

# 2008 Environmental and Social Report

### Contents

TOK's CSR	2			
A Message from the President	3			
Our Management System				
Further Promotion of CSR Management	5			
Corporate Governance	6			
Compliance	7			
Risk Management				
Information Security	9			
Performance Data				
Resources of Our Mother Planet	11			
Results of Activities in Fiscal 2007	11			
The TOK Environmental Policy	12			
Environmental Management System	13			
Environmental Performance				
Developing Environment-Friendly Products	21			
Environmental Communications	22			

Special Feature 1: Dedicated to Progress	
in Microprocess Technology	23
Special Feature 2: Managing Risks Involving	
the Environment and Health	27
TOK's Measures for Ensuring Safety	31
Living Together on One Planet	33
Committed to Earning the Trust of All Stakeholders	33
Relationship with Employees	34
Relationship with Customers	38
Relationship with Shareholders and Investors	39
Relationship with the Community	40
Corporate Information	41
Third Party Opinion / Editor's Note	42

### **Editorial Policy**

### **Editorial policy**

TOK views this publication as an important means of fulfilling its obligation to explain TOK's environmental and social activities to the stakeholders. We also position this report as a valuable tool for communicating with our stakeholders. Accordingly, every effort has been made to use expressions that are easy to read and understand.

### Applicable period

Fiscal 2007 (April 1, 2007 through March 31, 2008) Note: Data in this report is for fiscal 2007, but the report also covers activities conducted in fiscal 2008.

### Scope of data collection\*1

Headquarters, Osaka Marketing Office, Tohoku Marketing Office, Kyushu Marketing Office, Sagami Operation Center, Shonan Technical Center, Koriyama Plant, Utsunomiya Plant, Kumagaya Plant, Gotemba Plant, Yamanashi Plant, Ikuno Plant, Aso Plant and Distribution Control Center (including SP<sup>\*2</sup>)

- \*1. In this Environmental and Social Report, Yamanashi Ohka Co., Ltd. is reported as the Yamanashi Plant and Kumagaya Ohka Co., Ltd. as the Kumagaya Plant. The data on Headquarters includes data on TOK Engineering Co., Ltd. and Ohka Service Co., Ltd. Data on TOK Techno Service Co., Ltd. is included in that for the Shonan Technical Center (in addition, data for each marketing office includes some data on TOK Techno Service Co., Ltd.).
- \*2. SP: Controlled-atmosphere stock points. TOK has eight of these stock points: Miyagi, Yamagata, Ojiya, Ibaraki, Yamanashi, Mie, Hiroshima and Yamaguchi.

### **Reference guidelines**

Environmental Reporting Guidelines 2007, published by the Ministry of the Environment

### Issue date and 2009 issue date

Issue date: September 2008 Date of next issue: September 2009 (tentative)

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### Forward-Looking Statements

This Environmental and Social Report contains forward-looking statements based on current information. Actual results or events may differ materially from expectations discussed in such forward-looking statements.

# TOK's CSR



Our mission is to play a part in social progress through the constant pursuit of advances in microprocess technology.

TOK's expertise is instrumental to improving the performance of PCs, cell phones, flat-screen TVs, automobiles and many other products that we use every day.

TOK uses many types of chemicals that are vital to its manufacturing activities. *Monozukuri* (the art of manufacturing) operations maintain the proper balance between the many benefits of our products along with the potential risks of our activities to the environment and people. This is the basis of corporate social responsibility (CSR) management at TOK.

### Image of TOK's CSR Management



# A Message from the President

### Monozukuri with a Balance between Benefits and Risks

The growth of economic activity is responsible for environmental problems like global warming that pose a serious threat on a global scale. As a manufacturer, we have an obligation to use technological progress to improve our products and lower our environmental impact.

We understand that chemicals are a source of many benefits, mainly in the form of social and technological progress, but we are also aware of the risks posed by chemicals with regard to the global environment and our health. We believe that conducting our *monozukuri* (the art of manufacturing) activities from this CSR management perspective is our primary responsibility concerning business operations.

### Transforming our Corporate Policies into Actions

Supplying products and services required by society in a safe and reliable manner is a primary role of chemical companies. Environmental qualities are equally important. Society will refuse to accept products that are not environmentally responsible. No matter how useful a product may be, it will never be a success if the product is harmful to the environment or our health.

At TOK, all operations are guided by corporate policies with four core principles: continue efforts to enhance our technology; raise the quality levels of our products; contribute to society; and promote free-spiritedness. Our objective is to develop and provide outstanding products that make our lives better while adhering to the corporate policies. To accomplish this, we are developing products with a lower environmental impact. Additionally, we strictly supervise and handle chemicals used in our production processes. The TOK Group is dedicated to protecting the environment through our "3R Campaigns" (reduce, reuse and recycle).

All TOK executives and employees incorporate the spirit of CSR management in their own work and strive to fulfill our obligations to society. I believe that our collective efforts based on a strong commitment to CSR will enable us to transform TOK's corporate policies into specific actions.

### Aiming to Become a More Dependable Company

A series of corporate scandals at major companies has heightened the importance of conducting business in a responsible manner. Earning the public's trust demands more than simply complying with laws, regulations and social standards of behavior. We must also base our actions on a full understanding of the ethical guidelines that underpin conventional compliance activities. In fiscal 2007, ended March 31, 2008, we took steps to operate our internal control systems more effectively, reinforce compliance programs and make other improvements. These measures enhanced the transparency of our management and better enabled us to conduct corporate governance activities properly. Sustained growth is another goal. As one step toward this goal, we strengthened risk management activities in order to reduce our exposure to risks and prevent problems from occurring.

TOK will further heighten its commitment to CSR management to achieve sustained growth of corporate value. We aim to earn an even greater trust among and better meet the expectations of our stakeholders. This publication explains the measures we are taking to achieve this goal from the perspectives of environmental, social and economic activities. You will find that this information conveys both our dedication to CSR and our determination to strive for higher goals. We look forward to your continued support in the future.

September 2008

Yoichi Nakamura President & Chief Executive Officer

J. Nakamura

### **Further Promotion of CSR Management**

TOK's mission is to contribute broadly to social progress while achieving growth by supplying superior products backed by an aggressive R&D program that accurately targets market needs. In order to achieve that mission, all TOK executives and employees understand their responsibilities involving corporate citizenship. Our business activities are constantly guided by CSR that reflects a comprehensive perspective covering environmental, social, and economic factors. We are determined to remain a company that can use this approach to earn high levels of trust and satisfaction among all stakeholders<sup>\*</sup>. This is why CSR management is a key component of our management activities as well as a central concept for our entire organization.

★Stakeholders: Include but are not limited to consumers (customers), employees, shareholders, suppliers, communities, government agencies, non-profit organizations, non-government organizations and other entities.

### CSR Management Goal of the Third "TOK Challenge 21" Medium-Term Plan

During the current "TOK Challenge 21" plan, which covers the three-year period ending March 31, 2009, our goal is to contribute to social progress while sustaining growth in our corporate value. We are determined to do what is needed to satisfy our stakeholders and earn their trust.

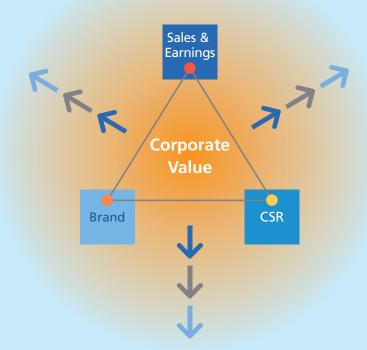
### Basic Vision of the Third "TOK Challenge 21" Medium-Term Plan

Guided by a firm commitment to CSR, which is at the heart of our third "TOK Challenge 21" medium-term plan, we will prioritize customer satisfaction, technological progress and employee development.



We will focus on three themes: earnings growth, promoting CSR management and strengthening brand equity. By seamlessly linking these themes, we aim to be a company that can sustain growth in corporate value.

### Sustained growth in corporate value



Management Vision

A company with a strong commitment to CSR

A company with a high share of the global fine chemicals market and many highly profitable products

### ••••

A company that is highly profitable and financially sound

....

A company backed by powerful brands that is able to earn the trust and satisfaction of all stakeholders

Basic Strategies of the Third "TOK Challenge 21" Medium-Term Plan >>>>1.

- Progress in microprocess technology
- Channel resources to growing business domains
- Create new business domains

Establishment of the TOK brand on a global scale

- Grow in other existing business fields by using TOK's semiconductor photoresist business
- Remain focused on customer satisfaction
- Expand the overseas network

# A stronger operating framework and reform of the corporate culture

### Promote CSR management

- Build an effective system of internal controls
- Make effective use of IT systems
- Upgrade empowerment faculty and sensibility in practice
- Create an organization that can quickly adapt to change

### Corporate Governance\*

### Basic Concept -

Aiming to become a company that is able to earn the trust and satisfaction of all stakeholders, TOK positions enhancement of corporate governance as one of the most important management issues: the means to maintain a sound and transparent management and to enhance its operational efficiency by speeding up the decision-making process.

★ Corporate governance: A generic term that describes a management supervision system designed to enhance management efficiency and enforce compliance and to promote stakeholders' interests by raising enterprise value.

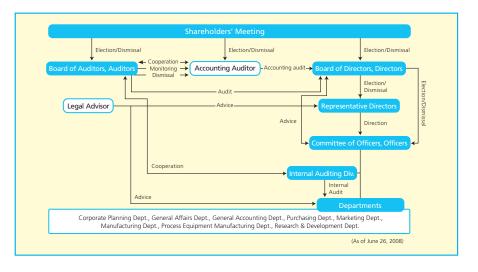
### Corporate Governance System

As a company with corporate auditors, TOK employs the corporate auditor system. We are taking actions to upgrade audits performed by the corporate auditors by using the greater authority of these auditors provided for in the Japanese Companies Act. In addition, TOK is using the benefits of reforms to its Board of Directors and the 2003 adoption of the officer system to fortify the management decision-making and supervisory function and business execution function while clarifying responsibility for performing these functions. We are convinced that using these systems to strengthen management is the most effective means of upgrading corporate governance.

### Board of Directors and Directors

As of June 26, 2008, we had seven directors, including one outside director. The board consists of the representative directors and the other directors. This provides a structure that is ideally suited to performing the board's fundamental roles of reaching decisions concerning management policies and supervising the management of business operations. The term of the directors is one year. This permits quickly responding to changes in the operating environment and clarifies accountability for the directors concerning operating results in each fiscal year. To make the activities of the directors more transparent and reinforce the board's supervisory function, there is one outside director.

Committee of Officers and Officers While taking steps to strengthen the Board of Directors' functions in management decision-making and supervision, TOK is also



reinforcing business execution functions. For this purpose, an organization has been established that is made up of the chief executive officer, senior executive officers, executive officer and officers. This organization provides for differences in the business responsibilities and other items concerning each officer. Furthermore, TOK has a Committee of Officers, which is made up of all officers.

As of June 26, 2008, we had 12 officers.

### Board of Auditors and Auditors

As of June 26, 2008, the Board of Auditors comprised three auditors, two of whom were outside auditors. In order to receive reports, hold councils, and pass resolutions on important audits, ordinary meeting of Board of Auditors is held once a month and extraordinary meeting as needed. The auditors attend meetings of the Board of Directors and other important meetings. These duties are performed in accordance with auditing standards (Corporate Auditor Auditing Regulations), the auditing policy, the division of tasks and other items. In addition, the auditors check the performance of directors by receiving reports from directors and others, and requesting an explanation when necessary. For financial audits, the auditors receive reports from the independent accountant and use other means, including requesting an explanation when necessary, to verify the suitability of financial accounting methods and the results of these audits.

### Internal Auditing Division

The Internal Auditing Division, under the direct control of the President, is a part of the Company's system of internal control. It consists of four full-time staff members and conducts periodic audits as deemed necessary in order to ensure full compliance with laws, regulations and Company regulations. The division also provides guidance concerning measures to make improvements.

Web For further information, please refer to: >>>> Corporate Governance http://www.tok.co.jp/en/company/about/governance.html

### Compliance\*

TOK fosters a strong spirit of compliance with the law, Company rules and regulations and social norms in all corporate activities, on the part of each and every one of its management executives and employees.

★Compliance: A generic term that describes a company's responsibility to conform to laws and regulations and the norms of society in all corporate activities.

