Tokuyama Corporation

Corporate Social Responsibility Division
Kasumigaseki Common Gate West Tower
2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-8983, Japan
Tel: +81-3-6205-4835 Fax: +81-3-6205-4882
www.tokuyama.co.jp

Cover Story

The leaves on the cover symbolize people, society and the environment. A combination of orange and green conveys Tokuyama's vibrant, active and dynamic corporate image. Also, the design on the cover depicts the fusion of two colors, with the green on the top half of the page and the orange on the bottom half of the page blending with each other in the middle. This represents the positive stance of the Tokuyama Group toward pursuing corporate growth and achieving its Centennial Vision.

International Year of CHEMISTRY 2011

The year 2011 is the International Year of Chemistry (IYC 2011). The United Nations General Assembly proclaimed 2011 as the International Year of Chemistry (IYC 2011) to mark the 100th anniversary of the Nobel Prize in Chemistry awarded to Madame Marie Curie.
www.chemistry2011.org/

This report is printed on FSC-accredited paper with pure plant oil ink, which contains no volatile organic compounds, utilizing a dry printing process that uses no water, thus precluding release of any harmful effluents.

Date of issue: October 2011
Next issue: Scheduled for October 2012

Tokuyama Corporation　CSR Report 2011

Chemistry with a heart
TOKUYAMA

In Harmony with People, Society and the Environment

CSR Report 2011

Responsible Care®

Toward Achieving the Centennial Vision

Contents

Centennial Vision

February 16, 2018 will mark Tokuyama's centennial founding anniversary. The basic strategies under the Centennial Vision call for a selection and concentration approach to strengthen strategic growth businesses and to bolster international competitiveness. We will concentrate our energies on promoting human resource-based management and CSR activities, as these activities provide the foundations of our basic strategies.

An Ideal Tokuyama Group

"A manufacturing company that exists in harmony with society and creates a brighter future with the vitality of its human resources and its creativity based on chemistry"

Editorial Policy

- The *CSR Report 2011* has been compiled with the aim of bringing Tokuyama's activities—directed at meeting its corporate social responsibility in fiscal 2010—to the attention of all concerned, including shareholders, investors, trading partners, employees and their families, people living near its production sites and other people in general.
- As with the 2010 edition, Tokuyama asked Ms. Eriko Nashioka of the Institute for Environmental Management Accounting to offer independent comments on this report. The purpose of the independent comments is to continuously seek feedback and ratings that help the Company to fulfill its social responsibility. Details of Ms. Nashioka's comments are available on page 50.
- This CSR report has been prepared based on the Environmental Reporting Guidelines (Fiscal 2007 edition) published by the Ministry of the Environment.
- This CSR report is also available via Tokuyama's website at: www.tokuyama.co.jp/eng/enviro/

Scope of the Report

Period: All performance data is for fiscal 2010, from April 1, 2010 to March 31, 2011. Certain activities undertaken after April 1, 2011 are included.

Companies: Tokuyama Corporation (Environmental performance data is for the Tokuyama Factory and the Kashima Factory.); certain environmental performance data includes total values for 11 major production companies within the Tokuyama Group (see page 48).

Region: Activities in Japan (including some overseas Group companies)

Date of issue: October 31, 2011 (The next edition will be issued in October 2012)

Accelerating Our Growth Strategies

Tokuyama is promoting the following growth strategies under its management slogan,

"Venture Spirit & Innovation,"

toward achieving its Centennial Vision.

GROWING

Strengthen Strategic Growth Businesses (See page 16)

Upholding a basic strategy, "Strengthen Strategic Growth Businesses" under its Centennial Vision, Tokuyama has begun the construction of a new Malaysia Factory for the manufacture of polycrystalline silicon for solar cells, which will boast an annual capacity of 6,200 tons when launched. By making this new factory the second flagship manufacturing base for this product following its Tokuyama Factory, Tokuyama aims to keep improving its world-class supply capability.

CREATING

Create New Businesses (See page 24)

Tokuyama creates environmental technologies and products by giving due consideration to social contribution factors and environmental impact reduction from the product development stage. Under its Centennial Vision, Tokuyama has defined a growth strategy, "Create New Businesses with Global Competitiveness." To help society solve worsening environmental issues through chemical technologies, Tokuyama will accelerate the development of such innovative products as aluminum nitride and materials for fuel cells.

INTEGRATING

Bolster International Competitiveness (See page 32)

The source of the Tokuyama Factory's competitiveness is the unparalleled energy efficiency in manufacturing operations and superior technologies nurtured through these operations. By refining its integrated manufacturing operations, Tokuyama is working to establish a highly profitable business structure. At the same time, by developing the Tokuyama Factory into its "Mother Factory," the Company will continue to reinforce its international competitiveness. Furthermore, we aim to make the Tokuyama Factory a manufacturing base that coexists and grows with local communities while establishing close communication with our stakeholders.

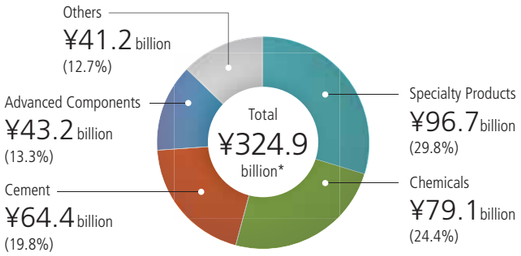
The Tokuyama Group at a Glance

(as of March 31, 2011)

Company Outline

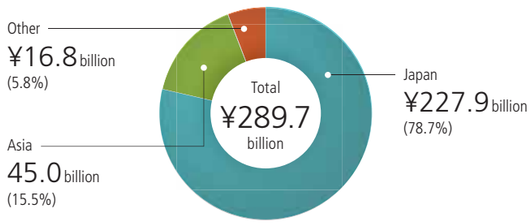
Company name:	Tokuyama Corporation
Established:	February 16, 1918
Capital:	¥53,458 million
Registered address:	1-1, Mikage-cho, Shunan-shi, Yamaguchi, Japan
Head office:	Kasumigaseki Common Gate West Tower, 3-2-1, Kasumigaseki, Chiyoda-ku, Tokyo, Japan
Branches and offices:	Sendai, Nagoya, Osaka, Takamatsu, Hiroshima and Fukuoka
Production and research sites:	Tokuyama Factory, Kashima Factory and Tsukuba Research Laboratory
Number of consolidated subsidiaries:	50
Number of equity-method companies:	9

Sales Breakdown by Segment (Fiscal 2010)

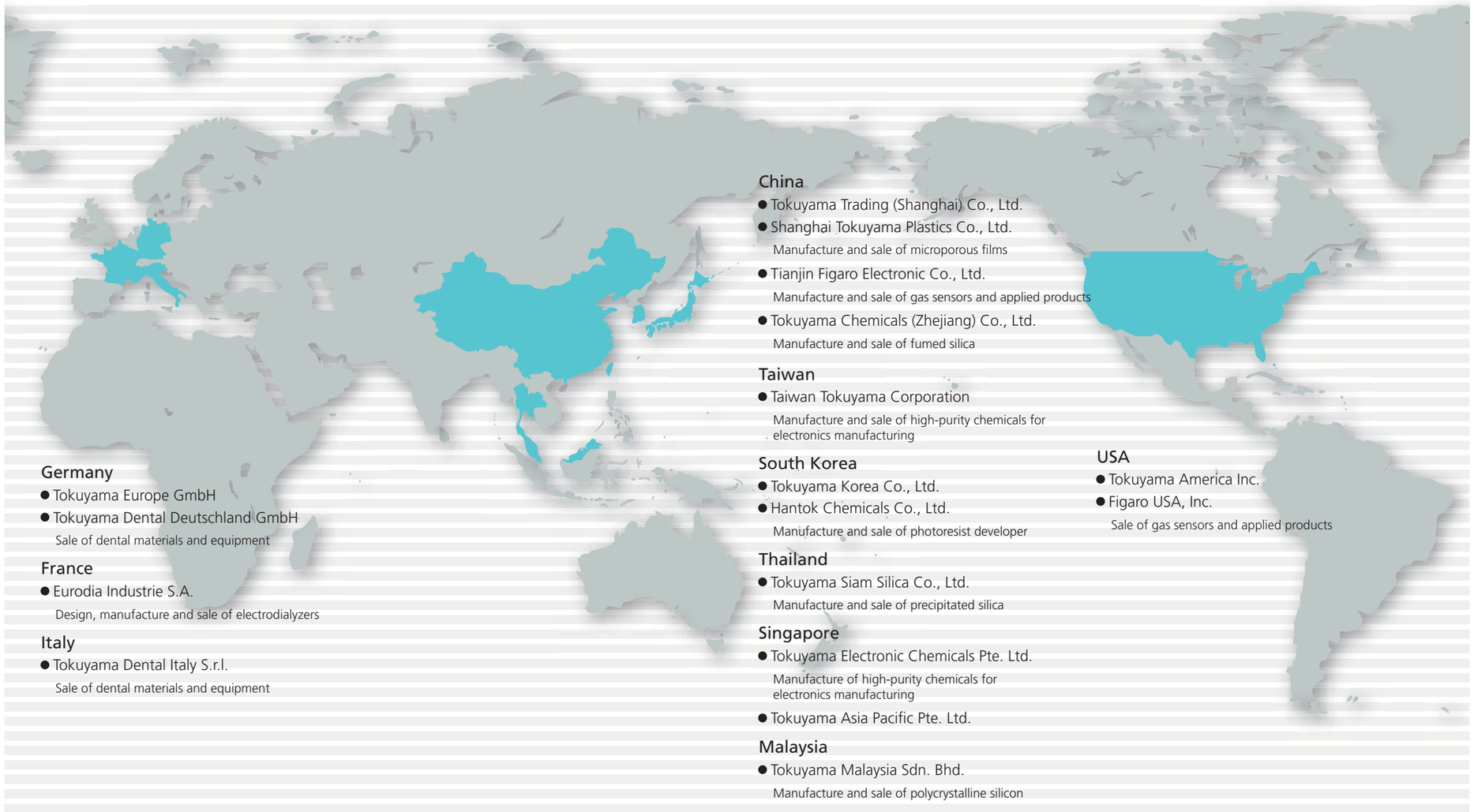


* Includes inter-segment sales and transfer of ¥35.1 billion

Sales by Region (Fiscal 2010)



Tokuyama's Global Network



China
- Tokuyama Trading (Shanghai) Co., Ltd.
- Shanghai Tokuyama Plastics Co., Ltd.
  Manufacture and sale of microporous films
- Tianjin Figaro Electronic Co., Ltd.
  Manufacture and sale of gas sensors and applied products
- Tokuyama Chemicals (Zhejiang) Co., Ltd.
  Manufacture and sale of fumed silica

Taiwan
- Taiwan Tokuyama Corporation
  Manufacture and sale of high-purity chemicals for electronics manufacturing

South Korea
- Tokuyama Korea Co., Ltd.
- Hantok Chemicals Co., Ltd.
  Manufacture and sale of photoresist developer

Thailand
- Tokuyama Siam Silica Co., Ltd.
  Manufacture and sale of precipitated silica

Singapore
- Tokuyama Electronic Chemicals Pte. Ltd.
  Manufacture of high-purity chemicals for electronics manufacturing
- Tokuyama Asia Pacific Pte. Ltd.

Malaysia
- Tokuyama Malaysia Sdn. Bhd.
  Manufacture and sale of polycrystalline silicon

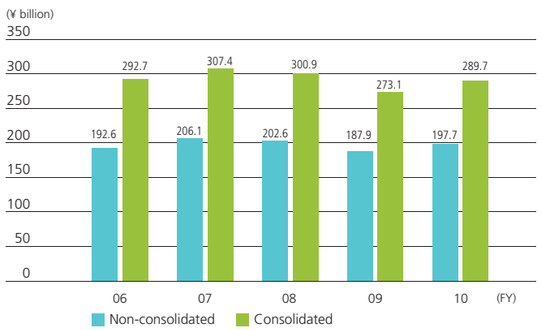
USA
- Tokuyama America Inc.
- Figaro USA, Inc.
  Sale of gas sensors and applied products

Germany
- Tokuyama Europe GmbH
- Tokuyama Dental Deutschland GmbH
  Sale of dental materials and equipment

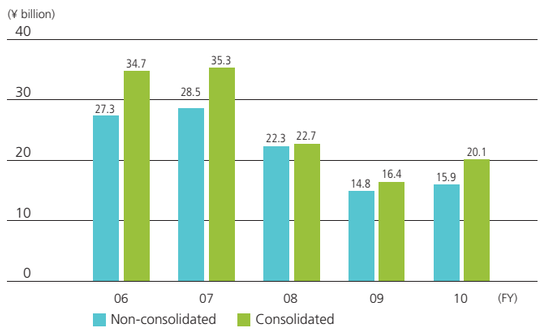
France
- Eurodia Industrie S.A.
  Design, manufacture and sale of electrodialyzers

Italy
- Tokuyama Dental Italy S.r.l.
  Sale of dental materials and equipment

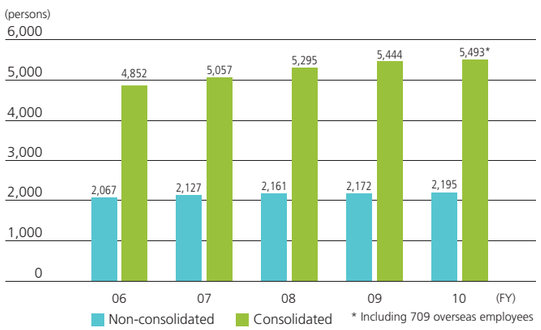
Net Sales



Operating Income



Number of Employees



* Including 709 overseas employees

The underlying principle of Tokuyama's Centennial Vision is "Venture Spirit & Innovation." This principle has been defined by our belief that any corporation cannot survive unless it continues to change.

"Venture Spirit & Innovation"

We are growing into a new Tokuyama Group as we approach 2018, the year marking the centennial anniversary of Tokuyama's founding. The underlying principle of Tokuyama's Centennial Vision is "Venture Spirit & Innovation." This principle has been defined by our belief that any corporation cannot survive unless it continues to change.

In 2010, Tokuyama established five working groups under the Venture Spirit & Innovation Project, with the aim of overcoming any issues that may arise before achieving its Centennial Vision. These cross-divisional working groups are required to make proposals for and implement more specific initiatives from their respective standpoints in order for the Tokuyama Group to achieve the Centennial Vision, which places particular emphasis on corporate management, underpinned by capable human resources. To realize business breakthroughs in the current severe operating environment, which presents significant uncertainties, every member of the Tokuyama Group must remain proactive and understand the true meaning of "Venture Spirit & Innovation" while thinking out things from angles that they have never tried. Only after that will we be able to create and instill a corporate culture that enables every Group employee to constantly and naturally act in line with the "Venture Spirit & Innovation" principle—a corporate culture that can be handed down to coming generations of Group employees.

Accordingly, we have positioned fiscal 2011, ending March 31, 2012, as a "run-up" period to gain greater momentum toward our centennial anniversary. Also, this fiscal year will be of significant importance, as we will formulate our next three-year medium-term management plan, to be launched in fiscal 2012, by giving thorough consideration to the drastic changes in our operating conditions.

