nagasaki.

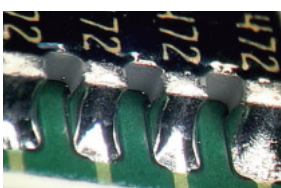
##### Acquisition of ISO 14001 Certification

Aval Nagasaki acquired ISO 14001 certification for its environmental management system in April 2006. The company measures its environmental impact, sets its objectives and goals, and pursues continuous improvement based on its ISO 14001-certified management system. Specifically, it endeavors to discontinue the use of lead in its manufacturing process and to reduce its consumption of electricity and chemicals.

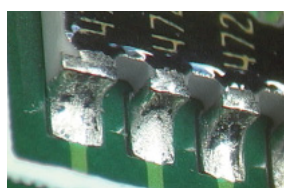
##### Lead-free Initiative

In response to requests from the Tokyo Electron Group and to regulations implemented in Europe, Aval Nagasaki established a new manufacturing line for lead-free printed circuit boards in July 2004. The company then conducted repeated reliability tests on the line, started to produce prototypes in February 2005, and finally began mass production of lead-free products in May 2005. In establishing the line, it introduced a nitrogen generator to prevent surface oxidization of the lead-free solder and expanded their dry warehouse for electronic parts.

##### Difference in Surface Luster between Traditional Solder and Lead-free Solder



Traditional solder



Lead-free solder

Aval Nagasaki established guidelines on lead-free processes. It also clearly separates the lead-free line from other lines by using the color green: all the items related to the lead-free line are colored green, including slips for lead-free parts, containers for lead-free paste solder, trowels for lead-free solder, and even the floor of the lead-free line. This prevents lead from commingling with lead-free products. Lead-free solder melts at a higher temperature than lead solder, and lead-free solder tends to peel off the printed circuit board and the solder surface tends to crack more easily. Aval Nagasaki has overcome these problems by improving the line management technology based on the results of reliability tests and succeeded in the mass production of lead-free products. In FY 2006, the company's use of lead-free solder accounted for approximately 20% of its total solder use, but the company plans to increase the percentage with further use of lead-free solder in its own products and OEM products now that it has obtained ISO 14001 certification.



Manual soldering using lead-free solder



Lead-free printed circuit boards

### Our Comments

Aval Nagasaki established a system to mass-produce lead-free printed circuit boards for use in the Tokyo Electron Group's CLEAN TRACK LITHIUS, a coater/developer ahead of other suppliers. The company is able to develop products that meet each customer's needs in relation to the RoHS directive, except for certain parts. Aval Nagasaki is thus supplying products that meet the needs of the Tokyo Electron Group. We expect the company to maintain their efforts for further environmental conservation.



## ■ Suppliers' Environmental Efforts —SMC Corporation

### Procurement from SMC Corporation

Since its foundation, SMC Corporation has been growing as a general manufacturer of pneumatic equipment, which is powered by compressed air and used for a variety of purposes. The Tokyo Electron Group procures pneumatic equipment such as air cylinders and solenoid valves as well as heat exchangers and thermo chiller from the company, and at least 90% of the products are customized for the Group.

### SMC's Environmental Policies and Environmental Measures for Products

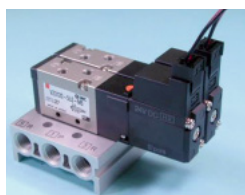
Based on the policy that conservation of the global environment is one of the most important challenges facing humankind and that the company has to contribute to creating a comfortable global environment through all of its business operations, SMC acquired ISO 14001 certification in 1999. When the Tokyo Electron Group asked the company to discontinue the use of lead in its products, SMC responded to the request based on its Green Procurement Guide, which includes policies for the RoHS directive. At present, however, their products contain parts in which other substances of concern are used. Regarding their use of these substances, the use of hexavalent chromium in chrome coatings has the highest environmental impact, followed by the use of lead in solder and various metals, and the use of PBBs, PBDEs, and cadmium in resin parts. Although industrial products, including pneumatic equipment, are not subject to the RoHS directive, SMC is implementing measures to reduce or discontinue the use of these substances in response to its customers' requests.

### Measures to Comply with the RoHS Directive (1): Solenoid Valves



Explaining SMC's measures at the interview  
Mr. Yoichiro Okada, Green Procurement  
Secretariat, Technology Division, SMC Corporation

The Tokyo Electron Group uses a lot of solenoid valves in its products. Solenoid valves are used to control the flow of compressed air supplied to air cylinders and other components. SMC is reducing the use of lead



Solenoid valve

and hexavalent chromium contained in the circuit boards and lead wires of the valves and will eventually discontinue their use.

### Measures to Comply with the RoHS directive (2): Thermo Chiller

For its thermo chiller that is used in coaters/developers (system that supplies chemicals to the equipment under strict temperature control), SMC is implementing measures to comply with the RoHS directive by removing lead from the circuit boards and hexavalent chromium from the plates. By making major changes to the circuit design, the company discontinued the use of these substances without any extra cost. It completed the evaluation of a prototype in June 2006 and plans to provide a lead- and hexavalent chromium-free thermo chiller FY 2007.



Previous thermo chiller (left)  
and the new one (right)

### New Methods and Ideas

#### Learned from the Tokyo Electron Group

SMC has been implementing environmental measures in cooperation with the Tokyo Electron Group. In the course of this cooperation, it learned the concept and methods of change management (management of risks associated with changes made to the design of a product, its parts, processes, etc.) from the Group, which marked a turning point for SMC. Without the introduction of this method, SMC might not have been able to manage changes made to comply with the RoHS directive.

### SMC's Future Environmental Measures

As a precondition for companies to continue in businesses, they have to conserve the global environment. SMC believes it possible to meet this requirement by using its comprehensive technological ability. For example, when depletion of the ozone layer by CFCs became a social concern, SMC was the first to develop a product using a new refrigerant that contains no chlorine, which resulted in the expansion of its share of the market. SMC therefore thinks that it can expand its business through environmental activities, including those necessary to comply with the RoHS directive and to promote green procurement.