### Compliance Framework

The Compliance Committee, a secretariat, provides information, training and other assistance to compliance leaders who are responsible for compliance activities at each TOK business site. Furthermore, every department involved with compliance programs provides executives and employees with information, training,

Compliance with laws and regulations

relationships with companies and

(2) Preservation of sound working

(3) Workplace health and safety

(4) Protection of personal information

(5) Prohibition of conflict of interest

3. Standards of conduct for business

(2) Safety of products and services

(3) Environmental conservation

(4) Security export controls

Subcontractors Act

and gifts

(1) Compliance with all business laws

(5) Compliance with Anti-Monopoly Act

(6) Proper transactions with vendors

and others; compliance with

(7) Prevention of unfair competition

(8) Prevention of improper entertaining

(6) Prohibition of political, religious and

1. General rules

individuals

2. Standards of conduct for

environment

(privacy)

behavior

activities

other solicitations

(1) Respect for human rights

consultation, and other supports involving compliance.

### Establishment of the Standards of Conduct

The TOK Group Compliance Standards of Conduct became effective on April 1, 2005. The objectives are to raise awareness of the importance of compliance and to establish a clearly defined set of shared values and code of conduct.

All employees have received a copy of the TOK Group Compliance Standards of Conduct Handbook. We are also holding compliance briefings at all sites to raise awareness of the code of conduct.



TOK Group Compliance Standards of Conduct Handbook

### Internal Reporting System

The internal reporting system has two options to protect individuals who submit reports: an internal route and another route which provides a direct link to TOK's auditors and legal counsel. This allows individuals to select the reporting channel that best matches each situation. For internal reports, we have a clear policy of (9) Prohibition of bribes, etc. to government employees in Japan and overseas

(10) Marketing and advertising

Items in the TOK Group Compliance Standards of Conduct

(11) Accurate recording and reporting of information

# 4. Standards of conduct for management, etc. of Company assets

(1) Proper accounting methods

- (2) Management of confidential information
- (3) Prohibition of personal use of the Company resources
- (4) Proper use of information systems
- (5) Protection of intellectual property
- 5. Standards of conduct for relationships with shareholders and other investors
  (1) Disclosure of corporate information
  (2) Prohibition of insider trading
- 6. Standards of conduct for community relations
  - (1) Contributions to society
  - (2) Regulations for charitable donations and political contributions
  - (3) Refusal to form ties with anti-social elements

preventing dismissals and other negative

consequences for individuals who submit

reports, except in cases where reports are

dishonest or inappropriate.

### Risk Management\*

TOK maintains an organization, Contingency Management Conference, for preventing problems associated with risks and for minimizing damage in the event of an emergency. This allows the Company to accommodate various risks that can have a significant effect on business activities.

Risk management: A generic term that describes the methods of identifying, preventing and responding to potential and actual risks likely to affect the viability of a business corporation.

### Risk Management Framework

TOK has the Contingency Management Conference that oversees all Company operations. This committee identifies risks that can have a significant effect on business activities, establishes preventive measures and formulates responses in the event of a crisis.

TOK takes measures aimed at managing risks and preventing the occurrence of problems through the establishment of its risk management system to adopt countermeasures effective against risks. This system uses a PDCA cycle, which includes risk analysis and evaluations.

Risk management countermeasures and other major activities in fiscal 2007 are listed below.

#### Risk Management Organization



up of representatives of the responsible persons on contingency plan and actual activity persons on contingency plan in each TOK operating department.

**Risk Management Countermeasures and Other Major Activities** Actions (Examples) **Risk Category** Violations of laws and regulations Revised compliance behavior standards and conducted training (Compliance violations) Fraudulent financial statements Revised procedures for preparing financial statements Infringement of intellectual property Conducted internal training programs and revised procedures Computer viruses Considered upgrading virus protection software Leaks of customer information Strictly followed the information security manual Strictly implemented 5S program 🛧, upgraded electrical Fires equipment Leaks of medicinal solution Installed leak sensors, revised procedures Difficulty in procuring raw materials Confirmed with suppliers of emergency supply systems

★ 55 program: Neatness (*seiri*), orderliness (*seiton*), cleaning up (*seisou*), cleanliness (*seiketsu*), and discipline (*shitsuke*)

### Contingency Management Organization

When a particular risk becomes a problem, the Contingency Management Secretariat gathers pertinent information and, using the route prescribed by the Contingency Plan, submits a report to members of the Contingency Management Committee. This committee is made up of operating department managers. In addition, directors responsible for business unit where the crisis is occurring immediately submit reports to the Company president. The directors and chairperson of the Contingency Management Committee then study the severity and impact of the problem to determine if there is a need to form a Contingency Management Center. The Contingency Management Committee provides advice and assistance for responses to the crisis in order to achieve a quick resolution.



and related offices, Prompt measures working team for customers and suppliers, Public relations team, General affairs team

### Contingency Management Education



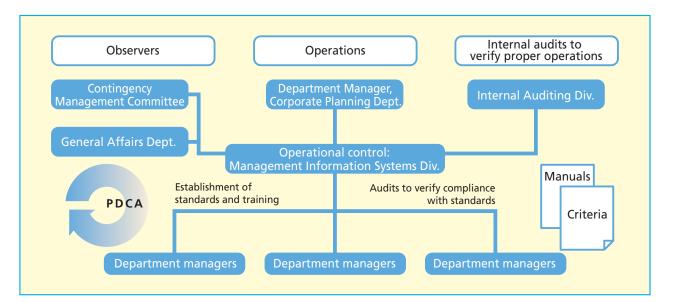
Crisis management education for newly hired employees

We place emphasis on training to prepare for a crisis, because we believe that an effective risk management program requires increasing every employee's awareness and understanding of risk management. We have a thorough training and awareness program. All new employees, including workers recruited from other companies, and individuals assigned to a different department learn the basics of contingency risk management. We also have classes and other activities covering emergency reporting channels, the status of contingency management activities, and other aspects of crisis management.

### **Information Security**

TOK has effective systems in place to maintain information security and properly manage information. With these systems, we protect exclusive TOK Group information and data, information received from third parties and personal information. These activities help ensure that we remain an organization that can earn the trust of all stakeholders.

### Information Security Organization



### Operating Framework

The Management Information Systems Division is at the center of the information security operating framework. We are constantly working on improving information security by managing security measures, training employees and performing audits.

Risk management concerning information security is an integral element of overall risk management activities. This gives TOK a unified risk management organization.

### Standards for Countermeasures and Actions

TOK has standardized all information security countermeasures to maintain a high level of security. Furthermore, we take actions to ensure that employees and others who handle this information strictly adhere to the standards.

### Employee Training

TOK has compliance training for new employees and information security programs for other employees. All training programs are structured to raise awareness of the importance of protecting confidential information, including personal information, and strictly following management procedures.

### Information Security Audits

Internal Auditing Division performs audits of the departments that are responsible for information security activities. Audits verify compliance with information security countermeasure standards by these departments at all the Companies organization. Audits also provide a basis for improving internal checks and balances, information security operating systems and security measures.



Information Security Plan

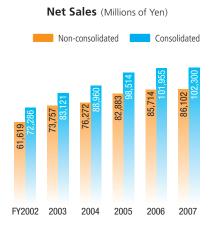
### **Performance Data**

### Financial Highlights

In fiscal 2007, TOK achieved a 0.3% increase in consolidated net sales to ¥102,300 million. However, in the term of earnings, operating income was down 24.1% to ¥8,266 million, ordinary income

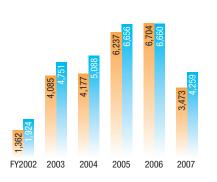
decreased 34.3% to ¥7,674 million and net income decreased 36.1% to ¥4,259 million. Higher depreciation expenses resulting from large capital expenditures in the advanced process technology was one cause. An addition to a provision for doubtful receivables in the process equipment business and fluctuating foreign exchange rates also held down earnings.

Web For further information, please refer to: >>>> Financial Data http://www.tok.co.jp/en/ir/f-data/index.html



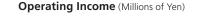
**Net Income** (Millions of Yen)

Non-consolidated Consolidated



R&D Costs (Millions of Yen)

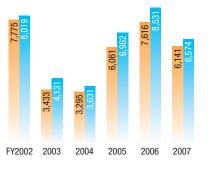




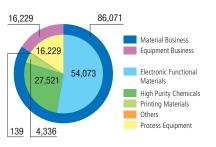


Investment in Plant and Equipment (Millions of Yen)

Non-consolidated Consolidated

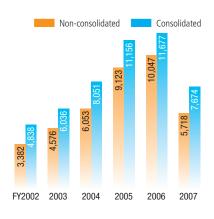


Net Sales by Business Segment for FY2007 (consolidated) (Millions of Yen)



Note: Equipment business sales exclude intersegment sales.

Ordinary Income (Millions of Yen)

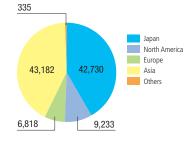


Depreciation and Amortization (Millions of Yen)



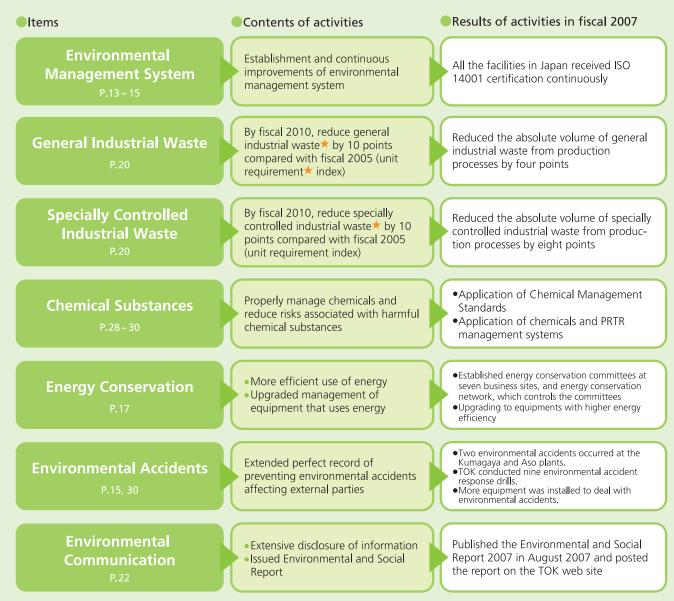
Net Sales by Geographic Segment

for FY2007 (Millions of Yen)



### **Results of Activities in Fiscal 2007**

The business activities of TOK affect the environment in some ways, such as through the generation of organic solvents and other industrial waste during production processes. This section presents information concerning the results of major environmental conservation activities during fiscal 2007 in order to reduce the environmental impact.



 $\star$ General industrial waste: Industrial waste that does not require special controls.

Unit requirement: The amount of energy consumed and industrial waste generated converted into a number showing these figures in relation to a certain volume of products manufactured.

In this publication, comparative index figures use fiscal 2005 as 100.

🛧 Specially controlled industrial waste: Industrial waste that requires special management due to its explosivity, toxicity, infectious properties or other hazards.

### Fiscal 2008 Targets for Manufacturing Department

For mature products, improve manufacturing efficiency (including energy conservation)

Use the reduce, reuse and recycle cycle to achieve a 10% reduction by 2010 in the unit requirement

index of general and specially controlled industrial waste compared with fiscal 2005

- Reduce the risk of fires and leaks of chemicals by taking preventive measures
- igoplus Use the Responsible Care guidelines to reinforce the framework for managing chemicals

### The TOK Environmental Policy

The TOK Group is conducting environmental initiatives in line with TOK's environmental policy to help achieve a sustainable society that does not harm the environment.

Processing chemicals for main pillar, TOK Group affects the environment primarily through releases and air emission by vaporization of organic solvents and other substances during production processes and following the use of the Company's products. Since its inception, TOK has placed priority on handling and disposing of these materials properly. In November 1998, an environmental policy was established to clarify the Company's commitment regarding the reduction of waste materials and conservation of resources and energy.

Fiscal 2006 was the first year of the third "TOK Challenge 21" medium-term plan. When this plan was formulated, we comprehensively reviewed our social responsibilities and the status of past

environmental activities Companywide. The results of this review became a major part of our new plan. The core environmental

elements of "TOK Challenge 21" represent the current environmental policy of the Company.

### **Environmental Policy**

Conducting CSR management that emphasizes global environmental protection is a central element of TOK's third medium-term plan. Accordingly, we voluntarily take action to ensure environmental responsibility, safety and health concerning our products. This covers every stage from product development and manufacture through their use and disposal. We are constantly working on becoming even more trusted and maintaining sound lines of communication with the public.

- 1. We recycle materials and transform waste materials into items of value.
- 2. We are reinforcing our safety management system for chemicals.
- 3. We are conducting energy-conservation initiatives.

Web For further information, please refer to: >>>> History of Environmental Conservation Activities http://www.tok.co.jp/en/company/csr/env-activity/history.html

### The Businesses of TOK

TOK supplies materials and equipment in the semiconductor, flat panel display (FPD), printing and other business sectors. To seek ways to lower our environmental impact, we monitor the energy and resources we use to conduct these business activities (input) as well as the waste materials, CO2 and other emissions resulting from these activities (output).