Growing Our Polycrystalline Silicon Operations into a Core, Strategic Growth Business

Under its Centennial Vision, Tokuyama has defined its polycrystalline silicon operations as a core, strategic growth business. Consequently, the Company is working to expand these operations aggressively. The Company currently commands an over 20% share in the global market of polycrystalline silicon for semiconductors. We aim to maintain such an advantageous market position. Also, the Company aims to raise its current global share of polycrystalline silicon for solar cells from approximately 5% to 10% or more. To this end, the Company commenced the construction of a new polycrystalline silicon factory in Malaysia on February 16, 2011. This new factory is scheduled to start operation in June 2013. So, I imagine that a year from now, more than 3,000 construction workers will be engaged in construction work in Malaysia.

To always remain a "manufacturing company in harmony with society" requires the consistent enhancement of corporate governance. In line with this approach, Tokuyama undertook management structure reforms this year. Aimed at reinforcing the supervisory function of the Company's Board of Directors and clearly separating functions for management supervision and business execution, these reforms included the appointment of an external director and the introduction of an executive officer system. This *CSR Report 2011* has been prepared for the purpose of introducing the activities that the Tokuyama Group promotes to remain a manufacturing company in harmony with society, in accordance with its Centennial Vision. Through this report, we hope to encourage an accurate understanding of the Tokuyama Group on the part of our stakeholders.

Tokuyama strongly believes that all corporations are required to fulfill their social responsibility in relation to their stakeholders. In line with this belief, the Company sees CSR initiatives as such activities that allow the Company to review and improve its business processes. By promoting these activities, which are centered on the principles of "ensuring and promoting compliance," "implementing Responsible Care activities" and "advancing CSR promotion (internal control) activities," the Tokuyama Group has continued to solidify the foundation for fulfilling its social responsibility.

Always Remaining a Manufacturing Company in Harmony with Society

With the aim of remaining a "manufacturing company that is in harmony with society," the Tokuyama Group has pursued Responsible Care activities, voluntary management activities promoted by the chemical industry on a worldwide scale, for more than 15 years. As a chemical company committed to protecting the environment, safety and health, we actively carry out these activities throughout the life cycle of chemical substances—encompassing development, manufacturing, distribution, use, final consumption and disposal.

We believe that safety is an essential part of business activities and that ensuring safety is the first step in successfully coexisting with society. Based on this stance, I have taken the lead in promoting process safety and disaster prevention.

We understand that the fight against global warming is a key challenge for the Tokuyama Group. The Group is proud that its development of environmentally friendly chemical products and environmental technologies—including polycrystalline silicon, a material indispensable to solar power generation—is encouraging the active global use of renewable sources of energy and spreading the practice of energy conservation.

In addition, the Tokuyama Factory, the principal production facility of the Group, has slashed its unit energy consumption by exhaustively improving the manufacturing processes and taking action to save energy. Through these activities, we achieved our goal of cutting unit energy consumption by 22% from the 1990 level in fiscal 2010. Furthermore, the Tokuyama Factory is unique in producing both chemicals and cement. Taking advantage of this dual function, it is actively reusing the waste and by-products generated inside and outside of the Company as raw materials and fuel for cement production. Our promotion of recycling activities, which include not only waste materials generated inside the Company but also those accepted from third parties, contributes to the maintenance of our high zero-emission rate and to the creation of a recycling-oriented society.

In January 2009, it was announced that Tokuyama and one of its subsidiaries had been involved in the mislabeling of fireproof specifications on plastic window sashes. The Company announced measures designed to prevent such specification mislabeling in March 2009 and has promoted these measures since then. We will continue to implement effective measures, including the inspection and improvement of related mechanisms and frameworks. Also, the entire Tokuyama Group is stepping up efforts to complete repairs and improvement work to ensure legal compliance at its customers' sites as quickly as possible. Through these efforts, we are working to regain the trust of our customers in the Tokuyama Group.

Taking the matter seriously and looking ahead, we will continue to ask ourselves the same question, "What is our social responsibility?" Working diligently to find the right answers to this question all the time, we will consistently promote our CSR-oriented corporate management. We invite readers to provide us with their feedback and comments in relation to this report.

The Great East Japan Earthquake on March 11, 2011 caused significant damage to the Tohoku and Kanto regions. On behalf of the Tokuyama Group, I would like to take this opportunity to express our heartfelt sympathy to all those who have been affected by this major disaster. I would also like to extend our best wishes for the quickest possible recovery and restoration in the disaster-stricken regions.

Japan is currently facing a national crisis of the largest scale since the end of World War II. It is now that all Japanese people must fully exert their individual capabilities to support the nation's resurgence, backed by the assistance offered by people throughout the world. As Japanese citizens, as members of a Japanese company, and as individuals, we must do everything we can to help Japan achieve recovery and restoration through responsible actions. The entire Tokuyama Group will work as one well-coordinated team and thereby enable Japan to overcome current difficulties and realize a resurgence.

July 2011

Kazuhisa Kogo

Kazuhisa Kogo
President

GROWING

Strengthen Strategic Growth Businesses

October 2010

Completion of facilities to heighten the purity of TCS and STC at Tokuyama Chemicals (Zhejiang) Co., Ltd.

We held a completion ceremony at Tokuyama Chemicals, following the completion of facilities to heighten the purity of trichlorosilane (TCS) and silicon tetrachloride (STC).* The facilities boast an annual processing capacity of 10,000 tons each of TCS and STC. TCS is used for wafers and in coupling agents, while STC is used for optical fibers and synthetic quartz. In China, where economic growth is robust, demand for optical fibers is rapidly expanding, and many manufacturers have announced the launch of optical fiber production in the country.

* Also known as tetrachlorosilane

November 2010

Capacity enhancement at Shanghai Tokuyama Plastics Co., Ltd.

Demand for disposable diapers in China has increased more than 10 times in 10 years since 2000. The scale of China's market for disposable diapers has exceeded that in Japan and is expected to keep expanding by roughly 20% every year. Shanghai Tokuyama Plastics manufactures and sells microporous films, a material used for disposable diapers. With the capacity enhancement, Shanghai Tokuyama Plastics now boasts a monthly capacity of 20 million square meters. In addition, it has introduced a seven-color printer for the production of multi-color print diapers, which are expected to experience increased demand.

February 2011

Groundbreaking ceremony for the new Malaysia Factory

On the day of the 93rd anniversary of Tokuyama's founding, the Company held a groundbreaking ceremony commemorating the commencement of construction of a new polycrystalline silicon factory in Malaysia. Approximately 5,000 people attended the ceremony, including representatives of the Malaysian government and local residents, showing significant interest in this project.

April 2011

Announcement of integration and relocation of the Tokyo Head Office

Tokuyama announced that it will integrate its two Tokyo Head Offices in Shibuya and Shimbashi and establish a new Tokyo Head Office in Kasumigaseki on August 1, 2011. This office integration and relocation is aimed at eliminating operational inefficiencies attributable to having two separate head offices and upgrading an office environment.

New Tokyo Head Office Location:
Kasumigaseki Common Gate West Tower
2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, Japan

CREATING

Create New Businesses

November 2010

Tokuyama's shikkui paper used for the works of Mr. Hiroshi Senju at APEC JAPAN 2010

Based on the technologies relating to its proprietary Fresco Giclee,* Tokuyama has undertaken the development of shikkui (plaster) paper for painting use with the support of the Japanese-style painter, Mr. Hiroshi Senju. Mr. Senju used the paper for his works, which were exhibited at APEC JAPAN 2010.

* Fresco Giclee is a new-generation inkjet printing sheet for professional photography use. Tokuyama made plaster—the base for fresco painting—into a sheet through the application of its unique technologies.

January 2011

Participation in the 3rd LED/OLED Lighting Technology Expo

At this expo, held at the Tokyo Big Sight, Tokuyama's Shapal Sales Department exhibited metallized AIN substrates and aluminum nitride (AIN) filler. At the same time, the Company staged a seminar on the theme, "Technological Trends in Aluminum Nitride (AIN)—A Highly Thermal-Conductive Ceramic Material Supporting High-Output LEDs." The seminar attracted the attention of many event-goers, and they expressed high expectations for the realization of a longer LED service life due to effective heat dissipation.

February 2011

Festival to pray for safety at the test manufacturing facility for an electrolyte membrane for fuel cells

Tokuyama's Research & Development Division is working to launch an electrolyte membrane for fuel cells based on the Company's technologies in ion exchange membranes. With this electrolyte membrane, Tokuyama intends to penetrate the market for fuel cells, which are highly expected to become a next-generation, eco-friendly energy source. Through the utilization of this facility, we aim to establish technologies in large membrane production and quality control, thereby building the structure required for the stable supply of this product for customers.

INTEGRATING

Bolster International Competitiveness

July 2010

Completion of the first-phase construction of new coal-handling facilities

Shunan Bulk Terminal Co., Ltd. is developing a bulk cargo handling base at the Tokuyama Kudamatsu Port. The Company completed the first-phase construction of new coal-handling facilities for Shunan Bulk Terminal. The first-phase involved the construction of loading and unloading facilities, such as an unloader, belt conveyor, ship loader and shipping dock as well as a 4.8-hectare coal storage yard. Following wharf reinforcement work conducted by the national government, the first cargo vessel boasting a 90,000-ton capacity docked at the port soon after the opening.

November 2010

Groundbreaking ceremony for a central control room in the South Area of the Higashi Plant at the Tokuyama Factory

Three control rooms currently used by the Si Manufacturing Department will be integrated into this central control room. This facility integration is aimed at creating a stable plant environment where employees can work safely and securely and improving the plant's international competitiveness and employees' job satisfaction. According to the construction plan, a series of new control systems will be installed in the central room by 2013 in line with the renewal of old systems.

January 2011

General disaster drill at the Tokuyama Factory

Tokuyama invites local residents to this disaster drill to promote their understanding of the safety activities that it conducts on the factory premises. Our in-house fire-fighting team and Shunan Fire Headquarters representatives led the drill, using fire engines. More specifically, they conducted a water-discharging exercise on the assumption that a fire had occurred on the factory premises. The drill also included practice to remove the harmful effects of chlorine using special equipment and operational practice for rescuing injured persons.

Tokuyama's CSR

Management in Harmony with Society

Tokuyama's CSR

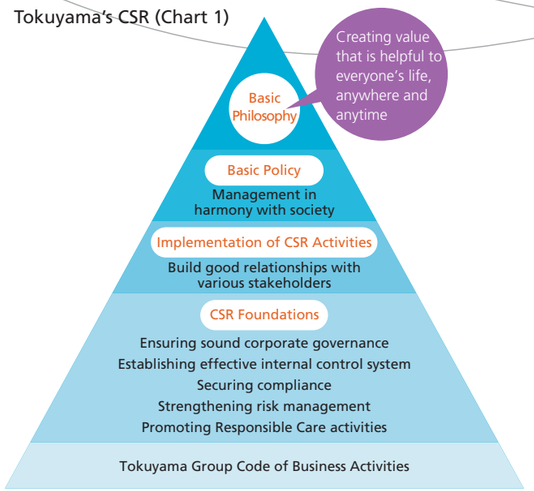
Tokuyama approaches its CSR activities in accordance with its basic policy of engaging in management in harmony with society. We believe that CSR activities help us to sustainably grow our business and enable us to work with society to build a sustainable future. To increase stakeholder satisfaction, we are committed to promoting corporate activities that are evaluated highly by stakeholders and all members of society. (See chart 1 on the right.)

Tokuyama has positioned the assurance of sound corporate governance and establishing effective internal control systems as a significant part of its CSR foundations, and the promotion of compliance and risk management underpins our internal control. Along with Responsible Care activities—an important area in the management of the Tokuyama Group—we are working to achieve optimally balanced CSR foundations.

During fiscal 2010, Tokuyama focused on reorganizing its CSR promotion structure, reinforcing compliance education, raising employee awareness on compliance, and strengthening its risk management structure. Adhering to the Tokuyama Group Code of Business Activities, we will continue to establish good relationships with our stakeholders and practice corporate management in harmony with society, thereby maintaining the Tokuyama Group's status as a corporate group of choice for our customers.

To ensure that compliance is promoted Groupwide in a tangible manner, we have distributed a handbook containing the Tokuyama Group Code of Business Activities, the Responsibility of Senior Management under the Tokuyama Group Code of Business Activities and the Tokuyama Group's Five Conscience Clauses to every executive and employee of the Group. (See chart 2 on the right.)

Tokuyama's CSR (Chart 1)



Tokuyama Group's Five Conscience Clauses (Chart 2)

Our behavior shall:

1. Comply with laws, regulations and internal rules
2. Conform to the Tokuyama Group Code of Business Activities
3. Justify the trust of customers and trading partners
4. Earn the respect of society and general consumers
5. Maintain standards that can be spoken of with pride in front of family members and coworkers

Message

Practicing CSR-Oriented Management

Masao Fukuoka

General Manager, Corporate Social Responsibility Div.

The Tokuyama Group has promoted business activities in line with its basic policy of practicing corporate management in harmony with society. When the mislabeling of fireproof specifications on plastic window sashes was revealed, we caused significant trouble for our customers and other stakeholders. However, the Tokuyama Group has completed the implementation of all medium-term measures to prevent the recurrence of similar problems, and we believe that we have been able to improve the Group's corporate governance.

When the Great East Japan Earthquake occurred in March 2011, the Tokuyama Group was fortunate to suffer only minimal damage. However, I think we must improve our response to massive events like this earthquake. With this in mind, we will evaluate how we can better cope with the ensuing crisis immediately after an earthquake or other catastrophe, including how to maintain our supply chain. Through these processes, we will step up our efforts to review the Group's comprehensive measures against such disasters, and make these measures even more robust.

In November 2010, the ISO 26000 standard—Guidance on Social Responsibility—was published. In accordance with this new international standard, Tokuyama will conduct a comprehensive review of the Group's current CSR frameworks and activities, further bolstering its advantages and turning its shortcomings into advantages. In this way, we will keep our CSR mindset up to date and further advance our CSR-focused corporate management.

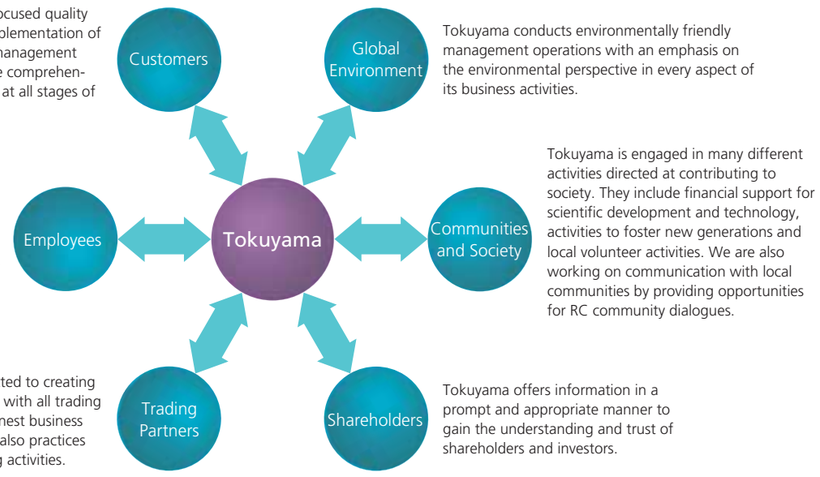
Tokuyama Group Code of Business Activities

All Tokuyama Group members will commit to operating in a way that is compatible with society and to fulfilling the Group's corporate social responsibility, following the principles below and endeavoring to achieve sustained growth by earning the support of our clients.