### Our Comments

SMC is ahead of other suppliers in setting out specific change management criteria for multiple parts and in filing related applications. In response to an increasing demand for environmental measures, including RoHS directive-related measures, the Tokyo Electron Group was able to identify and take relevant measures in cooperation with SMC and plans to make further progress in environment-friendly management and operation based on this experience.

## Plant and Office Initiatives for the Environment—Preventing Global Warming

The Tokyo Electron Group is reducing its energy use to contribute to the prevention of global warming.

### Reducing Energy Consumption

The Group is committed to reducing its energy use in compliance with the provisions of the Energy Saving Law. Its sites are actively reducing their energy consumption by setting specific energy-saving targets for lighting, OA machines, and air conditioners (through appropriate temperature control), while improving their work efficiency. Also, they completely shut down the machines during long holidays.

At TEL's Yamanashi Plant (Hosaka), we have installed a hybrid power generation system that uses both wind and solar power. Electricity generated by this system is used to light two lampposts within the premises of the plant, resulting in lower electricity consumption (by approximately 2.5 kWh per day).



Hybrid power generation system

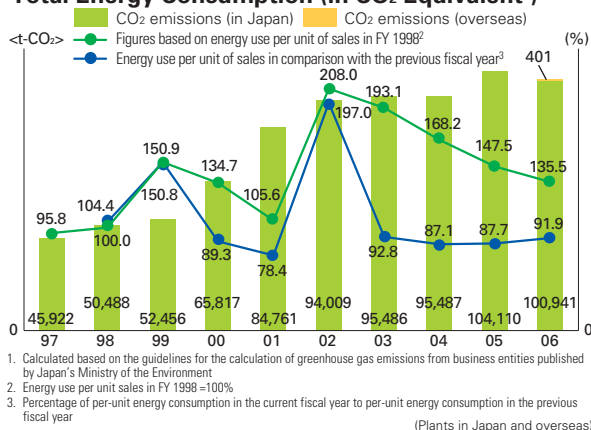
### Energy Consumption

In FY 2006, as in FY 2005, our total energy use increased due to an increase in production quantities. However, we were able to reduce per-unit energy use and achieved the target of reducing the energy use per unit sales by 1% compared with the previous fiscal year. We will continue to improve on our energy-saving measures.

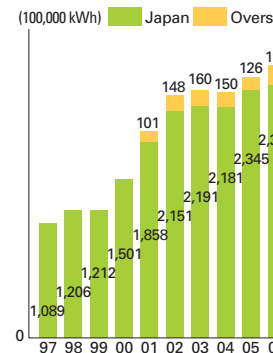
At the Yamanashi Plant, the amount of LPG used for decontaminating the process gas increased and energy use almost doubled from FY 2005.

In FY 2006, we have included data on emissions from places in Japan where our field engineers were stationed in the calculation of CO<sub>2</sub> emissions from our sites, referring to the guidelines for the calculation of greenhouse gas emissions from business entities published by Japan's Ministry of the Environment.

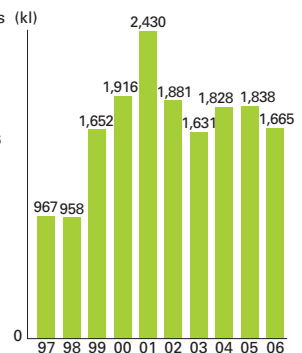
### Total Energy Consumption (in CO<sub>2</sub> Equivalent<sup>1</sup>)



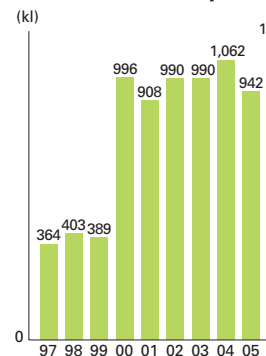
### Electricity Consumption



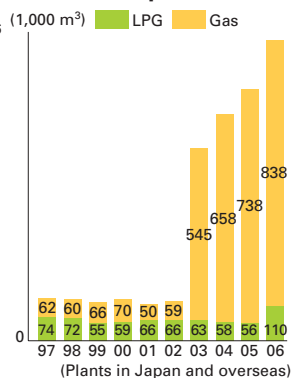
### Heavy Oil Consumption



### Kerosene Consumption



### Gas Consumption

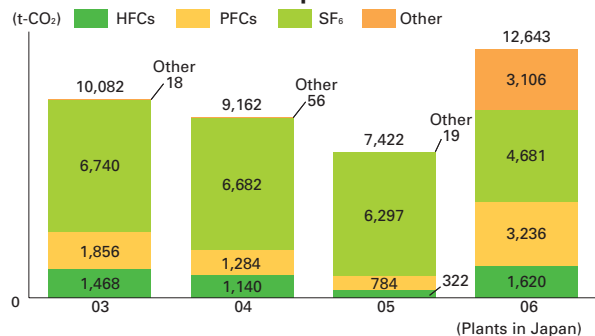


### Reducing the Use of Greenhouse Gases other than CO<sub>2</sub>

We use perfluorocarbons (PFCs) and sulfur hexafluoride (SF<sub>6</sub>), which are greenhouse gases, in dry etching, washing, and other processes during process development and process evaluation.

In FY 2006, we used 12,643 metric tons of greenhouse gases (as CO<sub>2</sub> equivalent), which is substantially larger than the amount used in fiscal 2005 (7,422 metric tons). This was because the types and volume of gas used for product evaluation increased.

### Greenhouse Gas Consumption



## Plant and Office Initiatives for the Environment—Waste Reduction and Recycling

The Tokyo Electron Group is working to minimize the generation of waste and improve its waste recycling rate to reduce its environmental impact.