### The Products of TOK

TOK supplies products that are essential to the production processes of semiconductor manufacturers, FPD manufacturers, printing companies and other customers. Our products are not readily visible. However, TOK plays a vital role in the manufacture of PCs, cell phones, liquid crystal display (LCD) TVs, beverages cans and many other items we use every day.

- Photoresist/Photoresist-related chemicals
- Material for forming interlayer insulating film and planarizing insulation film
- Printing plate making materials
- LCD panel manufacturing equipment
- Semiconductor manufacturing equipment Photoresist-related chemicals



Photoresist /



LCD panel manufacturing equipment

 Semiconductor manufacturers • FPD manufacturers Printing companies Semiconductors FPD Publications Examples Semiconductors: PCs, cell phones, digital cameras, automobiles, others FPDs: LCD TVs, plasma TVs, PC monitors, cell phones, others Printing: Beverage cans, cardboard boxes, wrapping paper, others Cell phones Flat-screen TVs Beverage cans

# **Environmental Management System**

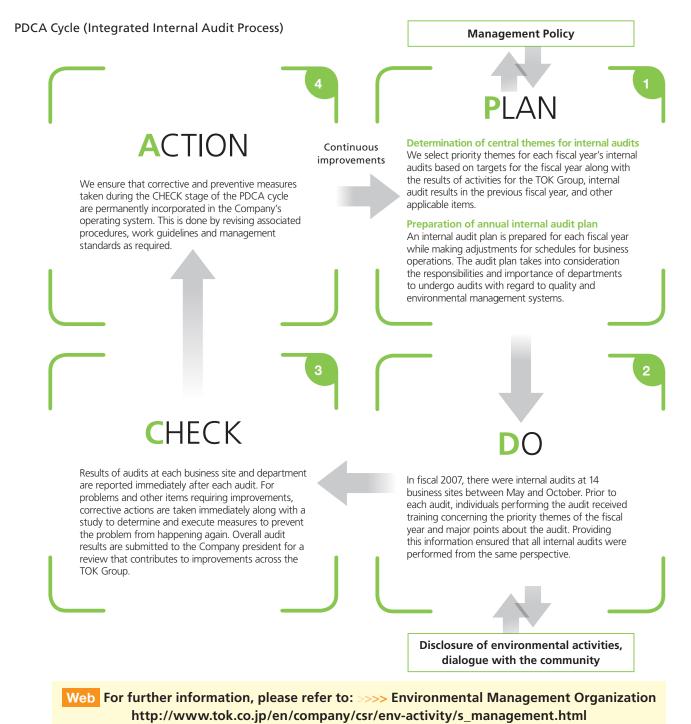
**Resources of Our Mother Planet** 

Environmental protection is one of the highest priorities of TOK. To make environmental programs part of all business activities, each operating department establishes business unit targets that combine environmental management and quality management systems. In addition, we lift ourselves onto a sustained growth trajectory through a continuous improvement process based on a plan, do, check, act (PDCA) cycle.

# Method for Conducting Environmental Activities

A plan is formulated based on environmental policy and goals. The next step is execution of the plan, followed by an

evaluation of the results. Last comes action to prepare for the next step. This PDCA cycle provides for continuous improvements in the environmental management system along with a decline in the environmental impact of business operations.



13 TOKYO OHKA KOGYO CO., LTD.

### **Environmental Risk Management**

At every business site in Japan, we examine all environmental overt and potential risks in accordance with items required by the ISO 14001 standard in order to prevent problems and reduce the occurrence of incidents. Furthermore, we evaluate and rank risks based on their magnitude to create a table identifying significant environmental aspects.\* In addition, each division and the Company as a whole select environmental factors requiring particular attention. Annual targets for improvements are then established and progress toward those targets is monitored. For environmental factors at each business unit, progress is supervised by establishing management standards.

### Contingency Management Organization

Each business site has its own Responsible person and Actual Activity person on Contingency Plan. These individuals work closely together to perform their tasks based on a common understanding of potential risks.

🛨 Environmental aspect: Factors involving organizational activities, products and services that could have an environmental impact.

### Environmental Awareness and Training

TOK has an environmental education program designed to raise awareness of environmental issues among all employees. Each business unit receives the Environmental Manual to use as the basis for its environmental activities. The aim is to encourage everyone to help reduce our environmental impact in many ways. In addition to location based education, the following education was provided in fiscal 2007.

### **Training for Environmental Aspect**

To make all employees more aware of environmental issues, we held classes to explain the method to specify environmental aspect from August through September 2007. The classes were attended by a total of 539 employees.

### Requirements for ISO and Training for Management Systems

A total of 206 employees attended classes to study the relationship between TOK's systems and the requirements for ISO9001 quality management system and ISO14001 environmental management system certification. This training enables employees to deepen their understanding of how TOK's management systems meet the requirements.

### Compliance with Laws and Environmental Regulations

Each domestic production site has prepared the List of Legal and Other Required Items and the Monitoring and Measurement Table and complies with laws and regulations. On the list, laws, rules, agreements and other regulations that must be observed are complied in accordance with corresponding requirements, such as submitting notices, applications and reports, performing measurements and enforcing compliance. The list is used to clarify the frequency of evaluations by the sections responsible.

In fiscal 2007, the monitoring and measurement results revealed two cases of exceeding environmental standard. Necessary actions have been taken to treat these problems.

We have never been fined or punished in any other way due to a violation of environmental regulations. Furthermore, we have never been the defendant in any environmental litigation.

Environment-					Sites				
related laws and	Sagami	Shonan			Plants				
regulations	Jayann	SHOUGH	Koriyama	Utsunomiya	Kumagaya	Gotemba	Yamanashi	Ikuno	Aso
Air Pollution Control Law	0	—	0	—	—	—	$\bigcirc$	$\bigcirc$	$\bigcirc$
Water Pollution Control Law	0	—	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	—	$\bigcirc$	$\bigcirc$
Sewerage Law	0	0	—	—	0	—	_	—	—
Noise Regulation Law	_	—	0	$\bigcirc$	—	0	—	$\bigcirc$	$\bigcirc$
Vibration Regulation Law	—	—		0	—	0	—	—	—
Offensive Odor Control Law	0	0	0	$\bigcirc$	0	0	$\bigcirc$	0	0
Soil pollution	0	—	0	0	—	0	0	0	0
Waste material	0	0	0	0	0	0	0	0	0
Energy conservation	0	—	0	0		0	0	—	0
PRTR	0	_	0	0		0	0	0	0

Applicable: O Not applicable: -

Sagami: Sagami Operation Center; Shonan: Shonan Technical Center

### **Response to Nearby Residents**

In fiscal 2007, TOK received one inquiry regarding a bad smell from an individual living near a TOK factory. After the inspection, it was proved that TOK was not at fault. We met with local residents to provide information concerning the problems and our responses.

### Response to Soil Contamination at Aso Plant

During an examination of an underground tank in June 2007 at the Aso Plant, an inspector found a solvent-like odor. A further investigation revealed that solvent may have leaked from the bottom of the tank. We immediately conducted a full-scale investigation that included soil tests. We found a tiny hole in the tank's side that was not visible to the naked

### Environmental Accounting\* -

TOK has been using environmental accounting since fiscal 2000. This allows the Company to conduct environmental management while monitoring the expenses and effects of environmental programs.

In fiscal 2007, environmental conservation expenses totaled ¥641 million, mainly for the prevention of pollution and recycling of resources.

★Environmental accounting: A system for understanding environmental conservation related investments made by, and expenses incurred by, businesses and other organizations, as well as the effects of such investments, in quantitative terms (currency or physical quantity) and communicating such information to stakeholders.

### **Environmental Conservation Cost**

Investments are the sum of investments in equipment associated with environmental conservation and improvement.

Expenses are the sum of depreciation, personnel and other operating expenses associated with environmental conservation. Personnel expenses are computed based on a basic unit cost.

# Economic benefit associated with environmental conservation measures

Figures are calculated based on internally realized benefits from the sale of materials having value and from the reduction of TOK's waste disposal cost. eye. Use of the tank was immediately suspended so that soil could be collected and treated. Reports were submitted to the fire department and other authorities. Fortunately, the soil pollution was negligible as only a small amount of solvent leaked from the tank. Regular inspections prevented this leak from becoming a serious problem, demonstrating the importance of constantly performing environmental protection activities.

The tank in which the leak occurred has been in use since the Aso Plant began operations. In fiscal 2008, the TOK Group is prioritizing the improvement of inspections at aging facilities.

### **Environmental Accidents**

In August 2007, an alkaline effluent that exceeded effluent standards was released

into a rainwater drain channel at the Kumagaya Plant. It was caused by the use of neutralization processing at a level that exceeded the capacity of the plant's wastewater treatment facilities. Some of the effluent that could not be processed overflowed from the facility and reached the external drain. We immediately took corrective actions and notified government officials and the operators of the industrial park.

As a measure, we forbid these neutralizations and enhanced employee retraining for environmental effect. We used lessons learned from these accidents to take actions at other plants as well.

### Environmental Conservation Cost (by Business Category)

### (Millions of Yen)

Category	Investment	Cost
(1) Business area cost	57	513
① Pollution prevention cost	40	184
(2) Global environmental conservation cost	14	12
③ Resource circulation cost	3	317
(2) Upstream/downstream cost	0	16
(3) Administration cost	0	78
(4) R&D cost	0	18
(5) Social activity cost	0	3
(6) Environmental remediation cost	0	13
Total	57	641

### Economic Effect Associated with Environmental

**Conservation Activities (Actual Effect)** 

(Millions of Yen)

Description of effects			
Revenue	Generating income by recycling medicinal solution during operating processes	22	
Expense saving	Reducing waste disposal costs through reducing waste disposal	23	
Total			

Note: Scope of environmental accounting is production facilities in Japan and distribution center excluding the headquarters and marketing offices. Reference is Environmental Accounting Guidelines 2005, published by the Ministry of the Environment.

### **Environmental Performance\***

# TOK evaluates the effects that its business activities have on the environment and takes various measures to minimize their impact.

### Manufacturing Input (Fiscal 2007)

Output<sup>2</sup>

CO2

SOx\*

BOD<sup>\*</sup>

General administrative waste

Specially controlled industrial waste

CO2 for transportation of products

General industrial waste

Input	
🗡 Total	נד <b>850</b>
Electric power	56,120,000kWh (560TJ)
Netroleum (heavy oil)	<b>4,323<i>kl</i></b> (169TJ)
Gas	<b>2,800,000</b> m <sup>3</sup> (115TJ)
Used water	<b>616,000</b> m <sup>3</sup>
Chemical substances (Class I Designated Chemical Substances on the PRTR Law)	<b>4,800</b> t

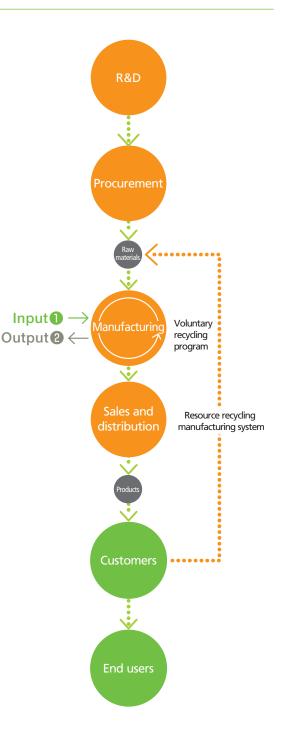
39,000t

4.2t

**0.5**t

**460**t

5,700t



### Sulfur oxides (SOX): Produced from the combustion of fuels containing sulfur. These are the causative substances of acid rain.

Biochemical oxygen demand (BOD): BOD refers to the volume of oxygen required when pollutants in the water (organic substances) are turned into inorganic substances or gases through the action of microorganisms. BOD is a major indicator used when evaluating the degree of contamination of rivers and other water bodies. A higher value for BOD means that the water involved is more contaminated.

Web For further information, please refer to:>>>> Data on Environmental Impact by Site (Fiscal 2007) http://www.tok.co.jp/en/company/csr/env-activity/load\_data.html

(Recycling rate: 77%)

5,448t (Recycling rate: 53%)

6,290t (Recycling rate: 96%)

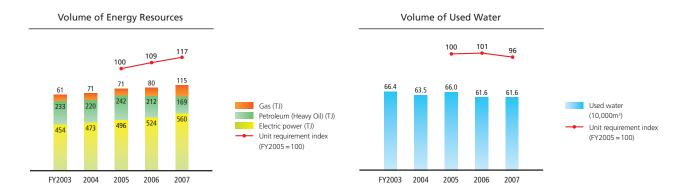
Environmental performance: Environmental performance evaluation is a method of evaluating, in qualitative and quantitative terms, environmental activities and results achieved by an organization in accordance with its environmental policy, objectives and goals.