(Established: May 12, 2009)

1. Compliance We act with good corporate ethics and common sense, based on the understanding that compliance with laws and corporate rules is the most important requirement in pursuing any kind of business.	▶ p11 Establishing Internal Control, Risk Management and Compliance Systems
2. Fair Business Activities • We aim to be moderate and reasonable in our business through fair, free, and transparent competition. • We will maintain fair and reasonable relations with political and governmental organizations.	▶ p15 Toward Regaining Trust
3. Responsible Care • We develop, produce and supply products and services that have value to the community, with a constant focus on safety requirements, so that we can satisfy our clients and consumers and earn their trust. • We voluntarily and proactively address environmental issues based on an understanding of their significance to all mankind and their importance to the continuation of business activities.	▶ p12 RC Promotion Structure and Operation of Management Systems
4. Respect for Human Rights and Personality • We respect the basic rights of people in our business and will not discriminate on the base of race, sexuality, creed, nationality or religion. • We value diversity in the workplace and will provide a safe and comfortable working atmosphere to provide satisfaction and opportunity to each employee.	▶ p20 Serving as a "Bridge" between Malaysia and Japan
5. Communications We make fair and positive public disclosure of information about our Group, including its business activities and financial reports, to maintain good communication with society.	▶ p36 Tokuyama Blending in with Society (Tokuyama Factory RC Community Dialogues/Public Disaster Drill)
6. Social Contributions • We actively seek to contribute to our community as a good corporate citizen. • We contribute to the development of local regions in our international business activities, respecting not only international rules, local laws and regulations, but also local cultures and customs.	▶ p37 Tokuyama Blending in with Society ("Mikage" Book Donation Program/ Tokuyama Science Foundation)
7. Exclusion of Antisocial Forces We will not enter into any business arrangement with antisocial forces that threaten public order and safety.	

Tokuyama's Major Stakeholders



Tokuyama's CSR Foundations: Corporate Governance and Internal Control

Basic Approach to Corporate Governance

Tokuyama believes that corporate governance is an important foundation for maximizing its corporate value. Tokuyama also believes that it must conduct daily inspections and take necessary steps to ensure its corporate governance systems always function appropriately.

At the same time, Tokuyama is working consistently to strengthen its compliance with corporate ethics, laws and regulations as a means of enhancing its corporate value. Furthermore, we believe that we can gain the trust of stakeholders—including shareholders, customers, trading partners, employees and local communities—by accurately understanding our social responsibility and pursuing corporate management in harmony with society.

Corporate Governance Structure

Board of Directors and Executive Officer System

Tokuyama's Board of Directors meets at least once a month to deliberate and make resolutions on important matters regarding business operations while supervising business operations. As of June 28, 2011, the Board of Directors consisted of nine directors and was chaired by the chairman, who is not involved in business operations. To reinforce the supervisory function of the Board of Directors, the Company has appointed one external director.

Tokuyama introduced an executive officer system in April 2011 with the aim of separating the supervisory and executive functions for business operations. As of June 28, 2011, the Company had 19 executive officers. With the Board of Directors delegating authority for business operations to executive officers and supervising these operations, the Company has established a management structure that stresses clear accountability and efficient decision making and is capable of responding to changes in operating conditions flexibly. In addition, the term of office of directors is set to one year to ensure clear accountability and management capability to promptly adjust to changes in the Company's operating environment.

Board of Auditors

The Company's Board of Auditors consists of four auditors, two of whom are externally appointed. The Board of Auditors holds meetings to report, discuss and make resolutions on important matters. Also, auditors frequently attend Board of Directors meetings and various other key meetings to oversee the execution of duties by directors through discussions and other activities.

Human Resources Committee

The Human Resources Committee consists of the chairman, representative directors and external director. This committee holds discussions on such matters as the remuneration for directors and executive officers and the selection of director and executive officer candidates before Board of Directors meetings take place.

Executive Committee

Tokuyama has established the Executive Committee as an advisory body to the president. This committee consists of the president and the executive officers selected by the president. The committee meets twice a month to make decisions regarding business operations in a flexible manner.

Strategy Committee

The Strategy Committee is an advisory body to the president and consists of the president and the executive officers selected by the president. This committee meets once a month to discuss the implementation and plans for such important matters as the launch, withdrawal and discontinuation of businesses and the implementation of large-scale infrastructure investments. Through these discussions, the committee helps the president determine the Company's policies for business operations relating to those important matters.

CSR Promotion Council

As part of its management structure reforms, Tokuyama has reviewed and streamlined the organization and operation of its internal committees. The CSR Promotion Council has been established through the integration of the Sunflower Committee, which previously governed the Company's decision making regarding internal control system development, and the RC Administration Committee, which was previously in charge of decision making concerning the Company's Responsible Care activities. The Company's directors and executive officers concerned attend meetings of the CSR Promotion Council.

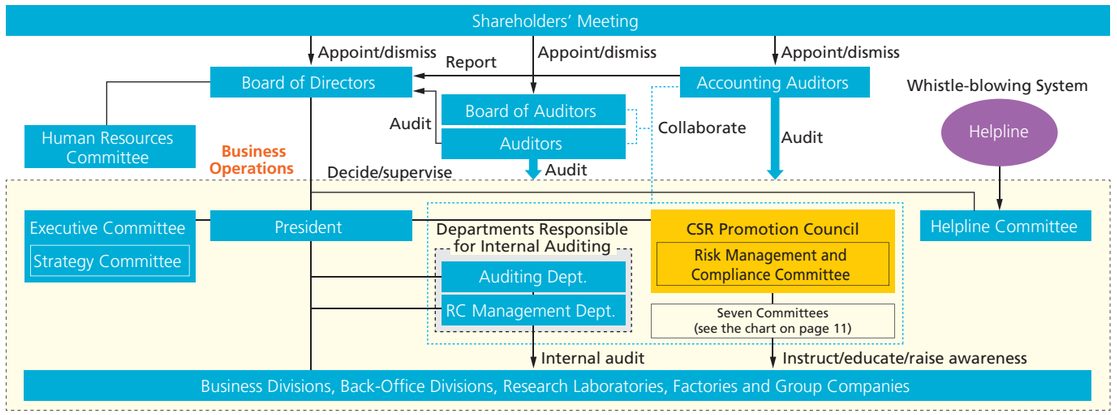
Risk Management and Compliance Committee

Tokuyama has positioned the promotion of risk management and compliance as central activities to develop effective internal control systems. In line with this view, the Company has established the Risk Management and Compliance Committee—chaired by a director supervising the Corporate Social Responsibility Division—under the CSR Promotion Council.

Helpline Committee

The Helpline Committee is responsible for the administration of Tokuyama's whistle-blowing system, which has been established for the purpose of enabling the internal reporting of legally questionable actions and behaviors by Group executives and employees.

Corporate Governance Structure



Departments Responsible for Internal Auditing

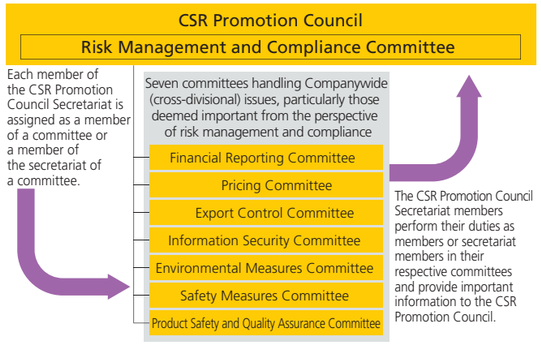
Tokuyama has established the Auditing Department and the RC Management Department, which are responsible for internal auditing. These departments perform internal audits of individual divisions and departments of the Company as well as of Group companies.

Establishing Internal Control, Risk Management and Compliance Systems

Reorganization of Companywide Committees

Tokuyama has comprehensively reorganized its internal committees. For example, the Company has established the Risk Management and Compliance Committee under the CSR Promotion Council. Also, under the CSR Promotion Council, we have established the Financial Reporting Committee, Pricing Committee, Export Control Committee, Information Security Committee, Environmental Measures Committee, Safety Measures Committee, and Product Safety and Quality Assurance Committee. These seven committees handle Companywide (cross-divisional) issues, particularly those deemed important from the perspective of risk management and compliance, in the areas coinciding with each committee's mandate.

CSR Promotion Structure



Financial Reporting Committee

This committee has been formed to ensure the reliability of Tokuyama's financial reporting. The committee manages the processes of preparing financial reports following end-of-period closing procedures. It consists of members selected from the Management Support Center, which is responsible for end-of-period closing procedures, and other related departments.

Pricing Committee

This committee has been established with the aim of ensuring the fair pricing of Tokuyama's products and services. The committee deliberates on and approves the revision to selling prices of the Company's products and services.

Export Control Committee

This committee has been established to ensure that Tokuyama appropriately manages its export products to help maintain international peace and security. Also, the committee works to prevent the Company from violating laws and regulations relating to export and other types of transactions. It meets on an as-required basis.

Information Security Committee

This committee has been launched with the mission of maintaining the security of Tokuyama's information assets and promoting the active use of these assets. The committee makes decisions about the Company's basic policies on overall matters relating to information security while engaging in activities to increase the awareness of information security among Group executives and employees. It also undertakes activities to promote the protection of private information.

Environmental Measures Committee

This committee deliberates and makes decisions on Tokuyama's environmental policies as well as on plans and measures for the Company's environmental management activities.

Safety Measures Committee

This committee deliberates and makes decisions on our safety policies. Also, the committee discusses and approves the plans and results of our safety management activities.

Product Safety and Quality Assurance Committee

This committee deliberates and makes decisions on our policies regarding product safety and quality. In addition, the committee discusses and approves the plans and results of our product safety and quality management activities.

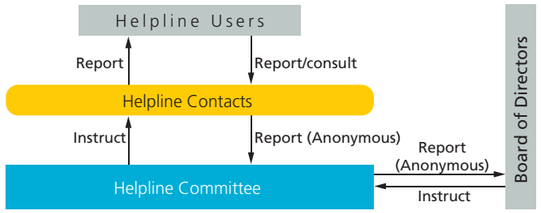
Promotion of Risk Management

To further strengthen the Group's risk management systems, including rules and guidelines for managing risks that may result in loss or damage, Tokuyama has established the Risk Management Promotion Subcommittee under the Risk Management and Compliance Committee. Through this subcommittee, the Company has launched activities to promote risk management across the Group.

We started with identifying significant Groupwide risk factors specific to the Tokuyama Group, a chemical company, through discussions with related divisions and departments. We assessed these factors and classified them according to their likelihood and gravity. For each class of risk factors, we then determined possible measures as to whether to minimize the likelihood, remove the cause, transfer them or maintain them as is. After this, we set targets for risk management and evaluated the Company's current status to clarify present issues. Among these issues, we selected those that are important and must be addressed with priority. In fiscal 2011, Tokuyama plans to examine these priority issues and determine possible measures.

Whistle-blowing System (Helpline System)

Tokuyama has launched a helpline system. Through this system, employees and other persons are allowed to anonymously report or seek consultations regarding compliance violations, including possible violations, within the Tokuyama Group. The system has been designed to prevent any disadvantageous treatment of persons who have made reports or sought consultations.

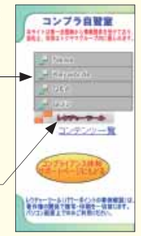


Compliance Study Room

To improve the compliance intelligence of Group executives and employees, Tokuyama has opened a Compliance Study Room on its intranet. This intranet site provides more than 500 different educational contents based on familiar topics.

Contents include the introduction of legal information and compliance-focused thinking processes. Familiar topics enable readers to understand compliance-related issues easily.

The Lecture Tool introduces stories incorporating compliance issues that can occur in daily operations. Through these stories, how to approach compliance issues is explained in detail.



RC Promotion Structure and Operation of Management Systems

Responsible Care

Responsible Care (RC) refers to the voluntary management activities of companies that manufacture and handle chemical substances to protect the environment and maintain the safety and health of members of the public and employees in all processes covering the development, manufacturing, distribution, use, final consumption and disposal of chemical substances. Also, RC activities involve the publication of the results of the activities and the promotion of dialogues and communication with society. The RC concept originated in Canada in 1985, and it is now in place in 52 countries around the world. In Japan, the Japan Responsible Care Council (JRCC) was established in 1995 within the Japan Chemical Industry Association (JCIA). It had 94 corporate members as of April 2011, Tokuyama being one of the founding members. We actively promote RC activities as the basis of our environmental management and CSR activities.

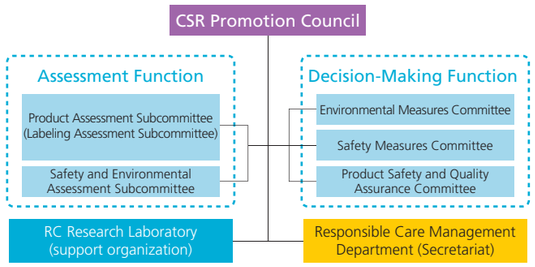
CSR Activities Centered on RC Activities

Tokuyama's CSR activities center on RC activities. A Companywide promotion structure has been established to soundly operate various management systems. In this way, we continue to improve our environmental, safety, and quality management systems.

RC Promotion Structure

Chaired by the president and consisting of members of the Board of Directors and executive officers concerned, the CSR Promotion Council is Tokuyama's top decision-making body for RC activities. Under the CSR Promotion Council, the Company has established the Environmental Measures Committee, Safety Measures Committee and Product Safety and Quality Assurance Committee as decision-making bodies. Also, the Company has established several subcommittees—such as the Product Assessment Subcommittee—which provide various assessment functions. All these committees and subcommittees promote specific initiatives in their respective areas of responsibility.

RC Promotion Structure



This laboratory checks the safety of chemicals and assesses their environmental impact using simulations. It also carries out environmental measurements, working environment measurements and ultra-trace analysis of substances under regulation and chemical pollutants.

This department promotes RC activities throughout the Group, covering the areas of the environment, safety and quality.

Basic Philosophy of Responsible Care

Basic Policy

As a member of the Japan Responsible Care Council, Tokuyama Corporation carries out Responsible Care activities that protect the environment and preserve safety and health throughout the entire chemical substance life cycle, from development and manufacturing to distribution, use, final consumption and disposal.

Our social mission is to aggressively tackle and systematically solve environmental issues in particular, which, in turn, will lead to sustainable corporate and social development. Based on this recognition, we promote Environmental Management, a management policy that emphasizes the environment, in all of our business activities, including development, manufacturing and sales.

Action Objectives

❶ **Promote environmental protection**
- Implement an ISO 14001-based Environmental Management System and reduce environmental impact

❷ **Observe the laws and regulations**
- Observe international rules, domestic laws and regulations and industrial standards
- Thoroughly implement export management rules on materials under control

❸ **Promote energy conservation and curb global warming**
- Achieve top-class unit energy consumption in the industry for each product

❹ **Promote resource recycling and work toward reduction and the proper management of waste materials**
- Promote the material recycling and thermal recycling of resources
- Work toward achieving a paperless office

❺ **Promote process safety, disaster prevention and occupational health and safety**
- Aim for zero accidents and disasters based on the principles of self-responsibility and the self-management of safety
- Achieve a comfortable working environment and protect people's safety and health

❻ **Ensure strict product safety standards**
- Offer environmentally friendly products that can be used with safety
- Provide proper information on how to use products and what precautions to take

❼ **Deepen the relationship of trust with society**
- Publicly disclose information on the Company's activities concerning environmental protection, process safety and disaster prevention, occupational health and safety, and chemical product safety
- Actively engage in dialogue with the local communities

RC Activity Evaluation and Management System

Tokuyama adopts a medium-term plan in the area of Responsible Care and determines its policies and targets for each fiscal year to achieve the plan. Under these policies, the individual departments create specific plans and engage in their activities. The results of these activities are assessed at the end of each fiscal year so that the plans for the following fiscal year will reflect the findings. Tokuyama formulated a new four-year plan starting in fiscal 2011. Activities under the plan are now in progress.