### Our Approach to Waste Reduction and Recycling

The Tokyo Electron Group is making concerted efforts to reduce the generation of waste based on the policy of minimizing waste generation, recycling generated waste as much as possible, and properly disposing of unrecyclable waste. In recent years, due to the lack of waste landfill sites, landfill costs have surged. This pushes us to make cost savings to reduce the generation of waste.

Specifically, we sort waste for recovery, change our manufacturing processes to generate no waste, use more recycling companies, check the qualifications of companies that we commission to dispose of waste, and regularly review the final disposal situation. Also, at our plants, we show how to sort waste in an easy-to-understand manner using illustrative posters. For example, Tokyo Electron U.S. Holdings Inc. in the United States recycled 32 metric tons of paper by encouraging employees to make effective use of waste paper through educational posters.

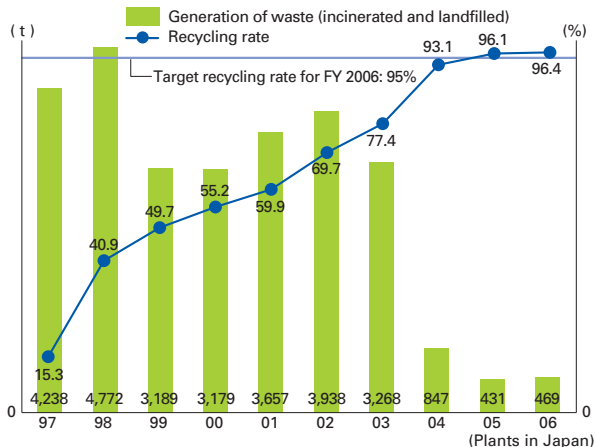


An educational poster

### Waste Generation and Recycling Rate

In FY 1999, the Tokyo Electron Group set a target of increasing the entire Group's average recycling rate to 95% by FY 2006. As a result of making efforts to attain this target, we achieved a recycling rate of 96.1% in FY 2005 and 96.4% in FY 2006. In the future, we will focus on reducing our overall generation of waste, including recyclable waste.

#### Recycling Rate and Generation of Waste

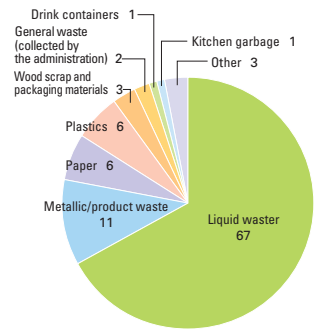


### Breakdown of Waste

Liquid waste from chemicals used in the product development and evaluation processes accounts for the largest percentage of waste generated by the Group. At present, most liquid waste is recycled. Also, some plants have installed equipment to treat liquid waste inside their premises.

We plan to introduce this equipment to a greater number of plants in the future.

#### Breakdown of Waste (%)



### Zero Emissions

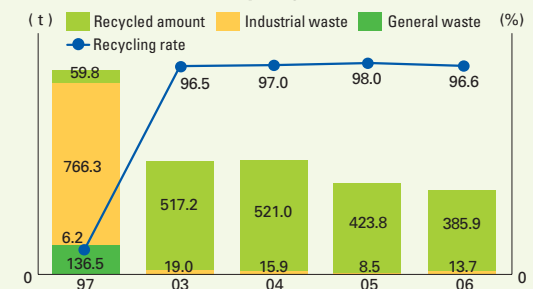
We define plants where less than 2% of waste generated by the plant is incinerated or landfilled as "zero emission plants" and encourage all plants to achieve zero emissions. In fiscal 2006, all the manufacturing plants excluding the Tohoku Plant achieved zero emissions consecutively from the previous fiscal year. In the future, we will also achieve zero emissions at our office facilities.

## TOPICS

### Reducing Waste at the Tohoku Plant

TEL's Tohoku Plant reduced the total generation of waste from more than 900 metric tons (including recyclable waste) in FY 1997 to approximately 400 metric tons in FY 2006, an approximately 56% reduction. Unfortunately, however, the plant could not maintain its zero emissions in FY 2006 from the previous fiscal year, because its recycling rate dropped due to debris generated from repairs to floors. Nevertheless, the plant is determined to maintain a high recycling rate and examine measures to reduce its total waste generation.

#### Waste Generation and Recycling Rate at the Tohoku Plant

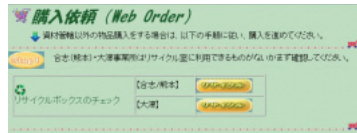


## Plant and Office Initiatives for the Environment—Resource Conservation

The Tokyo Electron Group is reducing its use of paper and water to conserve resources.

### Approach to Resource Conservation

We are minimizing our use of resources based on the concept of green procurement, which means to give preference to environment-conscious products in purchasing. Specifically, we are reducing the use and purchase of copy paper and stationery, and when we purchase them we choose environment-conscious products. At our offices, we have replaced printer toner cartridges with cartridges made from recycled materials and cooperate with the manufacturers in the recovery of end-of-life cartridges. At some offices, using the intranet, we have established a system under which stationery no longer being used by a certain department can be reused by another department.