### Effort to Reduce the Environmental Impact -

### Reduction in the Input of Energy Resources

TOK is working on reducing the environmental impact by improving manufacturing processes, raising operating efficiency and replacing equipment with more efficient models. Fiscal 2007 energy use was 850 terajoules (TJ), including electricity, heavy oil, city gas and other energy sources. On a unit requirement index basis, which takes into account the production volume, was 117 (using fiscal 2005 as 100), eight points higher than in fiscal 2006. Energy used for production processes was about the same, but there was a significant increase in total energy used at TOK due to the start of operations at a new research center.

### **Consumption of Energy Resources and Used Water**



### Reduction of Air Pollution: Global Warming Initiatives

We are improving manufacturing processes, operating and maintaining production machinery properly, and taking actions to reduce emissions of greenhouse gases\*.

In fiscal 2007, we converted a boiler at the Utsunomiya Plant from heavy oil to natural gas, which produces much less SOx. At the Koriyama and Yamanashi plants, we have replaced boilers with more efficient models.

Total energy consumption associated with business activities increased about 3% in fiscal 2007 but CO<sub>2</sub> emissions were about the same as in fiscal 2006. Significantly, SOx emissions were down by about 1.3 tons because of the reduction in the amount of petroleum (heavy oil) used. The Utsunomiya Plant, where a boiler was converted from oil to natural gas, achieved estimated reductions of about 560 tons in CO<sub>2</sub> emissions and 0.55 tons of SOx emissions.

★Greenhouse gas: Gas in the atmosphere that allows sunlight to pass through but absorbs infrared rays emitted from the ground and sea. These gases are believed to cause global warming.



### Emission Volume of Air Pollution (Based on energy consumption)

### Measures Involving Ozone-Depleting Substances

Chlorofluorocarbons (CFC\*) such as CFC-11 and CFC-12, which are harmful to the Earth's ozone layer, are used primarily at TOK as coolants in refrigerators and freezers. We also use halogenated hydrocarbon, another ozone-depleting substance, in some fire fighting systems. All equipment using ozone-depleting substances is inspected at regular intervals and managed and discarded as stipulated by law.

★CFC: An abbreviation for chlorofluorocarbon. Specified CFCs are particularly harmful to the Earth's ozone layer.

### Emissions to Water

Effluents from plants undergo an activated sludge treatment process and other cleansing processes at wastewater treatment facilities before being released to sewer systems and rivers.

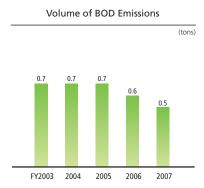
Due to these activities, we estimate



Upgraded wastewater treatment facilities (Utsunomiya Plant)

that we achieved a reduction of about 0.1 tons compared with fiscal 2006 in BOD emissions in the effluents discharged from our facilities.

We will continue to maintain and manage wastewater treatment facilities to achieve further reductions in discharges of BOD.



### opics

### Committed to Energy Conservation and Waste Resource Recycling

Conserving energy and recycling waste materials as resources are among the most important goals of the Purchasing Department. We have many energy conservation systems. For example, we use waste heat in climate control systems, we have invertercontrolled compressors, our buildings have highly effective thermal insulation, and lights are linked to sensors to switch off lights in unoccupied rooms. Furthermore, we have an extensive recycling and reuse program for equipment that is discarded as we update production facilities. First, we look for places to use older equipment at other TOK plants. For equipment that we no longer need, and used to simply discard, we now have an alliance with a firm that breaks down machinery into various materials for recycling.



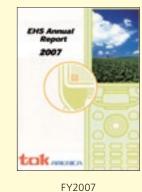
Taiji Shigematsu Equipment & Facilities Purchasing Section, Equipment & Facilities Purchasing Div., Purchasing Department





FY2005

FY2006



U.S. subsidiary TOKYO OHKA KOGYO AMERICA, INC. (Oregon Plant), which received ISO 14001 certification in September 2004, is taking many actions to reduce its environmental impact. This company is also active in the community, participating in clean up campaigns to make the area near the factory more attractive. To provide information about environmental and occupational health and safety programs, the company has been issuing an EHS Annual Report since fiscal 2005.

### Environmental Activities at TOKYO OHKA KOGYO AMERICA, INC.

### Environmental Measures during Distribution

● Environmentally Responsible Logistics The total amount of cargo transported during fiscal 2007 was 27 million ton-kilometers. We estimate that these transportation activities, including vehicles at logistics service providers used exclusively for delivering TOK products, generated 5,700 tons of CO<sub>2</sub> emissions.

In fiscal 2007, we reviewed how our products are transported between our production bases with the aim of raising efficiency. This process included a modal shift\* to railroads from trucks to cut CO<sub>2</sub> emissions.

★Modal shift: To reduce environmental impacts, cargo transportation is being shifted from trucks and other motor vehicles to trains and ships, which produce lower CO2 emissions per cargo unit.

### Provision of Environmental and Safety Information for Product Transportation

We require that our drivers carry emergency contact cards (yellow cards) at all times while they are on duty. This reflects our commitment to protecting people, merchandise and the environment from harm caused by leaks, fires, explosions and other accidents that may occur during the transportation of hazardous substances.

### Compliance with the Amended Energy Conservation Law

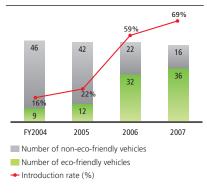
In response to the April 2006 enactment of Japan's Amended Law concerning the Rational Use of Energy, TOK has established

Ton-kilometer = Weight of products (tons) x One-way distance (km) CO<sub>2</sub> emissions = Number of vehicles x (Round-trip distance / Fuel consumption) x 2.64 (kg·CO<sub>2</sub> / l) a system for monitoring the volume of cargo transportation.

### Progress in Use of Eco-Friendly, Low-Emission Vehicles

TOK owns a fleet of 52 motor vehicles (including by lease). As of March 31, 2008, 69% of these vehicles used hybrid engines and other means to reduce emissions and protect the environment.

Introduction Rate of Eco-Friendly Vehicles



### Measures to Achieve Zero Emissions\*

To achieve a recycling-based society\*, we conduct a 3R campaign to reduce the volume of waste materials in order to achieve our goal of zero emissions.

- ★Zero emissions: This concept aims to establish a production infrastructure in which all members of society endeavor to eliminate all types of waste materials. One example of how this can be achieved is recycling waste generated by the production activities of one industry or using such waste as a raw material in another industry.
- Recycling-based society: As opposed to a society characterized by mass production, mass consumption and mass disposal, a recycling-based society refers to a society that aims to achieve both environmental conservation and pursuit of economic efficiency by reducing the volume of waste material

generated and promoting its reuse and recycling while at the same time minimizing the input of new resources.

### Reduce\*

TOK manufacturing bases are taking many actions to reduce energy consumption and the generation of waste materials associated with production processes. There are many initiatives aimed at reducing the volume of waste materials. Major programs include installing wastewater treatment facilities to process effluents internally; sorting waste materials to transform materials into items of value; and lowering the generation of waste materials by improving production processes.

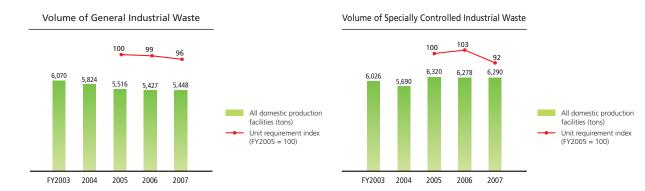
In fiscal 2007, the volume of both general and specially controlled waste materials at all TOK production facilities in Japan was about the same as in fiscal 2006.

In terms of the unit requirement index for waste materials generated, which reflects production volume, there was a reduction of four points for general industrial waste and a decline of eight points for specially controlled industrial waste compared with fiscal 2005.

★Reduce: This refers to reducing the volume of waste material generated.

Reduction involves minimizing the volume of materials in products in order to minimize the volume of materials that is eventually discarded.

### **Volume of Industrial Waste**



### Reuse\*

Products incorporating organic solvents have been placed in stainless steel containers since the late 1970s. This allows empty containers to be returned to TOK for reuse. In addition, some products incorporating organic solvents are transported using tanker trucks. We are also beginning to use returnable containers for some photoresist products, chiefly those used in the manufacture of LCD panels.

★Reuse: This refers to the use of manufactured goods, containers and other products repeatedly in order to reduce the volume of waste materials generated and conserve resources.



1-ton returnable container



18-liter returnable containers



Tanker truck

### Recycle

We are conducting a variety of recycling programs in order to utilize the Earth's limited volume of resources effectively.

Organic solvents (process effluents) used and collected during manufacturing processes at a plant are sent to recycling companies, where they undergo distillation and other processes for recovery and eventual reuse. In cases where recovery using distillation is not possible, used solvents are reused as a resource, such as for fuel at cement plants, and in other ways. TOK is also making efforts to promote the use of waste plastics as a raw material for plastic reclamation companies and used bottles as a raw material for glass manufacturing companies.

TOK production facilities are conducting programs to reduce the volume of waste sent to landfills and other final disposal sites. Specific categories of waste materials are collected separately to facilitate recycling. We also conduct a 3R campaign, review methods for disposing of these materials and take other steps to cut the volume of waste materials. On the strength of these efforts, we succeeded in completely eliminating waste materials sent for final disposal in fiscal 2004. The zero disposal rate was maintained through 2007.

★Recycle: Recycling is the use of waste materials as a resource rather than burning these materials or sending them to a landfill. Recycling thus conserves resources and prevents pollution.

### Management of PCB\* and Waste Materials Incorporating PCB

At the Sagami Operation Center, the Shonan Technical Center and the Utsunomiya Plant, waste materials containing PCB are stored under strict control. In fiscal 2007, we inspected electrical substation facilities at all business sites in Japan. This process



Electrical substation facility at the Sagami Operation Center, where PCB contamination was found

revealed that the Sagami Operation Center, the Shonan Technical Center, the Utsunomiya Plant and the Amanashi Plant are using some transformers that have insulating oil containing minute amounts of PCB. We are closely managing their use. In addition, the proper notices have been submitted to governmental bodies.

We plan to properly dispose of these PCB waste materials once the required disposal framework has been established.

★Polychlorinated biphenyl (PCB): One kind of organic compound, PCB was formerly considered a chemical that excelled in terms of heat resistance and electrical insulation and was used for thermal media, insulating oils, paints and other applications. However, due to the lack of degradability and high toxicity of PCB, PCB production was discontinued in 1972. Nevertheless, there is little progress in its disposal, and managers responsible for its storage are required to place it under strictly controlled conditions. Dedicated Stainless Steel Storage Container (Sagami Operation Center)



### **Developing Environment-Friendly Products**

TOK is helping protect the environment by supplying products that incorporate exclusive technologies accumulated over many years.

### Development of Next-Generation Solar Cell Production Process

As a source of clean and renewable energy, solar cells are viewed as a key element of measures to slow global warming. Rapid growth is foreseen in demand for these cells. Most solar cells are made primarily of silicon.

However, there are difficulties in procuring sufficient amounts of raw materials. Another

problem is the large amount of electricity required to manufacture silicon solar cells. CIGS\* solar cells may be the solution. Using a next-generation technology that does not require any silicon, CIGS solar cells generate electricity more efficiently and can be fabricated more efficiently than conventional solar cells. TOK has started work on developing process technologies, materials and equipment for the mass production of CIGS solar cells.

★ CIGS (copper, indium, gallium, selenium): A compound material used in the form of a polycrystalline thin film to make solar cells.

### Development of Offset Printing PS Plate Using Photocatalyst

A joint research project with the Kanagawa Academy of Science and Technology (KAST) has developed a highly efficient production technology for offset printing PS plates\* that can be reused. This unique production technique combines titanium dioxide photocatalyst\* technology with ink jet technology.

PS plates are widely used for the printing of publications ranging from newspapers to pamphlets, but their plate making produces chemical effluents. Furthermore, a PS plate can be used only once.

The newly developed offset printing PS plate uses a titanium dioxide photocatalyst and ink jet technology to simplify the production process and greatly reduce the amount of chemical effluents. Another advantage is the ability to reuse this plate with ease. With all these benefits, this revolutionary printing plate cuts printing expenses while having a much smaller impact on the environment.

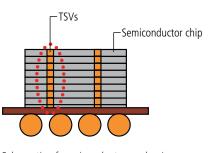
- ★ Titanium dioxide photocatalyst: This catalyst is capable of performing two functions when it absorbs light: breaking-down action and hydrophilic action. The use of these two functions holds much potential for new technologies in the fields of the environment, energy, health care, glass manufacturing and other applications.
- ★ Offset printing PS plate: In offset printing, ink from a printing plate is transferred (offset) to a rubber blanket and then to paper or other surface to be printed. Normally offset printing uses a pre-sensitized plate (PS plate) made of aluminum and coated with photosensitive material.