RC Activity Evaluation and Management System (Environmental Preservation)

Operation of Management Systems

ISO 14001 Environmental Management System

The Tokuyama Factory and the Kashima Factory have already acquired ISO 14001 certification. ISO 14001 is an international standard for environmental management systems. In line with the Companywide environmental policy, each factory sets out an environmental policy and the specific goals to be achieved in areas covering environmental impact reduction, energy conservation, waste reduction and resource recycling.

At the Company's head office, branch offices and research laboratories, activities are underway based on their respective policies and goals set out according to the scale of their operations, covering energy conservation, waste reduction, resource recycling and other activities.

ISO 9001 Quality Management System

Tokuyama has also acquired ISO 9001 certification for its quality management system that covers its principal products. Since fiscal 2002, this system has been operated as a system covering sales, development and all other divisions of the Company.

Occupational Health and Safety Management System

In accordance with the Japan Chemical Industry Association (JCIA) New Occupational Health and Safety Guidelines, Tokuyama has built and promoted occupational health and safety management systems at individual factories and offices. In fiscal 2005, the Tokuyama Factory upgraded its system into a safety management system covering various safety-related activities.

Assessment Systems

Tokuyama has set up several assessment systems in an effort to reduce environmental and safety risks.

Safety and Environmental Assessment

Prior to installing, expanding or modifying any facility, we conduct safety and environmental assessment. We check the safety design of equipment, the safety level of the materials handled, compliance with the laws and regulations and the impact on the environment, thereby ensuring that our facilities are safe, easy to operate, easy to maintain, and accident- and disaster-resistant. The assessments apply to three stages: Basic Plan Assessment, Design Assessment and Pre-Operational Assessment. At these stages, assessments are conducted to verify that the facilities have a safety- and environment-oriented design, that they have been built to the design requirements and that they are ready for operation.

Product Assessment and Labeling Assessment

To ensure product safety, Tokuyama conducts a product safety assessment at each stage, from research and development to commercialization. We assess the risk evaluation and examine compliance with the statutory requirements from a wide range of perspectives, including the safety of the chemical substances involved, the environmental impact and the effect on human health. We also assess the labeling to ensure that the product information in catalogs, manuals on safe handling, material safety data sheets (MSDSs)*1 and other types of labeling contain no deficiencies in relation to the instructions and/or warnings and that there are no inappropriate statements.

*1 A material safety data sheet is a document that deals with the hazard and toxicity of a chemical substance. It is prepared to ensure the safe handling of a particular substance and provides information on the name of the substance, safety measures, the action to be taken in the event of an emergency, and so forth.

Education and Training

Employee education on Responsible Care activities is provided for all members within the framework of level-specific group education.

Practical education and training in relation to environmental management, safety management, occupational health and safety, and quality management are offered as part of actual management activities. To take environmental management for example, the Tokuyama Factory and the Kashima Factory have formulated specific education and training plans in accordance with the ISO 14001 environmental manual. They offer education on the importance of environmental conservation and compliance with relevant laws and regulations to employees and contracted workers alike.

In safety management and occupational health and safety, we offer hazard prediction training, hands-on experience training, pre-work hazard prediction activities, safety regulation education, internal special education on electricity, oxygen deficiency, waste incinerators and other areas, foreman education, troubleshooting training, training on the use of fire prevention and extinguishing systems, evacuation drills, general disaster drills, traffic safety education, and training on aid activities following external accidents and disaster prevention. For quality management, every workplace separately organizes safety meetings and other opportunities for ISO-related education. Twenty key personnel at different workplaces have completed the ISO 9001 internal auditor development course. In August 2010, we organized a skills seminar for internal auditors with in-house lecturers.

Auditing Systems

Tokuyama has an auditing system aimed at verifying that individual factories and offices engage in appropriate activities in line with Companywide policies.

Safety and Environmental Audit

Tokuyama conducts safety and environmental audits on a yearly basis to verify the appropriateness of its accident/disaster prevention measures and management activities in relation to environmental conservation. The auditing team is headed by the director who chairs the Safety Measures Committee and the Environmental Measures Committee, and the team conducts audits of all factories, laboratories and offices, organizations designated for inspection under the High Pressure Gas Safety Act, the Purchasing & Logistics Department and the Health Management Center. The results of the audits are compiled in reports and distributed to all departments concerned. They are also presented to the president.

Third-Party Audit

Tokuyama undergoes ISO 9001 and ISO 14001 examinations conducted by accreditation organizations. The latest examination for renewal of the ISO 9001 certification took place in April and May 2011. The Company has implemented remedial measures for identified issues.

Examination for renewal of ISO 9001 certification at the Tokuyama Factory on April 14, 2011

Internal Audit

Tokuyama conducts internal audits on a regular basis in accordance with the ISO 9001 and ISO 14001 standards and with the occupational health and safety management system. The progress of action plans and the status of system operations are audited. If a problem is found, it is notified to related parties, and corrective actions are instituted.

Fiscal 2010 RC Activities: Priority Issues and Results

Category	Priority Issue	Results	Related Pages
Management	• Review by top management	• RC Administration Committee • Safety and environmental audit	P10 P12-14
Environmental conservation • Environmental impact reduction • Energy conservation • Waste recycling	• Reduction in environmental impact (air, water quality, etc.) • Reduction in the emission of PRTR substances and hazardous air pollutants • Decrease in unit energy consumption • Promotion of zero-emission activities • Promotion of green purchasing	• Reduction in the emission of SOx, NOx, soot, etc. • Promotion of energy conservation • Facilitation of the use of waste as raw materials and fuel of cement production • Promotion of green procurement • Steady operation of the environmental management system	P43 P41 P34-35 P22-23 P12-14
Process safety	• Zero accidents • Promotion of risk management • Promotion of independent safety management	• Proper operation of the safety management system • Safety education and audit of contracted logistics operators	P10-11, P12-14, P36
Occupational health and safety	• Zero disasters	• Efforts to maintain zero-disaster status • Promotion of risk assessment	P36, 38 P13
Chemical product safety	• Securing product safety	• Implementation of product assessment and labeling assessment • Improvement of MSDSs and promotion of research on new raw materials	P12-14
Cultivation of a relationship of trust with society and local communities	• Participation in community activities • Harmonious coexistence with society and local communities	• Participation in community volunteer activities • Holding of RC Community Dialogues (regional, organized by each factory) • Provision of factory tours	P36
Promotion of RC activities at Group companies	• Expansion of RC activities	• Safety, quality and environmental audits • Encouragement of ISO certification acquisition • Sharing of RC-related information	P48-49

Toward Regaining Trust

Addressing the Plastic Window Sash Problem

In March 2009, Tokuyama announced its measures to prevent the recurrence of the mislabeling of the fireproof specifications on its plastic window sashes. Since then, the Company has steadily implemented these measures to regain the trust of its stakeholders. During fiscal 2010, the Company successfully completed the implementation of its "medium-term measures" in March 2011 while working to ensure the effectiveness of its "urgent measures" and "short-term measures" implemented during fiscal 2009 through comprehensive assessment. In the past two years, we have undertaken various measures to prevent the recurrence of similar problems. The Company is committed to continuing effective measures, including the inspection of the mechanism of these measures and the improvement of implementation processes.

Adhering to one of our missions in this regard, namely, "repair customers' buildings and houses as soon as possible to ensure legal compliance," Tokuyama has steadily promoted the implementation of various measures through cooperation with Excel Shanon Corporation. These measures included the acquisition of new authorizations for fireproof and fire-resistant specifications, the establishment of organizational structures required to promote repair work in each region and the strengthening of training programs for repair workers. As of March 31, 2011, the Company and Excel Shanon have completed repair work for approximately 50% of the customers affected on the basis of the number of notifications submitted to the Ministry of Land, Infrastructure, Transport and Tourism. Although concerns are growing about the impact of the Great East Japan Earthquake, the Tokuyama Group will work as a team to accelerate repair work and thereby regain the trust of its stakeholders as quickly as possible.

Repair of Buildings and Houses to Ensure Legal Compliance

The repair of customers' buildings and houses to ensure legal compliance is promoted in line with two policies: "acquire new authorizations for fireproof and fire-resistant specifications and use Excel Shanon's newly authorized products as much as possible" and "use the existing plastic sash frames to minimize the burden on customers during the repair work." Tokuyama is offering personnel and financial support to Excel Shanon to facilitate the repair and supply of newly authorized products for replacement. However, the repair and replacement program has regrettably fallen behind schedule, as it has required a longer-than-expected time period to obtain the new authorizations. By June 30, 2011, we completed repair and replacement work for 60% of the customers affected by this incident. The acquisition of the necessary authorizations will be completed shortly. We are accelerating the pace of repair work in order to finish the program for most of the customers by March 31, 2012.

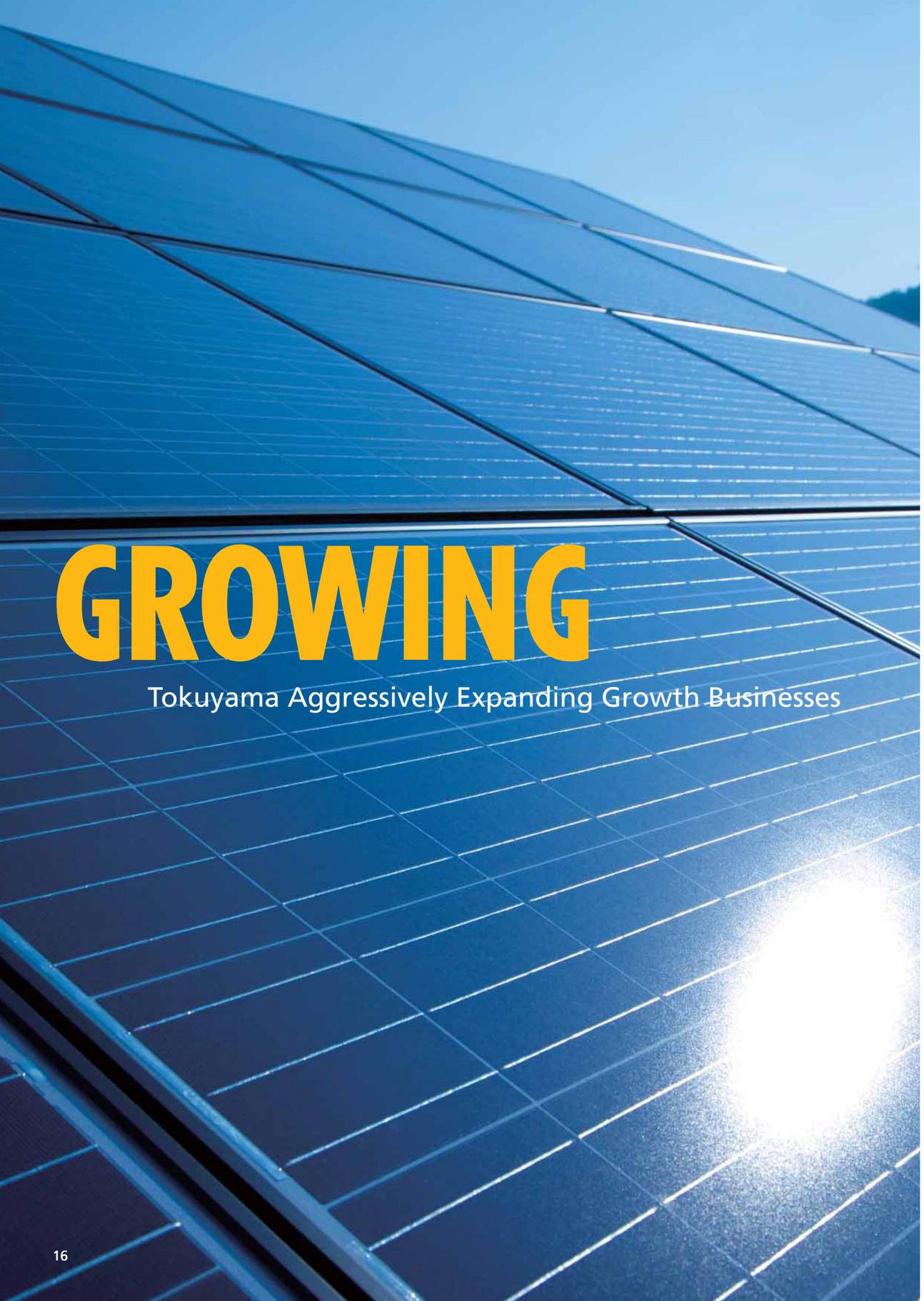
Technical seminar for repair workers (February 22 to 23, 2011)

Measures to Prevent the Recurrence of Similar Problems

During fiscal 2010, Tokuyama and Excel Shanon implemented the medium-term measures (to be completed within two years), listed in the table below. We completed implementation by March 31, 2011. To sum up, Tokuyama worked to enhance its auditing system, improve the Group management mechanism and strengthen its compliance system. Meanwhile, Excel Shanon strove to expand the scope of ISO 9001 certification with the aim of bolstering its quality assurance system. (Details of implementation status were published on April 1, 2011 on Tokuyama's website.)
www.tokuyama.co.jp/news/topics (Japanese language only)

Status of Implementation of Medium-term Measures to Prevent Recurrence

Implemented by	Measures to Prevent Recurrence	Implementation Status
Tokuyama	① Enhance auditing system	• We defined checklists and executing bodies for audits of Group companies and clarified the division of roles in auditing. • We set the rule of mandating audits on the status of the acquisition of fireproof and fire-resistant authorizations by Tokuyama's individual divisions and departments and by Group companies.
	② Improve Group management mechanism	• We identified and evaluated risks inherent in fixed personnel allocation at Group companies. Evaluation results were shared across the Tokuyama Group and related parties to establish a system to cope with risks through collaborative efforts. • We created a database containing information about Group companies on Tokuyama's information network. Based on this database, we established a structure to promote information sharing among Tokuyama, Group companies and related parties.
	③ Strengthen compliance system	• We investigated the status of Group companies' compliance with laws, regulations, and internal rules and guidelines and gained detailed knowledge about their compliance status and systems. • We positioned the Corporate Social Responsibility Division as the body responsible for providing compliance-related instruction and education. Also, we strengthened our Groupwide compliance systems by, for example, opening the Compliance Study Room intranet site.
Excel Shanon	④ Expand the scope of ISO 9001 certification	• Previously, only certain manufacturing departments acquired the ISO 9001 certification. All divisions—including development, design and sales, as well as all factories, branches and sales offices—have completed the acquisition of the certification by July 7, 2010.



GROWING

Tokuyama Aggressively Expanding Growth Businesses

Under its Centennial Vision, Tokuyama aims to strengthen strategic growth businesses. Our polycrystalline silicon business is the mainstay among these growth businesses. Polycrystalline silicon has been developed as a material for electronic parts and components, particularly for semiconductor applications. In line with the ongoing development of the semiconductor industry, Tokuyama has steadily expanded this business, which has, in turn, contributed to the growth of the Tokuyama Group. In recent years, polycrystalline silicon has become indispensable in today's society, increasingly used for photovoltaic power converters in solar cells, the use of which is rapidly spreading as a means to curb global warming. In addition to the area of electronic parts and components for semiconductors, Tokuyama is concentrating its management resources on the environmental and energy field. By increasing the production capacity through its global production network, Tokuyama is working to further strengthen its world-class competitiveness in the polycrystalline silicon business.