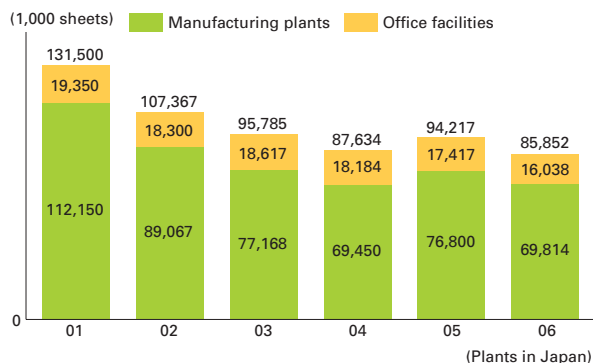


Recycling box on the intranet

### Efforts to Reduce the Use of Paper

The entire Group is committed to reducing the use of paper. In FY 2006, as a result of encouraging duplex copying, copying at reduced size, and digitization of information and documents circulated among employees, we reduced the use of copy paper by approximately 9% over the FY 2005 level as a whole (approximately 8.3 million sheets saved during the year). Also, we encouraged the use of recycled paper with the exception of some special-purpose papers, and introduced paper cups made from kenaf, which is an alternative to wood pulp. We will continue to reduce the use of copy paper in our business operations by minimizing the number of different types of records and slips, thereby further reducing the total paper use.

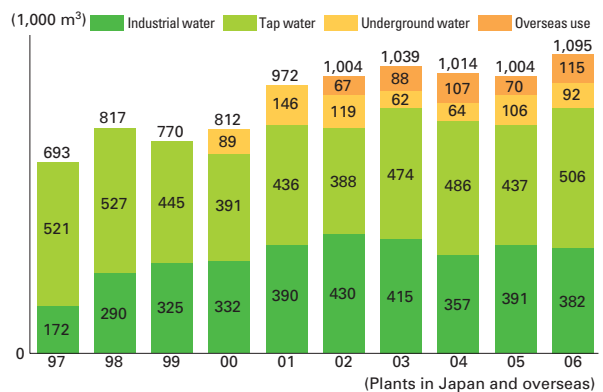
### Copy Paper Consumption



### Efforts to Reduce the Use of Water

At our manufacturing plants, various measures are being taken to reduce the use of water. For example, the plants have installed a water recirculating system to reuse cooling water. They have also installed automatic faucets in restrooms and other facilities. These touch-free automatic faucets prevent wastage of water by automatically shutting off the supply when the hands are removed from the sensor range.

### Water Consumption



### TOPICS

#### Reduction in Water Use at the Koshi Plant in Kumamoto

At TEL's Koshi Plant, underground water accounts for most the water used by the plant, which is implementing rigorous measures to prevent the depletion and pollution of underground water. The workers at the plant have taken the initiative in reusing cooling water and vacuum pump sealing water and in introducing vacuum pumps that do not use water. Also, the plant conducts activities to minimize the use of non-industrial water. Recognized for its water conservation efforts, the plant received the Higo Water Conservation Prize from the Higo Water Conservation Fund in FY 2005.



Vacuum pump that uses recirculated water



Vacuum pump that does not use water

## Plant and Office Initiatives for the Environment— Management of Chemical Substances

The Tokyo Electron Group is committed to the proper management of chemical substances and to reducing their emissions.

### Our Approach to the Management of Chemical Substances

The Tokyo Electron Group uses chemical substances mainly in developing and manufacturing products. In developing products, we sometimes adopt new chemical substances that were not used before, or use chemical substances in a way that is different from the traditional usage. In these cases, we look closely at the development facilities and methods, assess the environmental and operational risks associated with the use of the substances, and implement necessary measures before actually using the substances. As for the chemical substances that we use in our manufacturing processes, we are replacing dangerous and harmful substances with safer ones.

### Compliance with the PRTR\* Law

According to the provisions of the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (PRTR Law), we rigorously control the specific chemical substances regulated under the law and identify the use and emissions of these substances on a continuous basis. We use large amounts of hydrogen fluoride, which is one of the substances regulated under the PRTR Law, mainly for cleaning test wafers. The hydrogen fluoride waste is disposed of by an external company specializing in disposal or we dispose of it in the approved manner within our premises. We also use a considerable amount of ethylene glycol as a refrigerant for cooling water and recycle almost all of its waste. We will continue to properly manage the risk associated with the use of chemical substances.

\*PRTR stands for Pollutant Release and Transfer Register. Under the PRTR system, the use of chemical substances that may be hazardous to human health and the ecosystem, their release to the environment, and transfer (contained in waste) to the outside of the business premises entities are identified, tabulated, and announced.

### Amount of PRTR Law Class 1 Designated Chemical Substances Handled

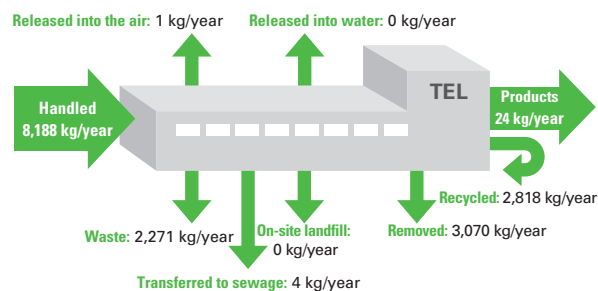
		(kg)				
Number in the Law	Name of Class 1 Designated Chemical Substance	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
1	Water-soluble zinc compounds	0	50	0	70	0
3	Acrylic acid	0	0	0	20	0
16	2-Aminoethanol	520	430	0	475	0
43	Ethylene glycol	1,500	4,000	9,144	6,353	2,800
44	Ethylene glycol monoethyl ether	120	0	0	0	0
45	Ethylene glycol monomethyl ether	0	0	0	0	3
63	Xylene	180	0	0	0	0
78	Diphenylmethane-4,4'-disocyanate	0	0	0	14	24
172	N,N-dimethylformamide	290	450	309	131	0
207	Water-soluble copper salts (except complex salts)	190	120	0	110	0
227	Toluene	620	0	0	5	0
260	Pyrocatechol	0	30	0	3	9
283	Hydrogen fluoride and its water-soluble salts	2,470	3,690	4,558	3,553	4,811
304	Boron and its compounds	0	0	0	0	1
311	Manganese and its compounds	0	900	450	610	540
Total		5,890	9,670	14,461	11,344	8,188

\* Weights are shown in metric tons for FY 2002 and 2003. (Plants in Japan)

### Handling of PRTR Law Class 1 Designated Chemical Substances

How Chemical Substances are Handled	Amount (kg)
Released	1
Transferred	2,275
Consumed	24
Removed	3,070
Recycled	2,818
Total	8,188

### Material Balance of Chemical Substances Regulated under the PRTR Law



### PCB Storage

Based on the Law Concerning Special Measures Against PCB Waste, we report on the storage and disposal of waste containing polychlorinated biphenyl (PCB) to the governor of the prefecture every year. The Tokyo Electron Group presently stores two waste transformers and four waste capacitors that contain PCB in a strict and secure manner.