Printing test with reused PS plate Left: Plate used for the first time Right: Printed with reused plate

### Zero Newton<sup>®</sup> Wafer Handling System

System in package (SiP) technology, in which two or more semiconductor chips are placed in a single package, is attracting attention as a way to meet demands for higher performance and smaller size in semiconductors for PCs, cell phones and other products. Hopes are high for using SiP not only to improve performance while lowering semiconductor package profiles, but also to lower electricity consumption. In the SiP field, TOK focused on creating technologies for making semiconductor chips thinner, stacking these chips and forming the through silicon vias (TSVs) for interconnecting the chips. The result was the development of the Zero Newton<sup>®</sup>. This remarkable wafer handling system is capable of creating thin semiconductor chips and forming the TSVs.



Schematic of semiconductor packaging with TSVs



Web For further information, please refer to:

>>>> Spinless<sup>®</sup>.net (Japanese only)

>>> Environment-Friendly Products http://www.tok.co.jp/en/company/csr/development.html http://spinless.net/

### **Environmental Communications**

By maintaining communications with stakeholders, we are determined to use feedback from stakeholders to improve our environmental programs.

### **Publishing the Environmental and Social Report**

TOK has been issuing an environmental report each year since fiscal 2002, positioning this publication as an important means of environmental communication. From the fiscal 2005 edition, this publication was renamed the Environmental and Social Report. Contents have been expanded to include our social activities as well as environmental programs.

This report minimizes the use of technical terms to provide a format that is easy to read and gives stakeholders a thorough understanding of our activities.

We feed back information and suggestions from questionnaires returned by readers

to related divisions in the Company, where they are used to develop environmental management programs of an even higher quality.

In addition, we use the "Eco Hot Line" of Infoword, Inc. to distribute our Environmental and Social Report to libraries, universities and other academic institutions throughout Japan. Please use the following address to request a printed copy of the TOK Environmental and Social Report.

http://www.ecohotline.com/ (Japanese only)

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Reports TOK has published

### Web Site Environmental Page

Our web site provides a broad range of information concerning environmental and social activities. Visitors can view our Environmental and Social Reports as well as data on environmental impact on individual sites and much other information.

### http://www.tok.co.jp/en/company/ csr/index.html



# **Dedicated to Progress in Microprocess Technology**

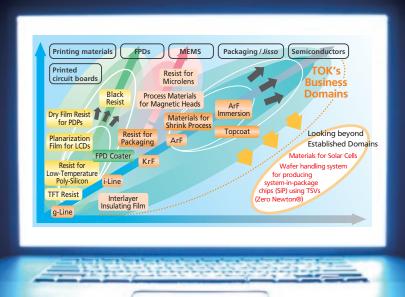
TOK is dedicated to seeking advances in microprocess technology to help create more fulfilling lives and contribute to social progress.

# The Benefits of Social Progress The Role of TOK in Society

We take pride in the important role we play in making people's lives more enjoyable and convenient. TOK supplies products that are vital to fabricating semiconductors, FPDs and other electronic parts. These items, in turn, become essential components of products we use almost every day, like computers, cell phones, flat-screen TVs and even automobiles.

As a company devoted to *monozukuri* (the art of manufacturing), we believe that developing and supplying outstanding products is our central role in society.

Progress in microprocess technology is one of the fundamental strategies of the third "TOK Challenge 21," our medium-term plan. Semiconductor fabrication technology is advancing in steps measured in nanometers. To support this progress, TOK is already at work on next-generation technologies and also the technologies that will follow. At the same time, we are looking beyond our current business domains. Entering new fields will require fresh ideas that are not restricted by current applications for our know-how or current business operations. Our objective is to start activities that have the potential of becoming TOK's core businesses of the future. We plan to do this by taking on the challenge of achieving more progress in microprocess technology.



### Special Feature 1 Dedicated to Progress in Microprocess Technology

### People benefit from microprocess technology in numerous ways day after day

Although not readily visible, microprocess technology is a vital element of your cell phone, digital camera, flat-screen TV and other home electronics. Even your car relies on this technology to offer better performance.

Industrial products depend on microprocess technology as well. TOK will remain a force behind the evolution of this technology in order to make our lives more enjoyable and convenient.

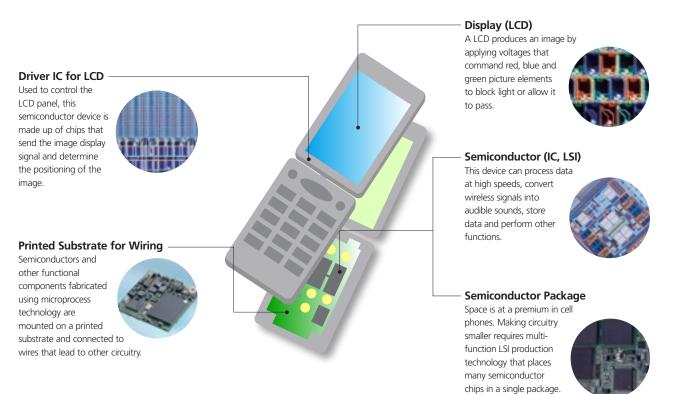






### How do TOK technologies play a role in creating more advanced products?

Cell phones are an excellent illustration. Small, lightweight handsets have e-mail, streaming video, music and many other capabilities. To offer even more functions, handsets will need smaller semiconductors and higher resolution LCDs. Without constant progress in microprocess technology, this would be impossible.



# Having started with measurements in micrometers, microprocess technology is now in the realm of nanometers

Current microprocess technology uses processes that form lines only 0.05% the width of a strand of hair. Driving progress invisible to the naked eye, TOK's microprocess technology is vital to improving the performance of electronic devices of all types.

Advances in microprocess technology have raised the density of semiconductor circuitry, which is instrumental to making products smaller and lighter. When mobile phones first appeared in the 1980s, a typical handset was about 20cm long and weighed 3,000g. Current handsets are small, slim and weigh only about 90g. Also, they are not merely telephones. Cell phones also function as digital cameras, MP3 players, TVs and Internet links. Text and visual communications are possible, too.

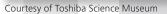
Photolithography\* is the key to this progress. This technology uses light to form microscopic lines on silicon wafers. Photoresist\*, TOK's core product, is an essential part of photolithography. Advances continue in the field of microprocess technology in the quest to make semiconductors with even finer circuit lines.

- ★ Photolithography: The use of light to form extremely fine patterns by using basically the same technology as for photographic film.
- $\star$  Photoresist: A photosensitive resin that acts and changes chemically when exposed to light.

Web For further information, please refer to: >>>> The World of Nanometers http://www.tok.co.jp/en/business/nanometre.html









64 Kb

### Microprocess technology drives progress in semiconductors

During the early 1970s, when the semiconductor industry was just starting to develop, the capacity of a DRAM\*, a widely used type of memory chip, was only 1 kilobit\*. Currently, advances in circuit density raised DRAM capacity to 1 gigabits, an increase of one million times. The one-kilobit chip had circuit lines that were 10 micrometers wide. In the advanced process technology, those lines are only 45 nanometers wide. By 2013, these circuit lines are expected to shrink to 22 nanometers. Naturally, circuit density within a chip climbs as the width of circuit lines falls. TOK's photoresist plays a pivotal role in forming these microscopic patterns on silicon wafers. Rising semiconductor density and memory capacity produce remarkable improvements in the data processing capabilities of computers and other electronic devices. TOK's products do their work behind the scenes, but their benefits are obvious to everyone in the form of better performance and more convenience in products that people use every day.

★ DRAM: Dynamic random access memory, a type of semiconductor memory device.

★ Bit: A unit used to measure the volume of data.

**Special Feature 2** 

KOV

# Managing Risks Involving the Environment and Health

# What risks are associated with chemicals?

Microprocess technology is vital to the manufacture of computers, cell phones and many other products that we rely on every day. Fabricating products that use microprocess technology requires many types of chemicals. One of these chemicals is photoresist, TOK's core product. Chemicals pose risks of varying degrees to our health and the environment. Failure to store and handle these chemicals properly can result in air, soil, water and other forms of pollution. Improper handling can even lead to accidents that may cause health problems. TOK is well aware of these risks. We identify risks in advance so that we can take a variety of preventive measures. TOK is dedicated to using technological progress to contribute to society. At the same time, we regard measures to lower environmental risks from our business activities as one of our greatest obligations to society.

# **Reducing Risk by Properly Managing Chemicals**

Properly storing and handling the chemicals used to manufacture our products requires a system to calculate the amounts of chemicals used and released. Also, managing chemicals requires controlling their use in many other ways. The procurement stage is one example. Checking chemical usage when products are designed is another important issue.

### Conducting a Management System for Substances Covered by the PRTR\* Law

The first step in managing chemicals is determining which chemicals and how much of them are discharged from specific production processes. Under the Japanese Pollutant Release and Transfer Register (PRTR) Law, companies are required to manage releases and transfers of chemicals and submit reports. TOK has its chemicals and PRTR management systems for the accurate determination of PRTR data and the submission of reports.

In fiscal 2007, TOK handled 42 of the

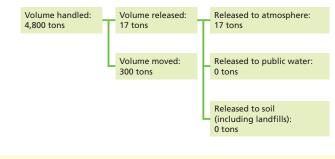
PRTR Law's 354 Class I Designated Chemical Substances. TOK handled 4,800 tons of these Class I chemicals during the fiscal year and released an estimated 17 tons of these chemicals into the atmosphere and public water systems. There was no soil contamination as TOK does not have waste material landfills at its production sites.

★ Pollutant Release and Transfer Register (PRTR): A system for collecting and officially announcing data on the sources and amounts of hazardous chemicals have been released into the environment or carried out of the plant as waste material.

### Chemicals and PRTR Management Systems



### Movement of PRTR Chemicals (Fiscal 2007)



### Web For further information, please refer to: >>>> List of Substances Covered by the PRTR Law http://www.tok.co.jp/en/company/csr/env-activity/prtr.html

### Managing Chemicals when Procuring Raw Materials

Countries worldwide have been enacting laws and regulations that prohibit the use of chemicals that are significantly harmful to people and the environment. In response, TOK has established a stringent management system that begins when chemicals are purchased. These systems are designed to lower our environmental impact and protect the environment. One component of our environmental policy is reinforcing our safety management system for chemicals. Based on this policy, we inspect raw materials for hazardous materials and legal conformity when purchases are made. When necessary, we ask suppliers to make improvements.

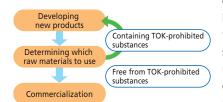
Customers want to reduce environmentally harmful substances used in our products. Meeting these demands requires more than merely complying with legal restrictions. Our goal is to achieve further reductions in the environmental impact of the ingredients that make up our products. In fiscal 2004, we established the Chemical Management Standards that prescribe chemicals to be managed and chemicals for which use is to be lowered or eliminated. Since then, we have used these standards to improve the environmental quality of our products. We plan to revise our standards as required to reflect revisions to laws and regulations in Japan and other countries.

### Special Feature 2 Managing Risks Involving the Environment and Health

3

### Prescreening for Harmful Substances at Product Design and Development Stages

Conceptual Chart of the Screening for Hazardous Chemicals



When designing and developing new products, we use a preliminary assessment system to ensure that products will not be harmful to the environment or the health and safety of people who use our products. We base this system on the TOK List of Prohibited Substances. This list incorporates the hazard rankings of laws and regulations, research institutions and other sources concerning substances that are carcinogenic, mutagenic, toxic to the reproductive system, or harmful in other ways. Starting with the design stage of new products, we perform assessments of chemicals to be certain that all newly developed TOK products are free of prohibited substances.

### **Providing Environmental and Safety Information on Products**

TOK has a management system for chemical information and for information that has been prepared and issued in the past. This system promptly supplies accurate environmental and safety information to our customers and operators at

our business sites. The system uses electronic material safety data sheets (MSDSs\*), which contain information on the properties of substances, how to handle them, and environmental and safety matters for chemicals in TOK products and prototypes. All of our MSDSs are based on the JIS Z 7250\* standard and comply with the PRTR Law, the Industrial Safety and Health Law and the Poisonous and Deleterious Substance Control Law.

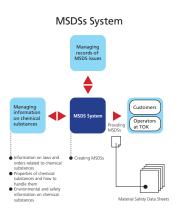
Countries worldwide are adopting unified standards for the classification and labelling of chemicals based on their level of danger and other risks. Japan has amended its Industrial Safety and Health Law to match this standard. As a result, TOK is required to comply with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). In response, we plan to revise our MSDSs to meet the GHS guidelines. The new European Union regulation on chemicals called Registration, Evaluation, Authorization and restriction of CHemicals (REACH) includes requirements for sharing information with business partners. For this purpose, we will perform more thorough surveys to determine how TOK products are used.