Expanding Global Production Network

Tokuyama established local subsidiaries in the United States and Europe in 1989. In the 1990s, the Company made full-fledged entry into the global market. More specifically, in 1995, we formed a joint venture in South Korea for the manufacture of photoresist developers used in the manufacture of semiconductors. Then, in 1996, we launched Tokuyama Asia Pacific Pte. Ltd.—a sales subsidiary—and Tokuyama Electronic Chemicals Pte. Ltd.—a subsidiary producing high-purity chemicals for electronics manufacturing and serving as a regional distribution base—in Singapore.

In 1998, Tokuyama opened Taiwan Tokuyama Corporation for the production and distribution of high-purity chemicals for electronics manufacturing. Once the world entered the new millennium, demand for disposable diapers in China started growing rapidly. In response, in 2002, the Company established manufacturing and sales subsidiary Shanghai Tokuyama Plastics Co., Ltd., which serves as the supply base for microporous films, a material used in disposable diapers. Also, in 2005, we established Tokuyama Chemicals (Zhejiang) Co., Ltd. near Shanghai, which operates the Company's first full-scale chemical plant overseas. As of March 2011, the annual fumed silica production capacity of Tokuyama Chemicals had expanded to 10,000 tons.

Growing Business to Cultivate Solar Cell Applications

From the standpoint of strengthening its strategic growth businesses, Tokuyama began constructing a new factory in Malaysia. Serving as a base for the manufacture of polycrystalline silicon for solar cells, this new Malaysia Factory, when completed, will boast an annual capacity of 6,200 tons.

Tokuyama decided to build this factory on the back of the rapid expansion of the global renewable energy market. Worldwide economic growth was driven by the computer industry in the 1980s and by the network and IT industries in the 1990s. The world witnessed the evolution of financial technologies and then experienced the burst of the bubble economy during the first decade in the new millennium. Today, countries across the globe are entering the era of renewable energy. In particular, the introduction of photovoltaic generation is accelerating on a global scale, and photovoltaic power capacity has shown an average 10-time increase in major countries from the 2000 level, with world leader Germany boasting the largest capacity, at 5,500 megawatts peak (MWp).

To date, Tokuyama has operated its Tokuyama Factory in Shunan City, Yamaguchi Prefecture, Japan, as its sole manufacturing base for this material. The Tokuyama Factory is now capable of producing 9,200 tons of the material annually. With this capacity, the Company commands a world-class market share. However, market competition is ever-intensifying, reflecting market entries by South Korean and Chinese counterparts. By mass-producing polycrystalline silicon at the Tokuyama Factory and the new Malaysia Factory, we expect to boast an annual capacity of 17,200 tons in 2013. Through the strengthening of our capacity, we aim to maintain the current global share of more than 20% in polycrystalline silicon for semiconductor applications. For solar cell applications, we will work to more than double our market share from current 5% (Tokuyama estimate).

To keep bolstering its major presence in the global market, the entire Tokuyama Group will steadily implement strategies and initiatives toward the successful completion of its plant project in Malaysia.

Growing Globally with Renewable Energy

Taking an Historic Step in the Renewable Energy Field

Overview of Our Project in Malaysia

On February 16, 2011, in Bintulu in the state of Sarawak, Malaysia, Tokuyama held a groundbreaking ceremony for the construction of a new factory for the manufacture of polycrystalline silicon for solar cells. With the startup of operations scheduled for June 2013, this new factory will boast an annual production capacity of 6,200 tons, using the Siemens method as its production technology. Tokuyama secured the land from the state government of Sarawak and plans to spend approximately ¥65.0 billion for the factory construction. Additional investments, estimated at around ¥15.0 billion, will include the installation of such utility facilities as power transmission facilities and hydrogen generators and the development of such infrastructure as roads and wastewater treatment facilities.

Tokuyama established Tokuyama Malaysia Sdn. Bhd. in August 2009 in Kuching, the capital of the Malaysian state of Sarawak, and this local subsidiary, which manufactures and sells polycrystalline silicon, will be in charge of operating the new factory. Through Tokuyama Malaysia, we are currently promoting preparations, including the employment of local staff, negotiations covering various matters with the state government and communication with local community members. Upon the commencement of factory operation, we plan to have a workforce at Tokuyama Malaysia of 300 employees, about 280 of whom will be employed locally.

Abundant Electricity and Human Resources

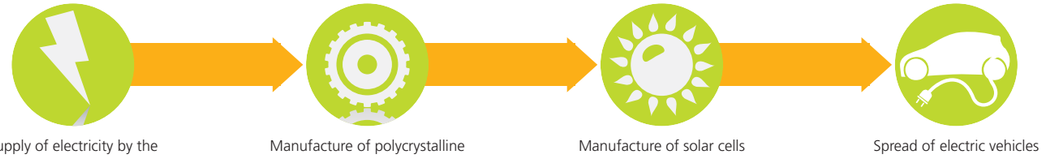
Tokuyama has long considered the establishment of a second polycrystalline silicon manufacturing base in addition to the one in Japan in light of diversifying risks and to respond to the expected medium- and long-term demand expansion for this material used in solar cells. Following careful examination of locations, the Company has selected the Samalaju Industrial Park in Malaysia. There were many reasons for the selection of this site, such as the region's sufficient electricity supply capacity, which is a prerequisite for the manufacture of polycrystalline silicon, the abundance of water resources for industrial use and highly educated human resources. In addition, Tokuyama will be able to receive preferential tax treatment and support for the acquisition of permits and licenses from the Malaysian federal government and the Sarawak state government.

The Samalaju Industrial Park boasts a site of 7,000 hectares. Within this vast site, Tokuyama has secured approximately 200 hectares with due consideration given to future extension. The first phase will involve factory construction on the site totaling approximately 40 hectares. The 2,400-MW Bakun Dam hydropower plant—situated about 200 kilometers south of the factory site—will supply electricity to the factory.

Sarawak Corridor of Renewable Energy

Malaysia consists of 13 states and 3 federal territories. Since Mr. Najib Razak took office as Prime Minister of Malaysia in 2009, the entire country has promoted the spread of renewable energy use and the development of environmental technologies. Located on the island of Borneo, Sarawak is the largest state of Malaysia and has the fourth largest population among Malaysian states and federal territories. In accordance with its clean energy policy, dubbed Sarawak Corridor of Renewable Energy (SCORE), the state of Sarawak is accelerating its economic growth and development while strengthening invitations to participate in renewable energy projects. The Samalaju Industrial Park has been designated as an economic development area under SCORE, and Tokuyama's new factory is the first investment project undertaken in this area. Thus, expectations are heightening for this factory project to make significant contributions to the growth of environmental businesses promoted by both Japan and Malaysia.

New Business Model




Bakun Dam hydropower plant


Bintulu Office of Tokuyama Malaysia


Groundbreaking ceremony in Bintulu, Malaysia

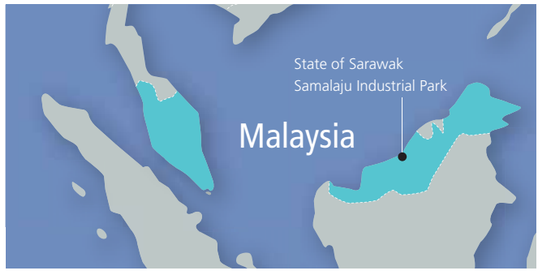

Training on basic operational techniques at the Technical Training Center's facility

New Business Model to Promote Clean Energy Development

In further developing solar cell-related industries, Malaysia is focusing on nurturing upstream businesses as well as downstream areas. Through such a focus, the country aims to establish a comprehensive value chain to bolster the competitiveness of these industries.

Tokuyama's polycrystalline silicon project in Malaysia involves the use of clean electricity generated at the Bakun Dam hydropower plant, which was constructed by the state of Sarawak, and the manufacture of polycrystalline silicon, a material used in solar cells. The solar cells that are manufactured based on our materials will, in turn, generate clean electricity, which will be used for the promotion of electric vehicles. In this way, we are working to establish an eco-friendly business cycle.

On the other hand, our project includes sophisticated manufacturing processes. Therefore, the project is expected to create and expand the employment of experienced engineers and highly educated workers. Furthermore, it will cause good ripple effects on local supporting industries, providing diversified business opportunities for many parties.



Location of the Samalaju Industrial Park

Message from Sarawak Chief Minister, Abdul Taib Mahmud

At the groundbreaking ceremony, Sarawak Chief Minister Abdul Taib Mahmud delivered a speech, which is summarized as follows.

"The Sarawak state government is always open to new development proposals made by foreign companies. We recognize the significance of the Samalaju Industrial Park in this regard. We are taking advantage of this industrial center to help transform Malaysia from a medium-income to a high-income country. We are ready to provide foreign and local companies with support for their investment projects within this industrial park. So, we will do our utmost to guarantee the success of Japanese companies. We will accelerate the development of this 7,000-hectare site by constructing housing for those who work in the park. At the same time, we will enhance facilities at the Bintulu Port to increase port capacity and thereby assist the growth of industries in the park. Today marks the launch of the first project within this industrial park, and, with this, the name Tokuyama has been engraved on the minds of people in this region. On this day, the state of Sarawak and Tokuyama set sail together toward new endeavors."

Growing Globally with People

Serving as a "Bridge" between Malaysia and Japan

Welcoming foreign cultures and improving ourselves—this is Tokuyama's way of globalization.

Yuji Ueda

TMP Project Group Leader

Our project in Malaysia marks Tokuyama's first step in expanding strategic growth businesses worldwide, a strategy under the Company's Centennial Vision. Leveraging the expertise that we have fostered through the manufacture of polycrystalline silicon for semiconductor applications over more than 20 years, we aim to secure our global presence in polycrystalline silicon for solar cell applications, the market for which is rapidly expanding. Simultaneously, through Groupwide capacity enhancements, Tokuyama is working to realize merits of scale.

Immediately after I was suddenly asked to go see Malaysia, I was selected as a member of this Malaysia project in April 2008 (the project title was the GSE Project at the time). As a project member, I conducted thorough feasibility studies. After the location was set for Malaysia, I was involved in all processes relating to factory construction, from negotiating with the local government and selecting construction companies to contracting with overseas vendors.

Most of the construction work is undertaken by Chiyoda Corporation, which has extensive experience overseas. Still, certain construction projects are conducted by overseas companies based on direct contracts. We are procuring construction materials from the United States, Europe, Southeast Asia and China, among other countries and regions. In meetings with representatives of overseas companies, we basically use English. Since not all project members are fluent English speakers, the efficiency of these meetings may be one-third of those conducted in Japanese. To cover this setback, we are working to improve the overall efficiency in our operations. At the same time, to help project members improve their English skills, we try to use English as much as possible in our weekly meetings.

We have experienced so many cases of local partners taking back previous statements or breaking delivery dates. This, of course, causes a lot of stress, and hardship beyond imagination. However, experience in overseas businesses, where Japanese ways are not always respected, strengthens our capabilities to overcome various difficulties and eventually changes us. I believe such a process will allow the Tokuyama Group to realize globalization in the truest sense.

Below, I would like to introduce three young project members, among others, who are engaged in this project—possibly an undertaking of the largest scale ever for the Tokuyama Group. I hope that they will become leaders within the Group and support Tokuyama's sustainable growth long into the future.

I would like to disseminate Tokuyama's technologies across the world by maintaining flexibility in thinking processes and the awareness that we are promoting business on an international stage.

Shota Hara

TMP Project Group

Mr. Hara plays futsal. He has formed a futsal team with his colleagues, and the team is currently competing in a local league tournament. Adhering to his motto, "understand and respect differences in each other's cultures," he is struggling, but making steady progress, with communicating and working with Malaysian staff members, using both Japanese and English.

I really feel privileged to have been given the opportunity to be a part of this huge Malaysia project. I believe that for a company to realize globalization, members of this company must develop their global business capabilities. Through my participation in this project, I have learnt that "speed" and "decision-making ability" are indispensable in order to sustain superior competitiveness in the world business arena. The mission of our project group from now on is to construct the factory in Malaysia and to launch the stable operations of this factory by effectively managing the work of each local staff member. Naturally, a project of such a significant scale requires a complex organizational structure. To ensure smooth project operations, it is important to facilitate information sharing and effective communication. Although communication between Japanese people allows for a certain vagueness, such a way of communication does not function well with non-Japanese people. So, I would like to promote clear communication and help create a workplace environment where everybody can say what he or she wants to say regardless of their age or post.

At present, I am assigned to the Tokuyama Factory. Here, I am working with some colleagues from Malaysia. I must admit that they show great thirst for acquiring knowledge and skills required for their operational activities. They ask Japanese staff a series of questions and never give up until they find and understand the answers. Seeing such attitudes really stimulates my motivation. They are so determined to use the techniques and technologies that they are learning in Japan to perform well when they go back to Malaysia.

I thought that the quickest way to make each other understood is to spend as much time as possible with one's counterparts. So, I play futsal with my Malaysian colleagues once a week. There, we can talk about our romances and other matters that we wouldn't dare to speak about in the office. This did it. We are now really close with each other. In July 2011, we expect to welcome 22 more staff employed locally in Malaysia. These new employees can hardly understand Japanese and are not familiar with Japanese culture and customs. So, I imagine that we will have to make more efforts to establish communication with them. In doing so, I intend to maintain my proactive stance without developing defensive attitudes.

I am fully aware that I am now doing business on a global stage. Sustaining this awareness, I would like to put everything I have into promoting this project. In this way, I will contribute to the sustainable growth of Tokuyama and, consequently, the international community.

I would like to make Tokuyama Malaysia a company managed by local staff

Muhammad Tariq Bin Noorazmi

TMP Project Group

He came from the state of Perak to Japan as a Malaysian government-sponsored student when he was 18. First he joined Toba National College of Maritime Technology to study electro-mechanical engineering. After that, he entered Gifu University, majoring in engineering and studying mechanical and systems engineering. Currently, he is learning plant operations at the polycrystalline silicon plant of the Tokuyama Factory. He is tackling his job there diligently, aiming to become an engineer who can work for any company. He likes to go for a drive and practice tae kwon do and karate.

When I was a kid, I used to watch *Kamen Rider* and *Ultraman* shows on TV. I loved them. I remember I had an image about Japan and Japanese people then. Actual Japanese people—my seniors and colleagues—I have now come to know are different from that image. They are really diligent, coming to work early and leaving late. When they work in shifts, they arrive at office at least 30 minutes before their shifts start. Those ending their shifts explain in detail the status of machines to those who work the next shift. Also, they sacrifice their own time to provide thorough instruction. I suppose this is about teamwork. On weekends and holidays, my Japanese colleagues invite me to participate in farming activities and futsal. This is a big help, for a change and fun.

In July, the second group of employees hired in Malaysia, totaling 22, is coming to the Tokuyama Factory. As they can hardly understand Japanese, my Malaysian colleagues and I are working together right now to translate the reference and educational materials that we used over the previous year into English (which we are almost forgetting!). Also, as a member of the first group, I believe that it is my responsibility to manage those incoming trainees who have different ideas about and morale toward work and to provide appropriate advice for work and private life.

In the spring of 2012, I will return to Malaysia and be involved with preparations for launching the operation of the polycrystalline silicon factory. I expect that the number of employees locally hired in Malaysia will increase. I would like to grow as a leader capable of providing guidance to other employees. I would also like to see Tokuyama Malaysia recognized as a Malaysian company, loved by local residents, creating jobs there and contributing to the additional development of our homeland.