## TOPICS

### Management of Special Gas

In our product development and evaluation processes, we use liquid chemicals and special gas to simulate the actual semiconductor manufacturing process. Because some of these special chemicals are hazardous to both the environment and human health, we strictly control their use, including the careful management of devices that use these chemicals. At the Kansai Technology Center located in Amagasaki City in Hyogo Prefecture, we check the devices that use special chemical substances daily or regularly so that we can detect any problems without fail. We have established a system to deal with any possible problems. For example, in the event of a gas leak, the gas detection system triggers an alarm and stops the supply of gas. Also, we notify workers of any problems by the use of sirens, automatic broadcasts, and message boards that are put up within the clean room, at the entrance, and in the office room of each plant to show important information in real time.



Message board

## Health and Safety

We are promoting health and safety for all our stakeholders, including employees and customers, in every aspect of our business operations, believing that we should ensure the health and safety of our employees as the basis for a comfortable workplace and as one of our corporate social responsibilities.

### ■ For the Safety of All

The Tokyo Electron Group believes that it should ensure the health and safety of all employees working for the Group, customers who use the Group's products, and all other stakeholders in its business operations as one of the Group's corporate social responsibilities.

In FY 2006, the Group held a total of six safety seminars for top managers (vice presidents of Group companies) at its plants. The seminars were divided into three sessions. In the "theory" session, participants learned about the necessity of taking an organizational approach to human factors, as well as risk management. In the "practice" session, they listened to the opinions of workers and learned about on-site safety problems, and in the "discussion" session, they discussed how to build a safety culture across the Group.

Managers participating in the seminars commented, "Employees are now more aware of safety, but it seems difficult to keep them committed to safety," and "Managers must first commit themselves strongly to safety and communicate the importance of safety to employees by establishing the appropriate organizational and managerial systems." In FY 2007, based on the results of the seminars, we will hold seminars for middle managers.



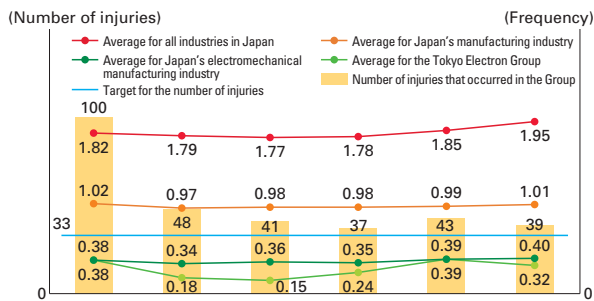
Safety seminar for top managers

### ■ Preventing Accidents

In FY 2006, the number of occupational accidents at the Tokyo Electron Group slightly decreased over the FY 2005 level. The work volume, however, increased in accordance with an increase in production quantities, and factors that can cause occupational accidents are on an upward curve. According to statistics on the trends of accidents in the Group, ergonomic factors\* account for approximately 30% of all risk factors. As equipment becomes larger and more complex, employees are forced to work in unnatural postures and they have to manhandle heavy objects, which bring new risks to employees. We are implementing countermeasures against this problem.

\* Ergonomic factors mean risk factors associated with heavy labor, repetitive movements, and unnatural postures, which may cause musculoskeletal disorders in employees who are engaged in these activities over a long time.

### Frequency of Occupational Accidents and Number of Injuries



\* The number of accidents is shown, taking the number in FY 2001 as 100.

\* Frequency of occupational accidents: Number of occupational accidents per one million labor hours = Number of accidents resulting in at least four days absence/Total labor hours x 1,000,000

## TOPICS

### Safety First Slogan Campaign

In FY 2006, the Tokyo Electron Group asked its employees to propose a slogan under which the entire Group would give first priority to safety while listening to the opinions of on-site workers.

From among more than 600 proposals, we chose the best slogans and also awarded a special prize to a proposal made by a group of employees. We created safety-first posters using the selected slogans, which are now put up at the workplaces. We also printed the prize-winning slogans on the back of the exist-

ing handy "safety first" card, copies of which are distributed to employees, thereby making them more aware of safety in their daily work.



Handy "safety first" card



"Eye Catch Safety" poster

## Example of Safety Measures—Ergonomic Approach to the Wafer Prober

As shown by recent trends in occupational accidents, ergonomic factors account for a larger percentage of occupational risk factors. As the background to this, wafers and circuit boards are being upsized and so the size of production equipment is also expanding. To cope with this, the Tokyo Electron Group is implementing the necessary measures for its products.

For example, we have introduced measures for the wafer prober\*. In recent years, the test head used in conjunction with the prober has been increasing in size and employees have to manhandle this heavy head, which has increased the ergonomic risk during their work. Of late, test heads weighing more than 500 kg are not rare. Employees cannot position such a heavy object easily and their work risks have been rising. In response, we analyzed the risk associated with the traditional attachment and adjustment methods for the test head and fed back the results to the design department and the manufacturers of the testers. In cooperation with them, we devised and implemented measures to eliminate or reduce the associated risks. The specific improvements are shown in the table on the right.