5

### Training People Who Manage Chemicals

Without the support of a well-trained and motivated workforce, even a highly sophisticated chemical management system will not improve the management of chemicals. This is why we have assembled a management system for chemicals that reflects the latest international trends. In addition, we properly manage chemicals at every workplace.

To implement the following measures right effectively, we must have a workforce that is highly trained. We are accomplishing this in many ways. We have company training programs and provide assistance for employees to earn official qualifications. In addition, employees participate in a variety of external seminars. Furthermore, we gather information from conferences and councils and make that information available to all associated TOK departments.



- ★ MSDSs: Material Safety Data Sheets are documents that include basic information on chemical products, including the names and amounts of chemicals contained in the products. The sheets also include information on how to handle products, the degree of danger, the effect on the environment, safety measures and other items.
- ★ JIS Z 7250: This refers to the section of the Japanese Industrial Standards (JIS) that stipulates the items, content of descriptions and overall structure for MSDSs.
- Risk evaluations based on the status of exposure of individuals to chemicals at each business site and, based on the results of the assessment, enactment of countermeasures to prevent this exposure.
- 2. In accordance with the rules in countries to which TOK products are exported, provide clear information about the danger, harm and handling precautions of chemicals, by using such method as picture labels on products to indicate the type of danger or harm. Also clearly establish measures to prevent health hazards based on MSDSs.
- Investigation to confirm compliance with restrictions, laws and regulations concerning chemicals that are established as prohibited substances and other substances by countries to which TOK products are exported.

# **Using Lessons Learned from Environmental Accidents**

There were two environmental accidents at TOK plants during fiscal 2006. We submitted reports to government agencies, confirmed the extent of the resulting pollution and took other necessary actions. In addition, we provided other business sites with information about the incidents and how each plant responded. Based on this information, other plants performed follow-up inspections, upgraded similar facilities and conducted employee training in order to prevent such incidents throughout the TOK Group.

### **Ikuno Plant**

In November 2006, the Ikuno Plant released effluents that exceeded the standards of the Japanese Water Pollution Control Law. This was caused by a malfunction of the acid neutralization equipment at the plant's wastewater treatment facility that resulted in the addition of too much neutralizing agent. When the release was discovered, emergency measures were taken to stop the discharge. We submitted reports to government agencies, confirming that there was no environmental impact on surrounding areas. To prevent a reoccurrence of this problem, we provided the required training for employees and security personnel, and took the following actions:

### 1. Improvements to equipment

We improved the acid neutralization equipment, replaced older components of this system and made other changes to this equipment. Furthermore, we established stricter management and inspections for equipment to discover problems before they cause an accident.

### 2. Containment of damage from leaks

We installed an automatic effluent return system that is activated when an abnormal effluent pH is detected, updated the emergency warning system and linked this system to external alarm systems. These actions are aimed at keeping damage from leaks to the absolute minimum.

### Aso Plant

An accident at the Aso Plant in December 2006 was caused by an inadequate safety inspection following the resumption of effluent treatment after repairs had been made. The accident resulted in an organic solvent release in the plant area. Including treatment of the organic solvents that were released, we took the following actions after this incident:

### 1. Clean-up measures

We recovered and treated as industrial waste the organic solvents that had been released into the plant's water discharge system. (No solvents reached wastewater channels outside the plant.) Contaminated soil at the plant was removed and treated, and other actions were taken to eliminate effects of the release. Almost all of the released organic solvents were recovered through these measures.

 Confirmation of environmental impact After completing clean-up operations, the plant installed an observation well to continually monitor the quality of the groundwater. (Measurements have confirmed the absence of any solvent pollutants.)

- 3. Measures to discover abnormalities quickly Leak sensors were installed at locations where built up liquids were accidentally released in order to discover abnormalities quickly.
- 4. Measures to prevent a similar abnormalities As an effective means of preventing accidents from reoccurring, we adopted stricter procedures to confirm that systems are operating properly following repair or maintenance work, and that newly installed systems are operating properly before using them for the first time.

### **Environmental Emergency Response Drills**

All business sites conduct drills to minimize the impact of an environmental accident after it has been discovered. Employees practice containment methods that are used in the event of a leak of organic solvents, toxic substances or other chemicals. Drills also include the notification of government agencies and other agencies.

Each domestic production site has emergency wastewater storage tanks and emergency shutoff valves. These facilities prevent effluents exceeding legal limits due to accidents and other events from directly reaching any external locations. We conduct drills to confirm that these facilities will operate quickly and properly when an emergency occurs. At the Ikuno Plant, all departments have conducted drills concerning the operation of the new automatic return pump system. The system was installed to prevent a reoccurrence of the effluent release that occurred in 2006.



Utsunomiya Plant



Ikuno Plant

# TOK's Measures for Ensuring Safety



Hiromi Anjou Labor Section Personnel Div. General Affairs Department

### [Personnel] Enhancing and Promoting Risk Assessment Activities to Prevent Workplace Accidents

TOK has established the following items as its priorities in fiscal 2008.

- 1) Enhance and promote risk assessment activities
- Continually take actions to reduce exposure to risks
- Take actions to prevent workplace accidents
- 2) A healthy mind and body
- Self-care seminars for employees
- Health management programs for individuals working for long periods of time (interviews with supervisors, etc.)
- Health management for individuals susceptible to developing metabolic syndrome

First, with regard to safety measures, we established a goal of enhancing and promoting risk assessment activities in fiscal 2008. The number of workplace accidents declined in fiscal 2005 and 2006 after reaching a peak in fiscal 2004. Unfortunately, the number of accidents increased in fiscal 2007. In fiscal 2008, we will continue to perform risk assessments and work on reducing exposure to risks. We believe these activities will contribute to the prevention of accidents.

Our goal is to eliminate accidents by using risk assessments. We also believe that risk assessments must ultimately aim for the elimination of all sources of danger in the workplace.

Workplace health and hygiene is another priority at TOK. In regard to mental health, there has been a steady increase in the number of employees taking time off for mental problems. Mental health measures are therefore a means of reducing the risk associated with employees taking extended breaks. In addition, mental health support can contribute to raising productivity and using human resources more effectively.

In fiscal 2007, TOK held seven "Line Care" mental health seminars for team leaders and management personnel. Individuals often do not realize they have a mental disorder. It is important for employees to be on the lookout for signs of problems among coworkers so that treatment can be started promptly. In fiscal 2008, we plan to conduct a number of self-care seminars for young and mid-level employees. The seminars explain ways to prevent mental problems, and also cover methods for individuals to determine for themselves if they are depressed.

In regard to physical health, Japan started a special health check up and guidance program in April 2008. The objective of the program, which is based on Japan's Law Concerning Health Care for Senior Citizens, is to prevent metabolic syndrome in individuals from the ages of 40 to 74, and improve their health. Health insurance associations are the primary source of guidance for people in this age group. We also urge employees under the age of 40 to participate in health maintenance follow-up programs by health nurses. We believe this will make people younger than 40 aware of the need to prevent metabolic syndrome.

Workplace safety and hygiene management are some of the most important social obligations of any company. A company is only as good as its workforce. We are aware that safety and hygiene programs are essential to eliminating accidents and providing workplaces where people can do their jobs without worrying about safety.



Yoshiaki Masu Process Equipment Development Div. Shonan Technical Center Process Equipment Manufacturing Department

### [Development] Using AED to Make Jobs Safer

Our primary activity in fiscal 2007 was a review of risk assessments. This process was not limited to ordinary business operations. We also wanted to determine whether or not TOK is selling safe equipment. Due to the need to perform work involving high voltages, we purchased an automatic external defibrillator (AED). Our department held classes and other training activities regarding the use of this device to reduce vulnerability to risks. As for mental health issues, we give individuals the opportunity to see an industrial physician once each month. We look after employees with regular health



care consultations. In fiscal 2008, we plan to work on preventing problems while increasing cooperation with industrial physicians, fire and police departments, and other external agencies. Our goal is the elimination of workplace accidents.



Hidenori Suzuki Material Purchasing Section Material Purchasing Div. Purchasing Department

### [Purchasing] Managing Many Chemicals with the Exclusive TOK System

The chemicals we sell must deliver the precise specifications required by each customer. To provide these specifications, we frequently purchase highly specialized raw materials formulated specifically for our needs. We procure various raw materials from suppliers. We must have a system for safely handling this large number of chemicals. This is why one of our environmental policies is to reinforce the safety management system for chemicals. We are making this a priority. We will perform this management using a stringent framework based on the chemical management standards system established by TOK's Safety & Environment Control Division.

Reinforcing safety management systems for chemicals also involves compliance with environmental laws and regulations as well as meeting customers' demands. Reducing the environmental impact of the raw materials used in our products is vital to achieving these goals. To do this, we clearly define chemicals that must be managed. We ask suppliers to perform surveys of the contents of each raw material. We want to know what substances are included in the raw materials in our products, and we want to prevent the use or inadvertent addition of unwanted substances during manufacturing. We also ask for information on how substances are handled. In addition to these activities, we ask suppliers to perform their own extensive internal management programs. This further contributes to improving the environmental quality of TOK products.

Along with these measures, TOK places priority on purchasing materials that can be easily recycled, and thus have a low environmental impact. Recovering and then recycling or reusing effluents (organic solvents) at our plants and our customers' plants is another important aspect of our environmental programs.

Takuro Ikemoto Safety & Environment Control Section Safety & Environment Control Div. Manufacturing Department





Tetsuya Kudo Manufacturing Section 1 Gotemba Plant Manufacturing Department



Many TOK products are subject to manufacturing and import restrictions in the countries where our products are manufactured or imported. One role of the Safety & Environment Control Section is to ensure compliance with these restrictions. We do this by submitting applications and notices as required by Japan's Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances and Occupational Safety and Health Law, the U.S. Toxic Substances Control Act, and other laws. We then use TOK's database to confirm that chemicals are manufactured and imported in the amounts stated in these applications and other documents.

### [Gotemba Plant] Improving Facilities to Provide Jobs for Physically **Challenged Individuals**

The Gotemba Safety and Health Committee is creating workplaces that can accommodate the needs of workers with special needs. Factory facilities have been improved for older and physically challenged individuals. For example, we installed handrails on stairways and in rest rooms. The Gotemba Plant did this on its own rather than as part of a TOK program. Furthermore, two physically challenged individuals spent time working at our plant in fiscal 2007 as a program aimed at helping them become self-reliant. Another measure was the provision of parking space near the plant for workers who have difficulty walking or who use wheelchairs. Our committee will continue to discuss this issue and work with labor unions to make more improvements to our working environment.



Masanori Abe Plant Administration Section Ikuno Plant Manufacturing Department

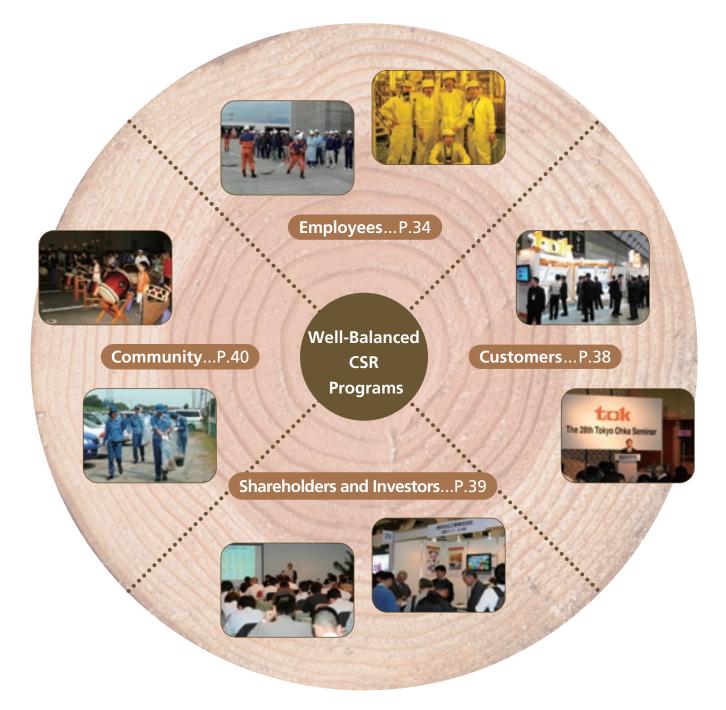
### [Ikuno Plant] A Record of Consecutive Accident-free Years

At the Ikuno Plant, we establish our own priorities in addition to concentrating on the fiscal year priorities. To help protect the environment, our monthly Safety and Health Committee meetings are paperless, relying solely on computers and projectors. There is always a lively discussion. Departments and task forces submit reports, patrol units provide information, and other subjects are covered. We have been working toward the goal of 500,000 continuous accident-free working hours since May 11, 2005. We reached this goal in May 2008, and we have raised the target to one million hours.