I would like to serve as a "bridge" connecting Japan and Malaysia.

Janting Anak Yabang

TMP Project Group

He is the youngest of six children in his family. He left home to go to a high school in Kuching, the capital of the state of Sarawak. After graduating from high school, he entered the prestigious University of Malaya in Kuala Lumpur, the capital of Malaysia. There, he learned Japanese, chemistry and physics for two years and then came to Japan. He plays soccer and badminton and loves music.

I am from Bintulu, about one hour away by bus from the Samalaju Industrial Park in the state of Sarawak, where Tokuyama is currently building a new factory. After coming to Japan, I studied at the Kyoto Institute of Technology for four years. It was immediately before I was going to go back to Malaysia that I came to know about Tokuyama's Malaysia project. I honestly thought this would be a chance for me. I graduated from the institute in March 2009 and went home. But I came to Japan again in April 2010. Today, I am learning operational technologies at the polycrystalline silicon plant of the Tokuyama Factory.

Traditionally, the state of Sarawak is home to many petrochemical companies. However, I believe that Tokuyama is the first chemical maker to establish a business base in the state. The Sarawak state is still far from being developed, and the agricultural industry is still the mainstay there. The establishment of a factory for the manufacture of polycrystalline silicon used for solar cells will definitely contribute to the development of my hometown and peripheral regions. I am proud that I will be involved with the operation of this factory.

Here at the Tokuyama Factory, Japanese senior staff and colleagues were really supportive not only in daily business operations, but also in private life. I was invited to join farming activities on holidays and weekends. This gave me a chance to relax. After farming work, they would treat me to dinner and drinks. I am really grateful for what they have done for me. Now, it is our turn. I will be assigned to the factory under the management of Tokuyama Malaysia in the spring of 2012. There, I will support Japanese expatriates in getting used to living there, and I would like to help them communicate smoothly with local staff. Taking advantage of Tokuyama's technologies and the knowledge that I have acquired in Japan, I will do everything I can to maintain the safe and stable operation of the new factory and to contribute to the development of my homeland. It is my dream to play an important role in the manufacture of polycrystalline silicon in Malaysia and, in the future, to export the material manufactured there back to Japan. This is what I mean by "serving as a bridge connecting Japan and Malaysia."

Growing Globally with People

Expanding Global Procurement Network

Tokuyama's Procurement Policies and Partnership with Overseas Suppliers

Tokuyama's Purchasing & Logistics Department adheres to procurement policies emphasizing: (1) stability; (2) strict compliance; (3) eco-friendliness; and (4) economic efficiency. Tokuyama heavily relies on overseas suppliers for the procurement of the raw materials and fuels it uses. Therefore, it is important how we meet these policies through our procurement operations, particularly those undertaken with overseas suppliers.

Caustic soda is a mainstay product of Tokuyama and is also a foundation of the Company's integrated manufacturing operations in our "mother" Tokuyama Factory. Another business foundation is in-house power generation to supply the substantial amount of electricity required to conduct our manufacturing and other operations. Caustic soda is based on industrial salt, while in-house power generation uses coal as fuel. Neither industrial salt nor coal is produced in Japan. Accordingly, the Company procures all of the industrial salt and coal it uses from overseas suppliers. Annually, we procure approximately one million tons of industrial salt and two million tons of coal. We directly receive them—shipped from overseas locations on 45,000-ton bulk carriers—at our own docks.

The procurement of industrial salt and coal with strict adherence to the aforementioned policies requires strong partnerships with suppliers based on the sharing and implementation of the precepts of these policies. In this section, we introduce the background of the production of industrial salt in Mexico and coal in Australia. Also, we will explain our relationships with our suppliers in the supply chains.

Eco-Friendly Solar Evaporation Salt Production

Solar evaporation salt production is one method to make salt. Seawater is evaporated and condensed using solar heat and wind and is then crystallized to make salt. This salt production method is suitable in windy regions with low rainfall levels. Although it is an eco-friendly, efficient method, solar evaporation salt production is not conducted today in rainy Japan. Saltpans are usually located in vast areas adjacent to seacoasts in extremely dry regions, such as Mexico and western Australia. Japan imports solar salt primarily from these countries. The production process starts with the pumping of seawater into evaporation ponds. Pumped seawater travels through ponds—commonly separated by levees and purposely made into different levels—due to natural drops or via pumps. Through this process, seawater is gradually condensed. Condensed seawater is then transferred to crystallization ponds, where the crystallization of salt takes place over a period of up to about six months. After the crystallization process, supernatant liquid is removed, and salt is harvested and cleansed. At saltpans in Mexico, for example, the salt produced is shipped out after these processes, which require approximately 30 months.

The World's Largest Solar Saltpan

There is a small town called Guerrero Negro at the center of the Baja California peninsula in Mexico. In this town lies a solar saltpan owned by Exportadora de Sal, S.A. de C.V. (ESSA), which boasts an area almost equivalent to the size of the 23 wards of Tokyo. As a single saltpan, it is the world's largest. It produces more than 7.5 million tons of salt every year, which roughly equals the amount of salt imported by Japan annually. Tokuyama uses ESSA, as one of the major suppliers of industrial salt, for stable procurement. Guerrero Negro provides optimal conditions for this saltpan, such as extremely low rainfall levels, strong northwest winds during daytime and clayey soil that effectively retains seawater, as well as seawater with a relatively high salt concentration at around 3.5% to 4.0%.

Mexican Saltpan

Message from ESSA Employees

At ESSA, we produce salt by evaporating seawater using solar heat and wind. The salt we produce is shipped to many countries across the world. We are working very hard to achieve a stable salt supply from the Baja California peninsula of Mexico to Tokuyama and other Japanese customers active in the electrolysis industry.

Also, the saltpan managed by ESSA and peripheral areas was designated as an internationally important bird sanctuary by a U.S. bird protection group in 2000. Even before such designation, ESSA promoted activities to protect the environment in this bird sanctuary, including the survey of birds flocking to the saltpan, the maintenance and preservation of nesting locations and the planting of approximately 200 perches to protect birds from coyotes and other predators.

Saltpan located in the Baja California peninsula (Mexico)

A bay near Guerrero Negro is home for whales, which stay in the bay for mating and rearing only during the winter after a more than 10,000-kilometer trip from the Bering Sea, and, because of this, this bay has been designated as a World Heritage Site. Also, the bay is renowned as one of the world's best habitats of birds. In winter, more than one hundred species of birds flock to the bay, and there are many bird species that can only be seen at this location. Such biodiversity is testimony to the Guerrero Negro saltpan being eco-friendly.

For the Safety and Health of Coal Miners

The Boggabri coal mine is situated in the northeastern region of New South Wales, Australia. Since 2006, this coal mine has annually produced 2.4 million tons of high-grade, high-calorie, low-sulfur thermal coal through the use of an open-cut mining method. As demand for coal is expected to rise over the medium and long term, particularly in Asia, the mine plans to expand its annual capacity step by step to 4.3 million tons by 2013. Idemitsu Australia Resources Pty Ltd (IAR) fully owns the Boggabri coal mine.

In open-cut mining, instead of digging tunnels, a series of spiral layers, known as "declines" or "benches," is developed. After World War II, the appearance of heavy machinery has enabled the large-scale development of natural resources such as iron ore in Australia. Open-cut mining using heavy machinery is less expensive compared with underground mining, which involves the digging of tunnels and is thus labor-intensive. In addition, the more productive open-cut method makes it easier to ensure the safety of mine workers. Nevertheless, the open-cut mining method can cause various problems, such as water pollution and dust and noise generation. Also, in recent years, the mining industry is increasingly recognizing the importance of mine reclamation. Mine reclamation refers to the process of filling in mined land and is aimed at protecting the eco-system and preventing disasters, while creating useful landscapes such as greenery through tree-planting and other activities.

IAR is implementing rigorous safety measures to prevent accidents and disasters and is making every effort to improve working environments. Tokuyama representatives regularly visit the mining site to confirm appropriate working conditions.

Boggabri Coal Mine

Message from IAR Employees

We have long accommodated the needs of Tokuyama—our favored customer since the founding of IAR—by supplying eco-friendly, high-calorie, low-sulfur Boggabri coal. We are committed to maintaining a safe, stable coal supply into the future by ensuring compliance with the management policy and action guidelines of Idemitsu Kosan Co., Ltd., our parent company. We would be very pleased if our business and other activities could serve to satisfy the requirements of Tokuyama and its stakeholders.

Salt harvesting using harvester

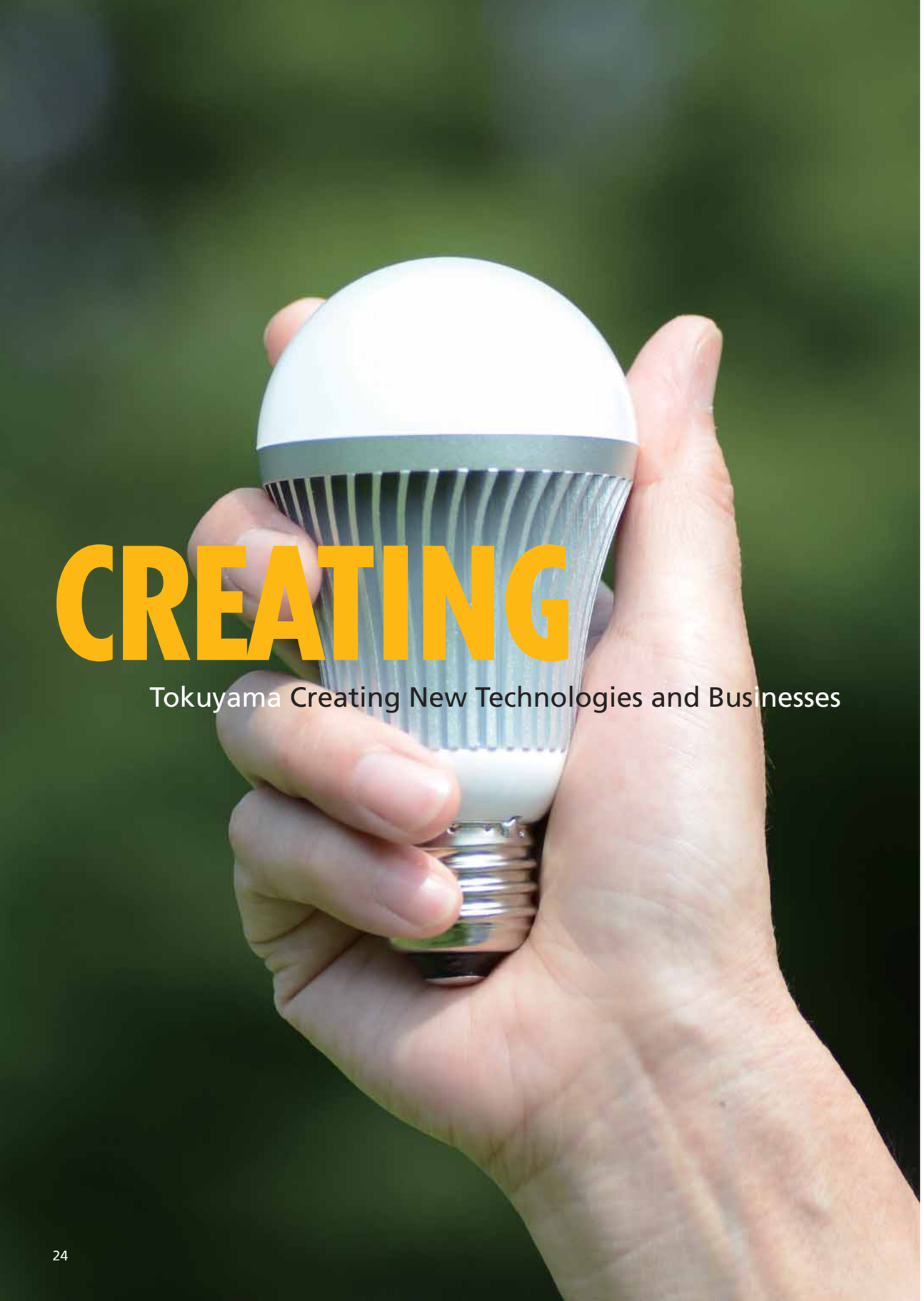
Salt in stock

A flock of birds on the coast near the saltpan

Crane operation

Open-cut mining

Loading coal on truck



CREATING

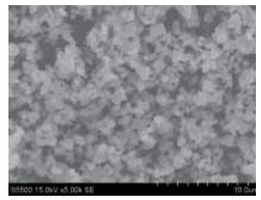
Tokuyama Creating New Technologies and Businesses

Tokuyama creates environmental technologies and eco-friendly products by emphasizing social contributions and environmental impact reduction efforts, even from the development stage. For example, our aluminum nitride (AlN) exhibits superior heat dissipation properties. For this material, Tokuyama is aggressively cultivating new applications, particularly for power semiconductors used in trains and electric vehicles and for light-emitting diodes (LEDs), as both application fields often require effective heat dissipation.

Meanwhile, Tokuyama is currently working to nurture a new business in hydrocarbon-based electrolyte membranes for use in fuel cells. In this new business, the Company is receiving an increasing number of customer inquiries for such membranes. In response, we completed a test manufacturing line at our Tokuyama Factory in February 2011. Looking ahead, Tokuyama will quickly establish a mass-production structure and market evaluation of this product, thereby accelerating its hydrocarbon-based electrolyte membrane business. Through business expansion based on its endless inquiring mind and ceaseless efforts, the Tokuyama Group will continue to contribute to the healthy development of society, and this is the mission in the Group's R&D activities.

Actively Approaching LED Bulb Makers

Effective heat dissipation is required to improve the output (luminosity) of LEDs, which, in turn, enables a longer service life. In light of the spreading use of LED lights, Tokuyama has promoted the development of aluminum nitride (AlN) packages for LEDs and AlN fillers (filling materials blended with resins) for super-luminosity LEDs, based on its aluminum nitride powder, which boasts excellent insulation and heat dissipation properties. By blending fillers with resins, the resultant material shows heat dissipation that is two to over ten times greater than that of conventional plastics. This suppresses the deterioration of LEDs due to heat and contributes to achieving the longer service life of LED lights.



Tokuyama commands approximately a 60% share in the global market for aluminum nitride powder. The Company's aluminum nitride powder is used for wide-ranging applications, including heat sink substrates for power semiconductors used in hybrid vehicles, trains and a various types of industrial machinery.

Aiming for the Mass-Production of Electrolyte Membranes for Fuel Cells

Leveraging its long-nurtured technologies in ion exchange membranes, Tokuyama is undertaking the development of electrolyte membranes, a core material of fuel cells, and has successfully developed two types of electrolyte membranes—membranes for direct methanol fuel cells (DMFCs) and membranes for alkaline membrane fuel cells (AMFCs). Our test manufacturing line was completed in February 2011, and full-fledged production commenced in May. The line boasts an annual capacity of 10,000 square meters. We expect our electrolyte membranes manufactured through this test manufacturing line to be used for a variety of applications, including portable fuel cells, which use methanol as fuel.

Strengthening Medium- and Long-term Development Projects

Tokuyama's Centennial Vision embodies a growth strategy, "Create New Businesses with Global Competitiveness." This strategy is supported by an initiative, "Strengthen Medium- and Long-term Development Projects." The Company has promoted the development of electrolyte membranes for fuel cells as part of efforts to create medium- and long-term solutions for addressing the escalation of environmental issues through the use of chemical technologies. Fuel cells are next-generation power-generating technology, which perpetually generates electricity using hydrogen provided by fuel and oxygen in the air. They produce electricity and water through the reverse principle of water electrolysis.