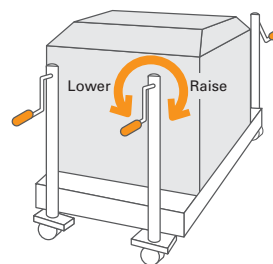
The Group—especially its design section—will continue to cooperate with the manufacturers of various testers to promote safety from the design stage based on risk analysis and other measures.

\* Wafer prober: Connected to a tester (manufactured by an outside company) to electrically test the ICs on wafers by touching their electrodes with a probe needle.

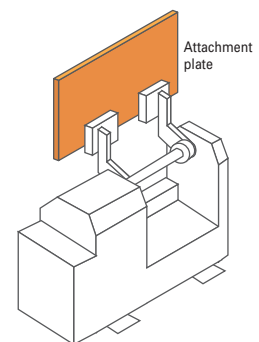
### Improvements Made through Analysis of the Work Risks

Work Details	Improvements
Unload the heavy test head from the cart and load it on the automatic lifter	The tester manufacturer has redesigned the cart so that the test head can be raised or lowered by handles, and workers no longer need to manhandle the heavy test head (see Improvement 1 below).
Install the attachment plate (weighing about 60 kg) on the test head	The wafer prober is now shipped in a different form, and workers no longer have to manhandle the heavy object.
Attach the cable bundle (weighing 30 kg or more per meter) to the clamp part	The lifting weight of the bundle was measured and it was divided into smaller bundles to reduce the work risk.

Improvement [1]  
Redesigned cart with handles to raise or lower the test head



Improvement [2]  
Shipped with the attachment plate installed



## TOPICS

### Team Resources Management Training

As equipment increases in size, the number of workers dealing with the equipment also tends to increase, and as the number of workers increases, it becomes more difficult for them to communicate with each other. Under these circumstances, safety activities and education need to be conducted focusing on human relations, and thus we developed a new educational method called Team Resources Management (TRM) jointly with the Japan Institute of Human Factors. TRM was built on Crew Resources Management (CRM), which was developed to teach flight crew members how to use all available human resources, hardware, and information effectively for high-level teamwork on board an airplane.

The TRM training targets on-site work leaders. In the TRM training, the leaders are trained in communications, team building, and situation assessment. They also practice teamwork within a clean room. The number of participants in the training is limited to

around 10 on each course. Therefore the numbers who have completed this training are still low, but we will continue to provide the courses to train as many leaders as possible so that they will understand the importance and difficulty of communications, teamwork, and situation assessment, something that they have all done without a second thought. The training will also enable them to recognize that they can improve their activities by intentionally modifying their behavior. We hope that this training will improve on-site communications and teamwork.



TRM training

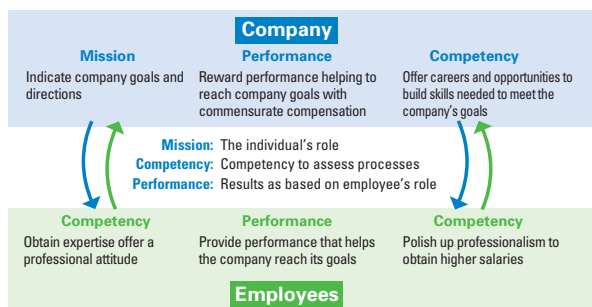
## Relationship with Employees

**Our personnel system allows employees to take on various challenges.**

### ■ Concept of the Personnel System

The Tokyo Electron Group respects a spirit of challenge and independence amongst its employees and aspires to be a corporate group in which employees can take on a variety of challenges. Based on this, we are improving the working environment to attain the following three targets: (1) no penalizing of employees who fail while taking reasonable risks in creative endeavors; (2) rigorous fairness in handling of our personnel; and (3) fairness in compensation. Our personnel system is designed to motivate the organization and help each employee develop him/herself. The system does not simply focus on the results, but also attributes importance to the process leading to the results. Our goal is to fairly evaluate employees based on their contribution through the three mainstays of “competency to assess processes,” “the individual’s role (mission),” and “results based on the employee’s role (performance).” Competency is not just the objective of assessment and inspection, but a measure of the growth of the employee’s skills and abilities required for task categories. We will always support our employees in their efforts to improve themselves and provide them with opportunities to upgrade their skills and advance their careers.

#### Concept of Our Personnel System



### ■ Motivating Employees

We conduct two types of employee surveys once a year: a personal survey in which employees describe any job changes they would like to make, their hopes and opinions about the company, and advice they would like to ask for; and a morale survey in which employees describe their view of their own morale levels and ideas about their organizations and workplaces. In the morale survey held in FY 2006, employees were asked for their opinions on management policies, their jobs, safety and health, their working environment, their bosses, and the company’s evaluation of them, and the survey results were posted on the intranet as feedback to employees. In addition to the surveys, we have introduced an in-house staff recruitment system to help employees decide on and pursue their own career paths, which matches employees wanting to improve their careers with departments in need of staff.

### ■ Providing Employees with Comfort in the Workplace

The Tokyo Electron Group is committed to providing employees with a comfortable workplace. For example, we try to ensure that employees do not work too much overtime. At each workplace, the manager in charge identifies the overtime hours for each employee and takes action to reduce the hours. In the month following a busy month in which employees worked much overtime, the manager encourages them to take paid holidays and ensure that no one works disproportionately more than others. Also, we have established some rules to provide employees with a better working environment, including the introduction of a no overtime rule on Wednesdays.

For maternity and childcare leave, we have improved the system so that both male and female employees can easily take childcare leave by simply applying to their manager. In FY 2006, a total of 40 employees took childcare leave.

We have also improved the working environment for employees with disabilities. At our sites, we are establishing facilities for the disabled, including barrier-free access and toilet facilities for physically handicapped people, thereby increasing the employment of people with disabilities within the Group.