Improving activities regarding mental health is a goal for fiscal 2008. We are concentrating on self-care and linecare programs. We have established our own goal of encouraging people to eat a balanced diet and exercise in order to prevent metabolic syndrome. Additionally, as part of measures to prevent damage to the health of employees, we constructed completely enclosed smoking areas to protect workers from second hand smoke.

### **Committed to Earning the Trust of All Stakeholders**

TOK's operations are made possible by the support of customers, shareholders and other investors, employees, communities hosting our facilities and many other stakeholders. We are determined to earn high levels of trust and satisfaction from all these groups. We are working toward this goal in many ways: a strong commitment to CSR, the manufacture of outstanding products, an extensive investor relations program, working on social program, and other activities.



### **Relationship with Employees**

We place priority on creating a workplace that is safe and healthy and that encourages employees to do their best.

### **Basic Policy of Human Resources**

• Never forget that business always starts with "people" Since our foundation, Any discrimination within the Company and among employees is strictly prohibited operations in line with Full compliance with applicable laws and regulations, as well as fair and equal compensation human resources are • Educate personnel and promote creativity to become a company that develops innovative technologies our most valuable asset. Personnel systems based upon performance, emphasizing and ensuring transparency

### **Personnel Training and Development Measures**

### Personnel System

we have conducted

the basic policy that

TOK's Personnel System, comprising the rank system, the remuneration system, the evaluation system and the "job challenge" system, supports us in promoting a new approach to utilizing human resources. Our goal is to create a more rewarding workplace by evaluating employees on their job performance.

### **Rank System**

The rank system allows talented employees to earn early promotion. The system offers employees the option of a career course based on choosing where you work, depending on aptitude, education, assignment and rotation, and a career course based on qualifications, depending on duties and responsibilities.

### **Remuneration System**

Under the remuneration system, employees receive a "base salary" that reflects their skills and performance and a "job category salary" that reflects the nature of their work and responsibilities. For regular employees, the "base salary" comprises remuneration based on "functional skill

grade" and on "job performance." For executives, remuneration primarily reflects their achievement of the performance required in their particular "functional skill grade." Furthermore, there are upper and lower payment limits for each level of qualification. This system eliminates seniority-based salaries and gives younger employees the opportunity to earn more.

### **Evaluation System**

The evaluation system combines the assessment of "performance" measured against the yardstick of employees accomplishing their respective goals and assignments and the processes by which they achieve their goals and assignments; that is, "competency" in carrying out each duty and responsibility. This approach eliminates all other factors, such as age, academic background and gender, from the evaluation system.

### "Job Challenge" System

This system was initiated as a means to assist employees taking on the challenge of doing new tasks of their own volition. The aim is to have employees take charge of their own careers. The "job challenge" system is composed of the following two parts.

### 1. Free Agent System

In this system, individuals select the position they wish to fill and are then interviewed. The decision on whether or not to approve the transfer is based on a comprehensive array of factors, such as skills, career goals and self-education. This system encourages individuals to take on new challenges to expand the choice of their career paths, thus moving away from the system where the Company makes assignments.

### 2. Career Challenge System

This system allows employees to apply for work at a particular location. The request is then referred to the employee's current division and desired division and a decision is taken based on the individual's character, skills and other factors. In principle, employees must return to their original division within five years. This system enables employees to explore their personal growth direction and role within

the Company from a medium- and longterm perspective. It allows individuals to gain experience in more fields of expertise and develop skills by performing various tasks, and it also encourages them to become more motivated to reach career goals.

### Self-Reporting System

Employees submit a report on their activities once each year. The report covers qualitative and quantitative items concerning their jobs, the working environment, wishes concerning jobs and work locations, messages to be communicated to management and other items. Studies based on these reports are submitted to the supervising director. The reports are used to develop skills, including careers, ensure the proper deployment of personnel, improve working environments and take other actions.

### An Experience Using the Career Challenge System

I have been assigned to the Manufacturing Section of the Sagami Operation Center since I joined TOK 12 years ago. Recently, TOK decided to move the operations of my section to the Kumagaya Plant. I viewed this as an excellent opportunity to learn about another TOK plant. So, I applied to participate in the Career Challenge (CC) System with the aim of upgrading my skills.

TOK sent me to the Shonan Technical Center. Employees at this center go on many business trips in Japan and overseas. The customers they meet span many cultures and languages. This experience is very different from working at the Sagami Operation Center. Furthermore, CC gave me a 180 degree change in my work, shifting from the materials business to the equipment business. This is creating many difficulties that are still continuing. I have a lot to learn, and I want to acquire as much knowledge as possible during this experience.



Kiyofumi Yukawa Section 1, Engineering and Control Div. Shonan Technical Center Process Equipment Manufacturing Department

(Transferred from Sagami Operation Center to Shonan Technical Center using CC System)

I think the CC System is an opportunity for people to change themselves and grow by taking on new challenges. I'm working hard every day during this CC assignment so that I can use this experience in my future assignments at TOK.

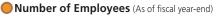
### **Employments**

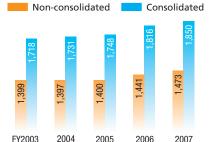
### Non-Consolidated Employee

### Information (As of March 31,2008)

	Number of employees	Average age	Average service years
Male	1,201	38.3	15.8
Female	141	30.1	8.2
Total or Average	1,342	37.4	14.4

Note: Number of employees does not include 86 seconded and 131 contract workers and includes one seconded worker from another company.





Note:Number of employees on a consolidated and non-consolidated basis excludes seconded workers outside of the TOK Group.

### Employment of Disabled Persons

Handicapped persons represented 1.58% of our total work force as of March 31, 2008 (legal minimum is 1.8%). TOK is committed to achieving the legal minimum rate.

### Rehiring System

The Rehiring System was established in April 2003 under which regular and contract employees who have passed the mandatory retirement age may apply to be rehired by the Company. The program targets such individuals who have the motivation, skills and stamina to continue making a contribution. Individuals are rehired until the day they reach the age when they become eligible for the full Welfare Pension program, which is currently 63 but will be raised to 65 from April 2009.

As of the end of March 2008, 18 individuals had been rehired under this program, reaching 85 individuals in total.

### Labor Relations

The Tokyo Ohka Kogyo Labor Union was formed in 1976. The Company has a union shop agreement with the labor union. Relations with the Company's labor union have always been cordial from the beginning, as the union is grounded in the concept of "Labor-Management Cooperation." Labor and management meet once every two months and exchange opinions on a variety of issues, from the operating environment to labormanagement relations.

### Realizing Ideal Working Conditions

### Time-Off System for Child-Raising

In July 1990, TOK introduced a system that gives employees time off to look after their children. The Time-Off System for Child-Raising gives an employee the option of taking leave from the birth of a child until the child is 18 months old or the first April 30 after the child's first birthday, whichever is longer. Under certain conditions, this enables an employee to take up to two years' leave, which exceeds the leave period required by law. In principle, an employee can return to his/her former position or a similar position elsewhere. Employees can also ask for shorter working hours from their return until their children begin elementary school. Moreover, TOK started the Child Care System (flextime) in October 2007 to provide more assistance for employees with preschool children.

As of the end of March 2008, a total of 49 employees were using the Time-Off System, 22 employees were using the Reduced-Time System, and seven employees were using the Child Care System. In fiscal 2005, TOK established an action plan based on the Law for Measures to Support the Development of the Next Generation. Our goal is to provide workplaces that make it easy for individuals to perform their jobs while also fulfilling responsibilities at home.

### Time-Off System to Care for a Family Member

In July 1992, TOK introduced a system that gives employees time off to look after a parent or other family member in need of care. Under the Time-Off System to Care for a Family Member, time off was extended to up to a total of 366 days, which exceeds the period under the law. Moreover, the Company continues to pay health insurance and pension premiums during the time the employee takes off, except for contract workers. In principle, an employee can return to his/her former position or a similar position elsewhere.

Employees can also request a shorter working day so that they can care for a family member while continuing to work. As of the end of March 2008, a total of seven employees were using the Time-Off System.

### An Experience Taking Time-Off System for Child-Raising

I returned to work in December 2007 when my daughter was 16 months old. During my time off, I had the opportunity to see my daughter grow day by day, watching every expression and activity. I am very thankful to TOK for having this system. I am also grateful for the understanding and cooperation of my supervisor and coworkers.

Now that I'm back at work, I use TOK's reduced working time system. I'm doing my job while benefiting from the support of many people in my office. I hope that more women at TOK take advantage of this system.



In March 1993, TOK adopted a system that assists employees who wish to continue working following a serious disease or injury. Under this system, an employee who has the will to work but cannot do so because of serious disease or injury (absence for convalescence) can opt for short-term recovery leave, longterm recovery leave or special long-term recovery leave. The Company supplements employee's pay depending on the type of leave.

### Break-In Working System

On April 1, 2005, TOK introduced the Break-In Working System to assist employees to return comfortably to work after an absence of one month or longer due to illness or injury. The breakin period is limited to one month upon an employee's return and allows the employee a shorter working day during this period.

### Charitable Activity Holiday System

Under the Charitable Activity Holiday System, which we have offered since July 1993, employees can take leave for up to two years and four months to participate in the activities of the Japan Overseas Cooperation Volunteers.



Yumi Yoshimura Plant Administration Section Administration Div. Sagami Operation Center Manufacturing Department

### Time-Off System for Bone Marrow Donors

TOK started offering time off for bone marrow donors in September 2005. We want to support the social contributions of employees by reducing the burden involved in bone marrow donation, from registration through the actual transplant. Employees can receive up to six days off for examinations and hospital stays for transplants, which are used to treat leukemia and other disorders.

### System for Accumulating Expired Paid Leave

Established in April 2008, this system allows employees to accumulate annual paid leave that had expired due to the inability to use that time during the specified period. The purpose is to permit employees to make effective use of this leave in the event of an injury, disease or other problem. Vacation time can also be used in half-day increments. A maximum of five days can be added each year and a total of up to 30 days can be stored for future use.

### Time-Off System for Child-Rearers

TOK started offering time off for rearers nursing children in October 2002. Employees who have pre-school aged children can use this system for nursing, bringing their children to hospitals, and transportation to and from nursery school. A maximum of five days can be taken a year.

### Occupational Safety and Health

### Mental Health Care

In April 2004, we expanded our health care service, establishing a help desk for access to mental health professionals, to promote good health among employees as part of the Tokyo Ohka Kogyo Health Insurance Association. Interviews and consultations are provided upon request. Since no personal information is passed on to the Company, employees can use this service to discuss family matters and any other problem with complete confidence. Sites distribute materials concerning mental health to educate employees about this subject.

#### Prevention of Sexual Harassment

A number of measures are taken to prevent sexual harassment and deal with problems. All employees receive a sexual harassment prevention handbook and we have established a detailed set of rules concerning sexual harassment. These rules specify the division responsible for this subject as well as procedures for dealing with any problems.

### Prevention of Workplace Accidents

Each site has its own Safety and Health Committee to conduct activities aimed at preventing accidents. Employees undergo training and conduct drills in accordance with carefully formulated plans. There is also a corporate-level Safety and Health Committee to facilitate the exchange of information among the sites and perform the comprehensive oversight of various programs. A manual has been prepared so that proper emergency responses can be made in the event of an accident or other incident.

Unfortunately, there were four losttime incidents in fiscal 2007. TOK will continue to make concerted efforts to prevent workplace accidents, with the goal of bringing down to zero not just actual accidents but also the risk of accidents.



Frequency rate: (Casualties due to labor accidents / total working hours)  $\times$  1,000,000

Casualties due to labor accidents indicate those who have been killed or injured and have taken one or more days off work.



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Our production facilities stock several kinds of large fire fighting pumps, fire extinguishers and fire extinguishing agents. The in-house fire service responds immediately in the event of a fire and tries to extinguish or control the fire until the fire department arrives.

The in-house fire service actively participates in regional fire fighting technology events to demonstrate its fire fighting techniques, to participate in mutual exchanges of technology and expertise and to polish its fire fighting knowledge on a daily basis.

### **In-House Fire Fighting**



In-House Fire Service

Severity rate: (Lost-time days / total working hours)  $\times$  1,000

Lost-time days mean total lost-time days resulting from casualties due to labor accidents.

Lost-time days are calculated using the following standards:					
Death:	7,500 days				
Permanent total inability to work:	Number of days for Grade 1 to 3 physical disabilities (7,500 days)				
Permanent partial inability to work:	Number of days for Grade 4 to 14 physical disabilities (50 to 5,500 days according to the applicable class)				
Partial inability to work:	Number of days obtained by multiplying the number of idle calendar days by 300/365				

Note: Data on the chemical and manufacturing industries used in the graphs come from *The Results of Labour Accident Trend Surveys* published by the Ministry of Health, Labour and Welfare.