The electrolyte membranes developed by Tokuyama are used for AMFCs. The use of our membranes expands the types of fuel and catalysts employed, and this is expected to contribute to improved performance and reduced environmental impact of fuel cells.

Creating A New Life

Tokuyama's Technologies Shaping the Future of Eco-Friendly Cities

Polycrystalline Silicon for Solar Cells

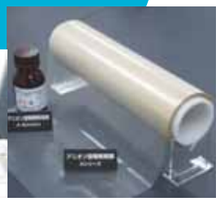
The effective use of solar energy underpins eco-friendly, future-oriented cities. Through the worldwide supply of polycrystalline silicon for solar cells, Tokuyama is helping realize a society supported by a distributed energy infrastructure.

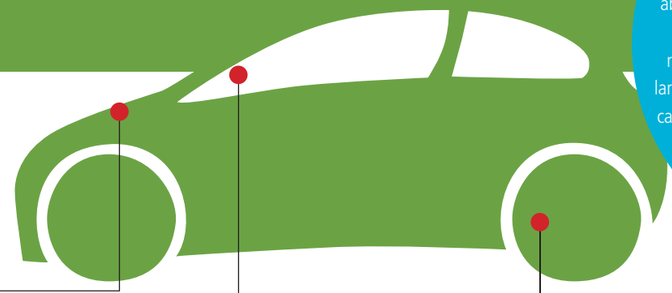
Aluminum Nitride Filler for LED Lights

In general, LED bulbs consume 10% of the electricity consumed by filament bulbs. Through the provision of aluminum nitride fillers, Tokuyama is contributing to the improved luminosity, lighter weight and longer service life of LED bulbs.

Electrolyte Membrane for Fuel Cells

Roughly 20% of worldwide CO_2 emissions is attributable to automobiles. The shift to electric and fuel-cell cars will definitely have a significant effect on the reduction in the environmental impact of society at large. By offering electrolyte membranes and electrode catalysts, Tokuyama is contributing to the spread of fuel cell use.

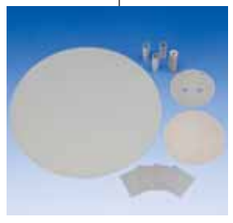




Through the proliferation of solar energy and fuel cell use, Tokuyama's technologies are contributing to the realization of a society underpinned by a distributed energy infrastructure.

When we consider global warming and resource depletion, we come to a conclusion: we must shift away from the development of an energy-intensive society. In the near future, we will see the realization of a society where general households are using solar power generation systems and electric vehicles, with various types of equipment being connected to power stations via a communications network, and efficient energy use being promoted in every aspect of living. It is expected that new buildings will be equipped with renewable energy systems and be built using construction materials that boast excellent heat insulation and dissipation properties. It is also expected that new urban development projects will increasingly involve the enhancement of ground so that soil liquefaction is not caused by earthquakes and other phenomena.

Today, the entire world is witnessing the development of eco-friendly, future-oriented cities in various locations, shifting away from the urban development model of the 20th century. Through the provision of polycrystalline silicon for solar cells and various materials for fuel cells, Tokuyama is contributing to the development of such cities.



Heat sink substrates for rolling stock and automotive motors: Tokuyama's aluminum nitride ceramics Shapal is used as heat sink substrates for power semiconductors controlling the motor output of hybrid cars. The use of Shapal enables the longer service life of power semiconductors and the higher output of motors. Shapal contributes to effective heat dissipation in various electronic devices as well.

Soda ash/caustic soda/chlorine: Tokuyama started out as a soda ash business. Soda ash is used as a raw material for car window glasses and other glasses and soaps. Caustic soda, chlorine and its derivatives are used as basic materials in many different sectors. Vinyl chloride resins, based on chlorine and its derivative, are used to manufacture water pipes and many other products.

Silica: Adding silica, instead of carbon black, to tires not only reduces fuel consumption of cars but also improves their grip performance on a wet road. In various fields of our society, the Company's silica products are used for wide-ranging applications, including the prevention of ink bleed on newspaper, polishing agents for silicon wafers, and encapsulants for semiconductor packages.

Cement/soil stabilization material: Tokuyama's cement and soil stabilization material is becoming increasingly important as a basic material to support safety and security in people's lifestyles. Meanwhile, in environmentally advanced cities, buildings are required to have a greater level of heat insulation properties and energy efficiency. By providing window glasses and sashes as well as a variety of exterior and interior construction materials, Tokuyama is contributing to eco-friendly urban development.

Creating Environmental Technologies

Tokuyama's R&D Facilities Creating Innovative Technologies

Mission of Tokuyama's R&D

Recent years have seen rising concerns about environmental and energy issues. In line with such a trend, innovative materials, such as those relating to solar power generation, are drawing attention from industries across the board.

Like those in other industries, Tokuyama's researchers and engineers are required more than ever before to develop new technologies and materials to accommodate needs that change along with advances of the time. Also, in step with business globalization, competition in the R&D sphere has intensified further, demanding quicker R&D development for new technologies and products and thereby raising the difficulty of R&D projects.

To remain a consistent winner in such an environment, Tokuyama must continue to create "Only One" or "No. 1" technologies and products ahead of its competitors. By strengthening its selection and concentration approach, Tokuyama will accelerate the pace of R&D projects. Simultaneously, the Company will steadily promote these projects by establishing a balanced portfolio consisting of short-, medium- and long-term projects.

R&D Structure

Tokuyama has established a Development Department and a Planning Department in each business division. Through these departments, the Company is advancing R&D projects that place particular emphasis on relationships with its customers. Meanwhile, in the Research & Development Division in charge of promoting corporate-wide R&D activities, the Corporate Development Department and other departments are promoting R&D activities aimed at creating new businesses. Also, with the goal of improving R&D efficiency, Tokuyama has established the Management of Technology Division, the Intellectual Property Department, the RC Research Laboratory and other organizations to support corporate-wide R&D activities, in addition to the Corporate Development Department focusing on the creation of new businesses and the R&D Planning Department, which was formed in 2010 as an organization exclusively tasked with identifying R&D project areas.

R&D Driving Tokuyama's Growth

Technologies advance constantly. Therefore, no corporation can achieve business growth unless it realizes technological breakthroughs and innovation. In other words, to enhance the competitiveness and prospects of a business, or to ensure the growth potential of a business, it is indispensable to search for new technologies and create technological innovation with clear strategies. As some of Tokuyama's businesses are maturing, we must create new businesses. To this end, Tokuyama is currently promoting such initiatives as identifying areas of new technologies leading to the creation of new businesses. In addition, we are working to develop these technologies into our unique strengths and, based on such strengths, create new products and businesses that will underpin the future growth of the Tokuyama Group.

In searching for new R&D themes, Tokuyama is focusing on such growth fields as "environment and energy," "information and electronics" and "life and healthcare." We are prioritizing the utilization of the current advantages in technologies and materials that the Tokuyama Group, including affiliates, boasts. At the same time, we are maintaining a policy of actively tapping the advantages of third parties, such as academic institutions, to compensate for any insufficiencies we might have. With the aim of achieving its Centennial Vision, the Tokuyama Group is facilitating in-house and external collaboration and searching for new technologies in line with its "Venture Sprit & Innovation" policy. In this way, we will bolster our R&D and technological capabilities.

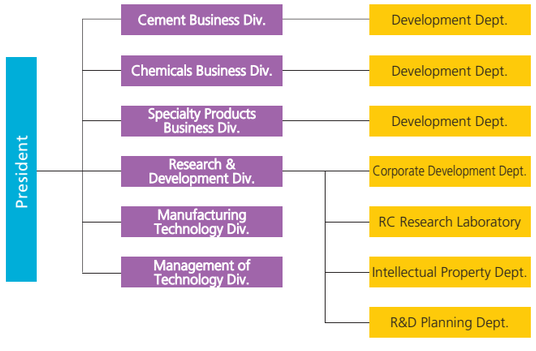
Role of the Corporate Development Department

The Corporate Development Department maintains its independence from Tokuyama's business divisions and undertakes R&D projects to create new products and businesses that will support the sustainable growth of the Tokuyama Group.

United by the motto of "proudly delivering 'Only One' technologies to the global market," researchers at the Corporate Development Department are making daily progress in their R&D projects. They value uniqueness and independence and engage in free and energetic discussions regardless of their posts and ranks. Such an R&D culture is the exact epitome of the Tokuyama Group—filled with vigor. Also, our researchers frequently communicate with related in-house organizations, such as the Management of Technology Division, the R&D Planning Department, the Intellectual Property Department and the RC Research Laboratory, to form a framework to flexibly and swiftly respond to R&D requirements that change in line with the times.

Current projects being promoted by the Corporate Development Department include the following. In the environment and energy field, it is advancing the development of electrolyte materials for use in fuel cells, which are increasingly recognized as a clean energy source, leveraging the Company's strengths in ion exchange membranes and electrochemical technologies. Every year, R&D outcome is presented at the FC EXPO, an international exhibition for hydrogen and fuel cells, and draws significant attention of industry players. In the information and electronics field, through cooperation with academic institutions, we are aggressively undertaking the development of single-crystal aluminum nitride—a material used for next-generation light-emitting diodes—and fluoride single crystals—a material of scintillators. We aim to quickly commercialize these materials currently under development, along with other projects. Furthermore, we will continue to launch projects in new fields, thereby creating a portfolio of high-value-added products that provide superior competitiveness.

Tokuyama's R&D Organization



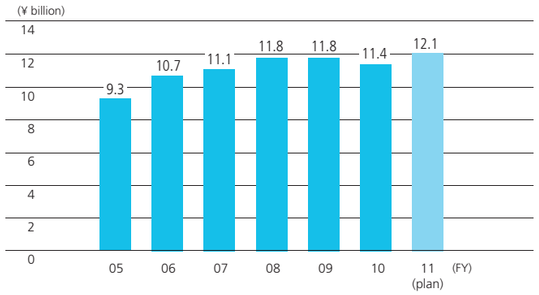

Tsukuba Research Laboratory

Intellectual Property Department

As a manufacturing company, Tokuyama must create and effectively utilize intellectual property to achieve sustainable corporate growth and make social contributions. Tokuyama's Intellectual Property Department adheres to the basic policy of "maximizing the Company's corporate value through the creation and effective utilization of intellectual property." In line with this policy, the Intellectual Property Department works to protect the outcome of the Company's R&D activities through the appropriate management of intellectual property rights. At the same time, it conducts risk management to ensure that the Company respects the intellectual property rights held by other parties.

By securing the outcome of product and technology R&D—the crystallization of the wisdom of Group researchers—through the establishment and management of intellectual property rights, the Intellectual Property Department strives to maintain the competitiveness of Tokuyama's operations. Moreover, the department implements intellectual property strategies closely linked with business and technological strategies to maximize the utilization of its intellectual property portfolio. As the Tokuyama Group bolsters business globalization, the department will strategically manage the Company's patents and other intellectual property rights in Japan and overseas, thereby contributing to the enhancement of the Group's corporate value.

R&D Expenses



Tsukuba Research Laboratory

The Tsukuba Research Laboratory is situated in the peaceful setting of Tsukuba Science City in Ibaraki Prefecture. This laboratory conducts research on fundamental and advanced technologies from a medium- and long-term perspective while promoting research in medical products and organic fine chemicals. Also, the laboratory goes beyond basic R&D for functional materials, performing applied R&D for systems and services.

Tokuyama Research Laboratory

Located within the Tokuyama Factory site, the Tokuyama Research Laboratory is in charge of the Company's core R&D. Taking advantage of its close proximity to the Tokuyama Factory, this laboratory incorporates requests from business divisions into its product development in a timely manner. Covering wide-ranging fields—from basic chemical products to cement—the laboratory undertakes basic and applied R&D as well as process development.

RC Research Laboratory

Positioned under the Research & Development Division, the RC Research Laboratory focuses on the development of cutting-edge technologies to analyze materials while supporting R&D activities aimed at creating new businesses that will underpin the future growth of the Tokuyama Group. To enable Tokuyama to protect the global environment and promote business activities centered on product safety, this laboratory applies its expertise in environmental analysis and risk assessment, maximizing the effectiveness of the Group's Responsible Care (RC) activities.

Creating Environmental Technologies

Dreams and Strategies in Environmental Technology Development

Electrolyte Membrane for Fuel Cells

Story of Electrolyte Membrane Development

Hiroyuki Yanagi
General Manager,
Corporate Development Dept.

Dr. Yohei Chikashige
Research Chemist,
Corporate Development Dept.
(Tsukuba)

At the Corporate Development Department, we are actively promoting the development of ion exchange membranes for fuel cells using our core electrochemical technologies, which have originated from Tokuyama's electrolytic chlor-alkali method. Fuel cells have become a focus of R&D worldwide, being viewed as a next-generation, clean energy source that does not rely on natural resources. In particular, with the onset of the Great East Japan Earthquake, expectations are heightening for the use of distributed power sources, including fuel cells. It may not be too much to say that the success in realizing the practical use of fuel cells will determine the future of the human race. At the same time, the entire world must work to combine solar, wind, water and other eco-friendly power generation with the use of fuel cells and lithium batteries. Tokuyama is committed to contributing to the achievement of optimal combinations through its materials. We have been able to realize revolutionary membrane performance by skillfully controlling the chemical structures of the membrane surface and catalyst interface. We plan to start the operation of our pilot facilities for the processing of membranes this year and launch full-fledged product development.

Indeed, manufacturing forms the foundation of Tokuyama. It is our responsibility to contribute to address energy issues through the application of our chemical and other capabilities. Surely, we will have to overcome a number of problems, specifically, membrane performance, costs and reproducibility. By steadily solving each of these problems through teamwork, we aim to launch new membranes as quickly as possible.

Fuel cells provide high generation efficiency and are power sources with low environmental impact. Thus, they are recognized as one of the most important elements in the world's efforts to realize a society underpinned by a distributed energy infrastructure. Ahead of the world, our team has been involved in the development of electrolyte membranes for alkaline membrane fuel cells (AMFCs), and we are currently advancing development projects aimed at realizing reasonable prices, high output and longer service life of our membranes. In AMFCs, such common metals as iron and nickel can be used as electrode catalysts, in place of such expensive, rare metals as platinum. Also, AMFCs can be fueled by bioethanol. Due to these features, the entire globe is tackling the development of AMFCs for automotive and other applications as eco-friendly fuel cells.

Without doubt, we have utilized the ion exchange membrane technologies that Tokuyama has accumulated over the years in the development of electrolyte membranes. Still, as there were no precedents that we could refer to throughout our development, we had to start with the most basic of basics, thinking systematically about the materials to be used and repeating hypothesis verifications. In so doing, we had to try new ways of concept development, "thinking outside of the box." It has been a series of trials and errors. Finally, we managed to develop an electrolyte membrane that significantly improves the service life and output of fuel cells for practical applications. We have seen a "light on the horizon," so to speak.

Yet, we have certain problems to solve to achieve additional performance improvements. However, we are working to make improvements day by day, dreaming of the day when the technologies and products we have developed and refined are distributed and used throughout the world.

Aluminum Nitride

Tackling the Creation of High-Quality Aluminum Nitride

Kazuya Takada
Senior Manager,
R&D Planning Dept.

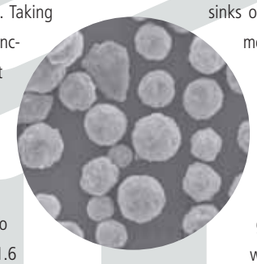
Dr. Yukihiro Kanechika
Manager, Specialty Products
Development Dept.,
Specialty Products Business Div.