Toilet facilities for physically handicapped people

### ■ Test for Employees Wishing to Change Work Category

In the Tokyo Electron Group, office employees are classified into two categories: those engaged in routine work and those engaged in more versatile tasks. For those who are engaged in routine work but have sufficient abilities and the willingness to take on more versatile tasks including planning, negotiation, and making comprehensive decisions, we administer a test comprising essay writing, a written examination, a presentation, and an interview, and those who met the absolute evaluation criteria of the test are allowed to change their work to more versatile tasks. We value willingness, awareness as a professional, determination, and future potential in the evaluation. In FY 2006, seven employees passed the test and changed their work category. We will continue to provide highly motivated employees with an opportunity to change their work category under this system.



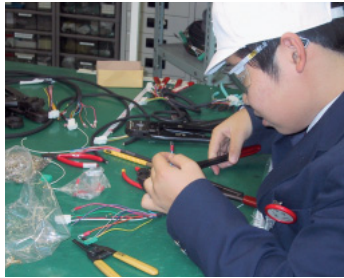
## Communicating with Stakeholders

Communicating with our stakeholders helps us grow as a group.

### Our Approach to Communication

The Tokyo Electron Group proactively promotes communication with its stakeholders. We think it indispensable to disclose information about our business operations as much as possible to all our stakeholders and interact with them through information disclosure and the acceptance of feedback in running our environmental, health, and safety activities. As part of our efforts, we cooperate with local schools and accept their students to our sites for work experience.

We have been publishing environmental reports since 2000. We also disclose environmental, health, and safety information on our website and plan to continue these efforts actively in the future.



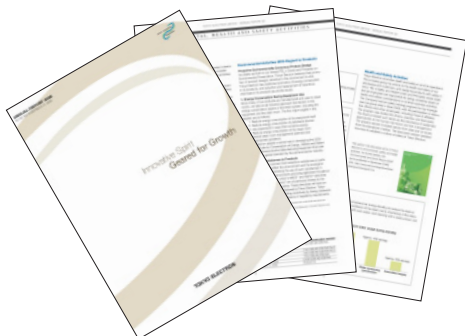
Student on work experience

### Sharing Information through *EHS Times* and the Intranet

The Tokyo Electron Group publishes the *EHS Times*, a bimonthly in-house magazine that reports on the discussions in relevant Group committees and introduces the environmental, health, and safety (EHS) activities conducted by the Group's companies, plants, and offices in an easy-to-understand manner. Individual Group companies and sites have their own in-house magazines and use them to raise employees' EHS awareness and share relevant information.

We use the intranet for speedy disclosure and sharing of EHS information within the Group.

The Group's EHS activities are also introduced via brochures for shareholders and investors and the annual reports.



Introducing EHS activities in the Annual Report

### EHS Seminar in Taiwan

In May 2005, the Tokyo Electron Group held a TEL EHS Seminar in Hsin-chu City in Taiwan inviting its customers in Taiwan. The Group has been organizing this seminar in Taiwan since 2001, and the May 2005 seminar was the fourth one. Before the seminar, we asked participants to answer a questionnaire on the seminar contents and based on the results, we arranged a seminar that focused on our approach to EHS, actual EHS activities, reduction in the use of regulated chemical substances in our products, and EHS measures for each of our products.

A greater number of people participated in the fourth seminar than in the previous seminar, especially those who were directly involved in the use of our products. These participants gave their opinions from the viewpoint of direct users of the products and an active Q&A session was conducted at the seminar. Participants were particularly interested in the safety of our products.

Customers participating in the seminar evaluated it highly, with comments such as, "It was easy to understand," "I could understand the Tokyo Electron Group's approach to EHS and relevant measures," and "I could obtain new ideas and inspirations from the seminar." Many asked us to continue the seminars so that they can keep informed of the Group's safety measures for its products and examples of reducing the environmental impact.



Brochure distributed at the seminar



EHS Seminar held in Taiwan

Results of the survey

## Communicating with Stakeholders

### ■ Our Approach to Social Contribution

The Tokyo Electron Group states the following: “We place the highest priority on gaining the trust and acceptance of customers, suppliers, investors, and communities around the world” and “We therefore strive to be a faithful and cooperative member of the communities and nations where we do business.” We are engaged in a variety of activities to contribute to society and build relationships of trust with governments and local communities around its facilities. This is true in Japan, of course, as well as overseas. These efforts are based on the above principles. We will expand our activities, hand-in-hand with our customers and neighbors.

### ■ Social Contribution in Japan

The Fujii Plant (in Nirasaki City, Yamanashi Prefecture) participates in the Nirasaki City’s local clean-up program. Under the program, local inhabitants (and companies), supported by the city government, clean local public spaces including roads and parks at least six times a year to make the city a more comfortable place to live in with no trash or litter in the streets. The City named this program



Employees cleaning the park

“Adopt Program,” hoping that citizens will take good care of public places in the same way that they take care of their own children.

Plant employees participated in activities to clean the central park in

the City. This activity allowed the Plant to deepen its relationship with the city government and contribute to local communities. The first clean-up activity conducted on June 6, 2005 was introduced in the August 2005 issue of the City’s public magazine and a poster introducing the activity was put up in the playground in the central park.



Poster put up in the central park

### ■ Social Contribution Overseas

Tokyo Electron (Shanghai) donates money to local orphanages as part of its social contribution activities and as a means to teach its employees how to express their thanks to society. At the New Year’s party, the company holds a bingo game and employees and their family members participating in the game purchase a bingo card for 10 yuan. All the proceeds from the sales of cards are donated to the orphanages. At the New Year’s party held in January 2006, 3,630 yuan (approximately ¥55,000) was collected and all the money was donated to orphanages.



Employees enjoying bingo



Jay Chen, President and Representative Director of Tokyo Electron (Shanghai) Limited holding a certificate of donation

## TOPICS

### Planting Trees—

Tokyo Electron Kyushu celebrated its 20<sup>th</sup> anniversary by planting trees on Mt. Tawara in Aso to create a forest to protect the watershed.