### Tokyo Ohka Foundation for the Promotion of Science and Technology

The Tokyo Ohka Foundation for the Promotion of Science and Technology was established in May 1987, with the mission of promoting peace and prosperity through advances in science and technology. To this end, the foundation awards grants for research and development and for exchanges for science and technology projects with the potential to contribute to industrial and economic development. In fiscal 2006, the foundation started a new aid program that provides grants for the advancement and greater awareness of science education.

In fiscal 2007, there were 36 grants totaling ¥28 million. As of June 2008, the Tokyo Ohka Foundation had distributed 510 grants totaling ¥391 million since its establishment. To celebrate its 20th anniversary, the foundation held a ceremony in November 2007 along with a commemorative seminar that many people attended.

Please refer to the foundation's website for more information on aid programs. (Japanese only) http://www.tok-foundation.or.jp/index.html

### **Relationship with Customers**

TOK is committed to building a relationship of trust with its clients and to raising customer satisfaction by supplying products that match the needs of customers and which they can use with complete confidence.

### **Communication with Customers**

TOK regularly conducts customer opinion surveys to get an objective evaluation of its services. The results are fed back not only to the sales representatives but also to all concerned divisions. This information is used to develop concrete reform measures and responses, and to determine updates and changes.

### **Quality Management Program**

To provide products and services that excel in terms of quality and performance, new products undergo risk assessments at an early stage of their development. These and other activities ensure that products with consistently high quality can be supplied from the time that mass production begins. The quality of existing products is monitored so that any abnormalities can be

quickly identified and necessary actions be taken.

In fiscal 2006, we introduced the Manufacturing Execution System (MES)\* at the Koriyama Plant, our state-of-theart photoresist manufacturing facility. The introduction of this system will enhance efficiency and enable us to consistently manufacture higher-quality products.

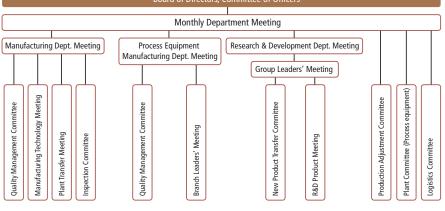
Most of our production facilities have earned ISO 9001 certification (the international standard for quality management systems). We regularly hold meetings in which all Company divisions participate. The goals are to make concerted efforts to enhance quality by actively disseminating information on the effectiveness of the quality management system and to exchange information.

TOK is committed to continuous improvements in its highly dependable quality management system, as a means to enhance customer satisfaction.

★ Manufacturing Execution System (MES): A technique for providing information for managing and optimizing all manufacturing processes, from receipt of order to manufacture of the product.

### Board of Directors. Committee of Officers

System of Meetings for Quality Management



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### **Tokyo Ohka Seminars**

The annual Tokyo Ohka Seminars have been held since fiscal 1980. In addition to lectures by outside experts, the seminars are a forum for presenting our new technology and products and for exchanges of information and identifying the needs of customers.

Approximately 240 people attended the fiscal 2007 seminar, the 28th in the series. We also held seminars in Singapore (The 5th TOK Seminar in Singapore) and Shanghai (The 5th TOK Seminar in Shanghai).



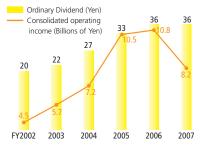
# **Relationship with Shareholders and Investors**

Proving worthy of the trust of our investors and measuring up to their expectations are important management issues. We will work toward these goals by maximizing our corporate value through sustained growth and sharing profit with our shareholders. Another priority is a timely and suitable information disclosure program for investors in order to maintain the transparency of business activities.

### Distribution of Earnings to Shareholders

Distributing earnings to shareholders is one of TOK's highest management priorities. TOK is committed to paying a dividend based on the current dividend as well as TOK's financial position, operating results and other applicable items from a long-term perspective. We also take into consideration the need to maintain adequate retained earnings, which are vital to becoming more competitive and increasing earnings. Based on these factors, the Company's fundamental policy is to consistently pay a dividend that is at least 20% of consolidated earnings. In addition, we acquire treasury stock in a flexible manner as another means of returning earnings to shareholders from a long-term perspective. To further increase shareholder value and implement flexible capital strategies we acquired one million shares of treasury stock in fiscal 2007.







The primary mission of our IR activities is to ensure the timely release of corporate information, such as management strategy and financial results, in a manner that is fair and proper for all shareholders and investors. Information and comments obtained through IR activities are fed back to management and used in the formulation of management and operations policies.

➤Investor Relations (IR): A generic term that refers to activities related to providing corporate information to shareholders and investors.

### Meetings and Other Events for Investors

TOK holds information meetings for earnings announcements as well as tours of facilities and other events for institutional investors and securities analysts. We also welcome



Nomura Asset Management Fair

visits from investors and analysts at any time. We provide streaming video of the biannual financial results briefing on our web site to make this information available to individual investors. In fiscal 2007, TOK participated in the Nomura Asset Management Fair, an event for individual investors, to give these individuals an opportunity to gain a better understanding of the Company's operations.

### Preparation of Easily Understood Communication Materials

We prepare a business report (in Japanese) and an annual report (in Japanese and English) to provide shareholders and other investors with information on our activities. In addition, a broad range of information is available on our web site. All these means of communication are written and arranged to make them easy to understand.



Financial results briefing





Business Report





http://www.tok.co.jp/en/ir/index.html

Web For further information, please refer to: >>>> IR Information http://www.tok.co.jp/en/ir/index.html

### **Relationship with the Community**

As a good corporate citizen, the TOK Group is involved in a broad spectrum of volunteer, educational and other social service activities in the regions in which it operates, in order to reach out to and enhance communication with local communities.

### Major Volunteer Activities

Employees at every TOK production facilities in Japan periodically clean up surrounding areas, an activity that makes them more aware of the need to protect the environment. At the Aso Plant, for example, employees work closely with local residents in community activities, including a



Aso Plant

### Factory Study Tours —— (Aso Plant)

In fiscal 2007, the Company invited students from a junior high school near the Aso Plant. The study tours provide students with practical information on products and equipment that supplements their textbook studies.



Factory study tour at the Aso Plant

### Blood Donation on -Red Cross

Every year, the blood donation activity is executed once or twice at each business site. Many employees participated in the blood donation in fiscal 2007.



Blood Donation (Headquarters)

clean-up program to help preserve *miyamakirishima*, a protected flowering plant that thrives in the outer rim of the Mt. Aso crater. At the Sagami Operation Center, employees help clean the banks of the nearby Sagami River and participate in patrols to stop illegal dumping of waste. Employees at the



Sagami Operation Center

center also participate in the community's beautification campaigns.

Moreover, employees of TOKYO OHKA KOGYO AMERICA, INC. (Oregon Plant) are conducting clean-up activities around their plant.



Oregon Plant

### Dragonfly Pond Living Nature Observation Tour – (Gotemba Plant)

In August 2007, children and their parents were invited to participate in a Living Nature Observation Tour at the Dragonfly Pond, a biotope<sup>\*</sup> on the grounds of the Gotemba Plant.

The Gotemba Plant will continue to contribute to environmental conservation and society through this biotope environmental initiative.

★Biotope: A German term derived from the words "bio," which means life, and "top," which means place. Biotope refers to a particular space that is created for wild plants and animals.



Parents and children observing living nature at the Gotemba Plant

# Noryosai (Sagami Operation Center, Shonan Technical Center)

TOK held its 22nd annual *Noryosai* (summer festival) at the dormitory and Company housing complex adjacent to the Shonan Technical Center in August 2007. Many local residents, employees of business partners and others attended the event. TOK employees sold food and other items at booths and held a traditional *obon* dance. It was another opportunity to provide an enjoyable evening for people of all ages.



Noryosai

### **Corporate Information**

### Corporate Data (As of March 31, 2008)

Corporate Name: Established	TOKYO OHKA KO October 25, 1940	GYO CO., LTD.	
Headquarters:	150 Nakamaruko,	Nakahara-ku	
neuquarters.	Kawasaki, Kanagawa 211-0012, JAPAN		
	TEL. +81-44-435-3	3000	
President:	Yoichi Nakamura		
Paid-in Capital:	¥14,640 million		
Number of Employees	: Non-consolidated:	1,473	
	Consolidated:	1,850	
Net Sales (FY2007):	Non-consolidated: Consolidated:	¥86,102 million ¥102,300 million	

### **Business Activities**

### Material Business



### **Electronic Functional Materials**

We offer a diverse range of photoresist, which is a widely used material that is essential for the microprocesses involved in the manufacture of semiconductors, FPDs, semiconductor packagings / jisso, printed circuit boards and other electronic products. We also supply materials for forming interlayer insulating film and planarizing insulation film, which are required as advanced microprocesses in semiconductors raise the number of layers of circuitry. TOK contributes to progress in the electronics industry by developing and supplying products that offer higher performance and quality.



### **High Purity Chemicals**

As a comprehensive manufacturer of photoresist, TOK uses its knowledge of this material to supply a wide variety of photoresist-related chemicals such as developing solution, stripping solution, rinsing solution, thinner and other chemicals. In addition, TOK manufactures inorganic and organic chemicals used in a wide range of industries.



### **Printing Materials**

Products include photopolymer plates used in letterpress / relief printing for corrugated board, wrapping paper, beverage cans and other applications, and PS plates used in offset printing / plate making materials. To address environmental issues, TOK is working on the development and refinement of flexographic printing plates. These activities enable the Company to meet customer demands for products that reduce pollution, raise quality and optimize printing efficiency.

Equipment Business



### Process Equipment

This equipment includes photoresist coating and developing machines used to manufacture LCD panels as well as a variety of semiconductor manufacturing equipment. By developing photoresist along with related materials and equipments, the synergetic effects can be generated to the fullest. In this way, TOK can strongly support its customers.

Web For further information, please refer to: >>>> Corporate Profile http://www.tok.co.jp/en/company/about/index.html

### **Third Party Opinion**



Mitsuru Hirota, Ph. D. Professor Department of Bioscience and Biotechnology, Faculty of Agriculture, Shinshu University

### **TOK's Response**



Susumu Ichikawa General Manager, Safety & Environment Control Division, Manufacturing Department

Today, we are witnessing a chain of events that is affecting the environment on a global scale. Rising concentrations of CO<sub>2</sub> are a cause of global warming, which is associated with unusual weather patterns. At the same, the increasing cost of crude oil is raising the production of bioethanol, which is in turn causing the price of grain to climb. How should people, countries and the world respond? What should companies do to deal with these rapid economic shifts? Never before has the world been faced with such difficult decisions.

I was given the opportunity to read this year's TOK Environmental and Social Report, as I also did last year. The 2008 report places greater emphasis on corporate social responsibility, with particular focus on environmental accidents and occupational safety and health. There is information on the safety and health programs at individual business sites and other information. I was impressed with TOK's dedication to the safety and health of its workers from the standpoint of a company that recognizes the importance of its employees.

Regarding TOK's environmental activities, I want to see TOK work even harder at making improvements based on a unified recognition of issues. In addition, TOK should not limit its environmental activities to manufacturing. I hope to see TOK use its technologies to adopt a more aggressive stance toward making a contribution to dealing with the environmental changes occurring worldwide.

TOK continued to conduct a variety of environmental and social programs during the past year while reflecting the suggestions and comments of Mr. Hirota. Regarding goals, we established fiscal year targets for reducing the environmental impact of each TOK plant and incorporated those targets in our daily activities. However, we are aware of the need to establish even more practical and clearly defined targets from a long-term perspective.

In the current fiscal year, in addition

to existing programs to lower our environmental impact, we are making environmental programs an even greater element of our business activities. For example, we have started developing a manufacturing process for solar cells. Through R&D activities, we want to create more ways to use TOK's technologies to protect the environment. TOK will continue to use the feedback of Mr. Hirota and others to enhance our environmental and social activities.

### **Editor's Note**

Thank you for taking the time to read the TOK Environmental and Social Report 2008.

We hope that you have found the information in the TOK Environmental and Social Report 2008 to be interesting and useful. This year's report contains a variety of information and data on environmental and social activities. There are also feature sections that discuss advances in TOK's technology and our efforts to prevent environmental accidents. Since this publication is distributed to all our stakeholders, we have used a format that makes the information easy to understand for a general audience. This year, some information that was supplied in last year's report has been posted instead on our website. This allows us to supply more detailed data about environmental and social activities. Please visit our website to see more information about the subjects in this report. Also, please take the time to complete the attached questionnaire so that we can use your comments and suggestions to make next year's report even better.

September 2008 Safety & Environment Control Division

# tok TOKYO OHKA KOGYO CO., LTD.

http://www.tok.co.jp/

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