Watershed protection forests play an important role in water conservation and water purification and these forests are called “green dams.” The headwaters of the six major rivers running through the five prefectures in the central and northern parts of Kyushu are located in the Mt. Aso area where the trees were planted, and at least three million people are supplied with water from these rivers. In recent years, however, the volume of spring water has been decreasing due to a decrease in the amount of water retained, which has been caused by urbanization and use of water for farmland (rice paddies). The company planted trees to increase the amount of water retained in



Employees and their families planting trees



Group photo

order to protect limited and valuable water resources. This year, 227 employees and their families planted 1,000 broadleaf trees, including mountain maple, wild cherry, and sawtooth, on land extending over 0.3 hectares. The planting activity will be conducted over a time span of five years (three years for planting and two years for growing). Participants made comments like, “The whole family enjoyed planting trees together,” and “It gave me a chance to think about the environment.”



### Hiroshi Hasebe

Purchasing Dept.  
Tokyo Electron Kyushu Limited

I participated in the planting activity with my four-year-old son. We planted as many as 26 trees. My son is looking forward to visiting the planted area again to look for beetles and stag beetles in the trees.



### Mihoko Inada

Quality Assurance Dept.  
Tokyo Electron Kyushu Limited

Mt. Tawara was not a familiar area for my parents-in-law. However, after taking part in the planting activity on the mountain, they now say, “We will think about those trees whenever we pass nearby.”

## ■ Social Contribution by Tokyo Electron U.S. Holdings, Inc. Receiving the Industry Leadership Award

Tokyo Electron U.S. Holdings Inc. (TEL USHD) received the Industry Leadership Award from Keep Austin Beautiful (KAB) in 2005. This award is granted to citizen groups and other cooperative organizations that have greatly contributed to KAB's activities in the fields of local beautification, mitigation of pollution, and reduction in emissions. KAB highly evaluated TEL USHD's planting, nature conservation, clean-up, and alternative energy use activities.



Receiving the Industry Leadership Award

## Sponsoring "Japan and Nature—Spirits of the Seasons"

TEL USHD sponsored an exhibition held by Austin Children's Museum last year, which was titled "Japan and Nature—Spirits of the Seasons." In the exhibition, children made a virtual visit to four characteristic places in Japan, Fukuoka, Shiga (Lake Biwa),



Exhibit of a Kyoto scene

Kyoto, and Sapporo, and enjoyed one season in one place. Japan's unique geographical features and sights were introduced through interactive media. The number of visitors to the exhibition exceeded 200,000.

## Message from Will Wynn, Mayor of the City of Austin

TEL USHD is an outstanding corporate citizen for the City of Austin. For example, in recent years, its community outreach programs and recycling efforts have been honored by Keep Austin Beautiful. TEL USHD's dedicated support and leadership really make a difference to the quality of life in our community.

May 2006



Will Wynn  
Mayor of the City of Austin

## Comments from a Stakeholder

### We received comments from Mr. Tomine on our 2005 Environmental and Social Report.



#### Tetsu Tomine

Manager, Energy Saving Section  
IC/CS Quality Assurance Dept.  
(The Environment)  
Semiconductor Operations Division  
Seiko Epson Corporation

#### (1) Comments on the Environmental and Social Report

The report outlines the Tokyo Electron Group's activities briefly. I find the report attractive in that it specifically describes the Group's activities and how it implements its commitment to the environment. Also, the report explains technical matters in a way that is understandable even to customers who are not familiar with the technical details. In particular, I was impressed with the Group's commitment to energy-saving equipment. The Group is strongly determined to meet its customers' needs through the concerted efforts of its workers. In addition, the report clearly shows what the Group should do, including giving considerations to safety and health-related matters. Also, the Group's top managers express their opinions on specific issues in detail in the report. Reading this report, I can understand how the Group focuses on fulfilling its corporate environmental and social responsibilities.

#### (2) Comments on the Tokyo Electron Group's EHS Activities

I was impressed with the Group's commitment to their customers and the environment and also with its strong sense of responsibility to ensuring the safety and health of its employees. I can understand that the Group thinks that the starting point for ensuring safety for its customers is ensuring safety for its own employees, and this has deepened my trust in the Group.

In examining the environmental impact of semiconductor factories, I came to realize that the semiconductor manufacturing process is based on an exceptionally diverse range of technologies. In a semiconductor manufacturing facility, manufacturing devices are connected with each other through input and output operations. In manufacturing a variety of semiconductor equipment, the Group is determined to face EHS-related problems seriously and give consideration to EHS as early as from the design stage, and I am quite impressed by their attitude.

#### (3) Impression of the Tokyo Electron Group from the Viewpoint of Seiko Epson

We are pleased that the Group promotes the development of new equipment, including process technologies, and continues to make proposals to us. We also expect that the Group will make proposals for improving the equipment that has been in operation in our factories, in addition to proposals for new equipment, leveraging the results of their technological development. As demonstrated in the environmental and social report, the Group is eager to set out an industry standard and takes the initiative in the activities conducted by the semiconductor industry, including those by SEMI. The Group has indeed established a leading presence in the industry.

#### (4) Requests and Expectations for the Tokyo Electron Group

At present, we are in a very sensitive situation concerning energy saving and environmental conservation, especially the latter. Individual achievements have been made from various aspects, but these achievements should be integrated to promote energy saving in semiconductor plants. It is also true that an individual company cannot be a winner in environmental activities without the cooperation of other companies. I therefore think it important for the entire semiconductor industry to improve cost efficiency as part of its environmental measures and I expect the Tokyo Electron Group to continue to take the initiative in developing and popularizing diverse environmental technologies and lead other companies in energy-saving efforts by the entire industry.



## TOKYO ELECTRON LIMITED

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