Traditionally, heat and chemical agents have been used mainly to kill microorganisms that can cause diseases. In recent years, ultraviolet light radiation is increasingly recognized as a clean sterilization method with low environmental impact. However, as their name suggests, mercury lamps—used as ultraviolet light sources—contain mercury, creating a contradiction, since eco-friendly ultraviolet light sterilization can cause environmental pollution.

On the other hand, aluminum nitride (AlN) not only boasts excellent thermal conductivity, but is also known as a semiconductor material that emits ultraviolet light with a powerful sterilizing effect. Taking advantage of the materials' characteristics, we are advancing the development of high-performance ultraviolet LEDs by synthesizing and utilizing high-quality single-crystal AlN substrates.

According to the 2006 version of the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, approximately 1.1 billion people worldwide do not have access to safe drinking water, and more than 1.6 million babies and young children are dying every year from infectious and other diseases caused by the drinking water they consume. So, if reasonably priced, portable sterilization devices that have a long service life and combine less power-intensive ultraviolet LEDs and solar cells are distributed across the world, we would be able to save the lives of many people.

At present, white LEDs are taking the place of filament bulbs and fluorescent lights. As such, the shift from vacuum tubes to solid-state devices is a major technological breakthrough. To promote such a breakthrough, we are taking on challenges of realizing innovation, aiming to achieve the practical use of ultraviolet LEDs that will replace conventional mercury lamps.

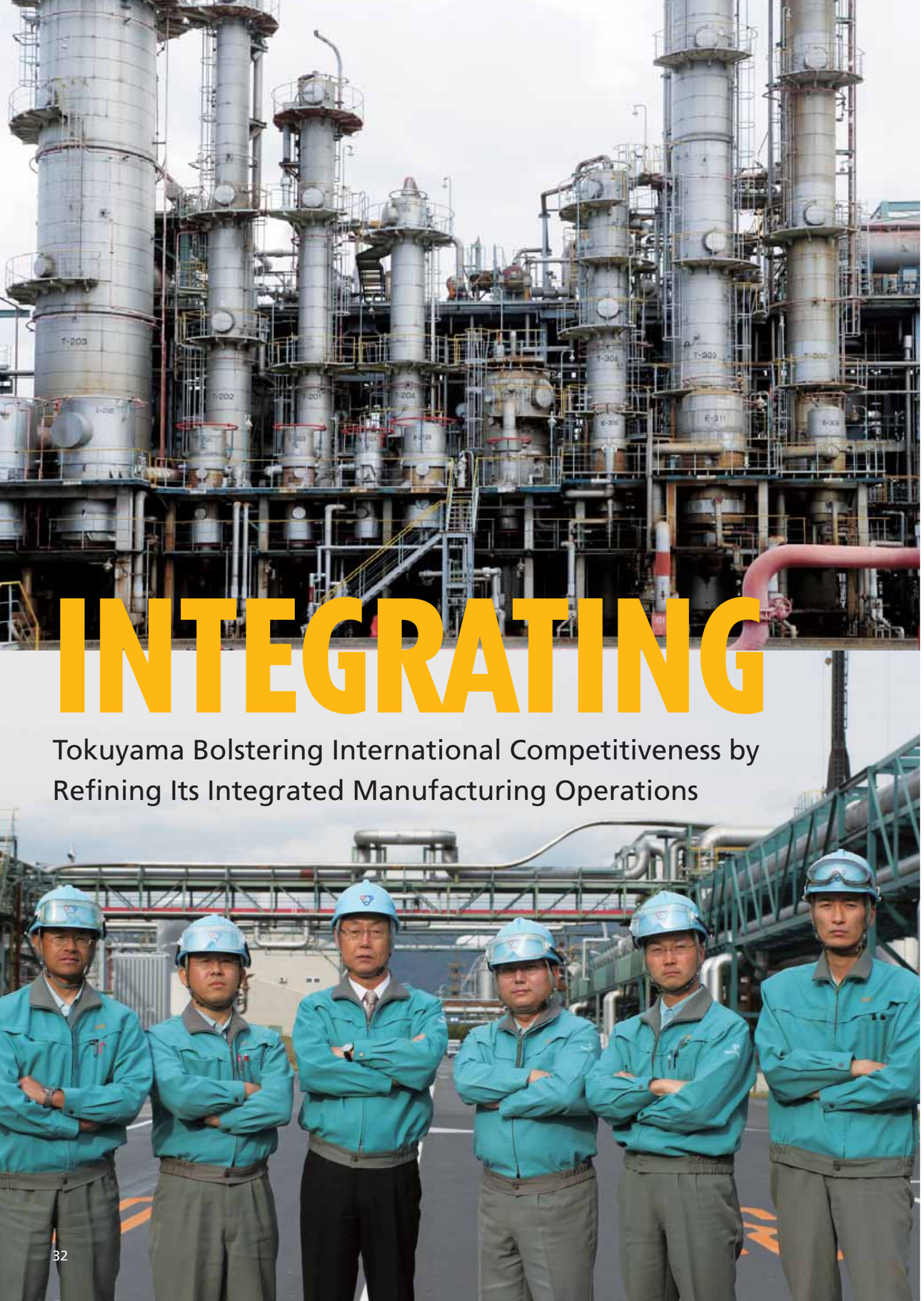


Aluminum nitride filler

In line with the realization of more compact electronic devices with faster processing capabilities, such as personal computers and smartphones, the electronics industry is increasingly facing the issue of releasing the heat generated in these devices. This issue is shared by the automobile industry, as effectively releasing the heat generated by semiconductors used for power control systems in hybrid and other cars can improve the reliability of various devices and, ultimately, these cars. AlN boasts excellent thermal conductivity and electrical insulation. Due to these features, AlN has been used for the heat sinks of these semiconductors while contributing to the development of LEDs with greater luminosity and longer service life.

However, since it has been difficult to supply reasonably priced AlN, the scope of AlN application has been limited to certain areas. In response, to supply more reasonably priced AlN, we are accelerating the development of a new filler based on the AlN manufacturing technologies that we have accumulated to date. By blending AlN with resins, the heat conductivity of the resultant material can be improved two to tenfold or more. This blending can both reduce the manufacturing cost of heat sink substrates and help realize more effective heat dissipation in electronic devices. As prices become more reasonable, a wider range of AlN applications can be expected in various aspects of living.

In addition to the AlN substrates we have already commercialized, we aim to supply new, high-performance and yet reasonably priced fillers, thereby contributing to the realization of electronic devices that are capable of even faster processing, offer greater reliability and achieve a longer service life. In this way, we will help society reduce its impact on the environment.



INTEGRATING

Tokuyama Bolstering International Competitiveness by Refining Its Integrated Manufacturing Operations

Tokuyama is working to establish a highly profitable business structure while striving to catch up with the pace of changes in operating conditions. To this end, the Company will promote necessary restructuring at its Tokuyama Factory. The sources of competitiveness of our Tokuyama Factory include unparalleled energy efficiency and the technologies that we have nurtured at the frontlines of manufacturing operations. With an eye to strategically responding to dynamic changes in raw material and fuel prices and the possible implementation of an environmental tax, we aim to reduce our unit energy consumption and improve the productivity and efficiency of operations in back office divisions, thereby further solidifying the foundation of the Tokuyama Factory as our "Mother Factory."

(Top) Vinyl chloride monomer plant in the Tokuyama Factory
(Bottom) President Kogo and engineers playing key roles in the Tokuyama Factory

Developing the Tokuyama Factory into Our "Mother Factory"

We are working to improve the productivity at our Tokuyama Factory and on a Groupwide scale through the reestablishment of manufacturing and information infrastructures. To strengthen our manufacturing infrastructure, we have positioned the factory as the Company's "Mother Factory" responsible for the Tokuyama Group's technologies and expertise. Based on this positioning, the Tokuyama Factory will accelerate collaboration with the Kashima Factory and other factories operated by Group companies. The Tokuyama Factory boasts advantages in the manufacturing processes and technologies required to launch mass production after product development is completed. We will leverage these advantages—fostered through operations at the frontlines of manufacturing technology development—to expand our global operations. In addition, Tokuyama will optimize its production network and promote cost reductions and awareness-raising through steady, thorough rationalization, thereby bolstering its international competitiveness—a growth strategy under its Centennial Vision.

To enhance its information infrastructure, Tokuyama has started the introduction of an enterprise resource planning (ERP) system Groupwide. Through the reinforcement of management accounting, we will work to improve the productivity not only in our manufacturing divisions, but also our back office divisions.

Sophistication in System and Process Integration

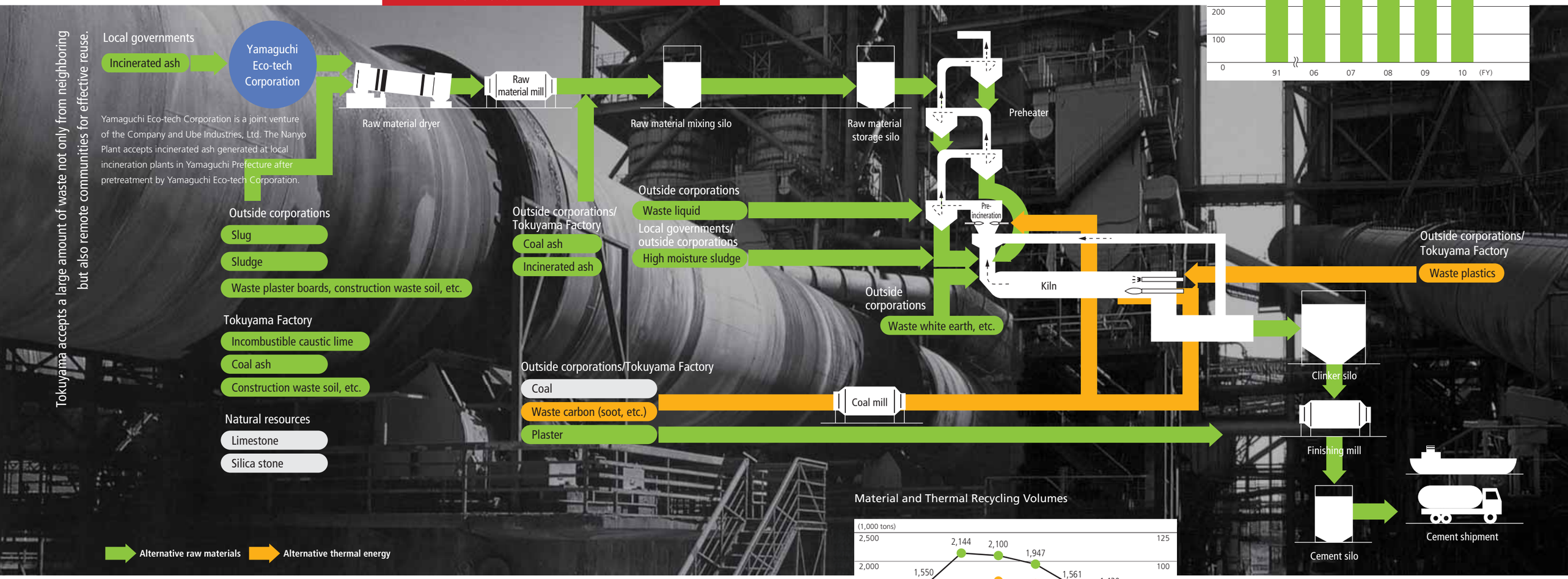
The Tokuyama Factory is located within the Shunan Petrochemical Complex in Shunan City, Yamaguchi Prefecture, and it is the Company's core production base, integrating diverse manufacturing operations. The Tokuyama Factory consists of the Higashi Plant, which produces polycrystalline silicon and organic chemicals, the Tokuyama Plant, which mainly produces soda ash and other inorganic chemicals, and the Nanyo Plant, which produces cement. These plants and production facilities work together to effectively use raw materials, products and by-products, and the Tokuyama Factory has constantly pursued its vision of becoming an integrated production base, where energy, materials and technologies support close links among different businesses.

At the heart of the integration at the Tokuyama Factory is its in-house power plant, which boasts one of the largest capacities in Japan at 552,000 kilowatts. The electricity and steam generated are supplied through power lines and pipes to each plant. In addition, the Tokuyama Factory has been making exhaustive efforts to recycle waste generated from within and effectively use such waste as fuel and raw materials for cement production. Thanks to these efforts, the Tokuyama Factory achieved a zero-emission rate of 99.9% in fiscal 2010.

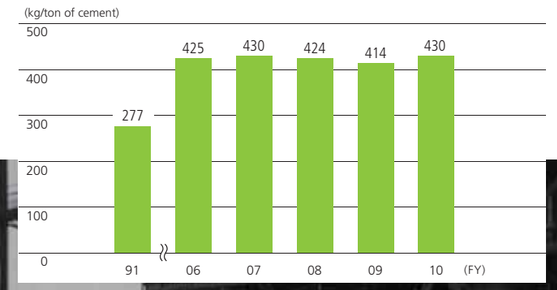
Integrating with Communities

Recycling Approach Open to Society

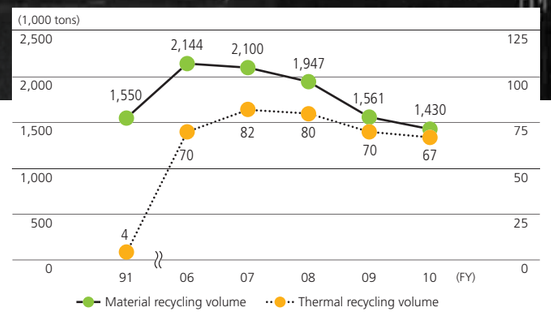
Resource Recycling System Centered on Our Cement Plant



Unit Consumption of Waste and By-Products



Material and Thermal Recycling Volumes



Low-moisture sludge facilities

High-moisture sludge facilities

Coal ash facilities

Proactively Accepting Waste from Local Communities and Industries

The Nanyo Plant, a cement production base within the Tokuyama Factory, is promoting the reuse of by-products from the Company's soda ash plant and coal ash from the in-house power plant as raw material for cement production. In addition, the Nanyo Plant proactively accepts a significant volume of waste and by-products from local communities and industries, promoting a recycling approach open to society.

For example, the Nanyo Plant accepts sewage sludge from local governments within and outside Yamaguchi Prefecture for reuse as an alternative raw material for cement. Also, it receives incinerated ash generated from household waste. More specifically, incinerated ash generated at local incineration plants is sent to Yamaguchi Eco-tech Corporation. Yamaguchi Eco-tech Corporation then removes chlorine and other substances unwanted for cement production from the ash to improve ash quality to a level sufficient for reuse. The Nanyo Plant accepts this processed ash. The Nanyo Plant also accepts slug from steelworks and coal ash from thermal power plants, which are similarly reused as alternative raw materials for cement production.

Meanwhile, Tokuyama has promoted the recycling of waste plastics and has established a technology to enable the stable injection of crushed plastics in large quantity from the front of its cement kiln. In 1999, the Company became the first Japanese cement maker to have established a plant for making waste plastics-based fuel for thermal recycling at a crushing capacity of 15,000 tons per year. The Company has continued to expand the crushing capacity ever since, and the plant is now capable of accepting, crushing and combusting 125,000 tons of waste plastics a year. The temperature in the cement kiln reaches 1,000 to 1,800 degrees Celsius. At this high temperature, combustible elements are reduced to ash, which is used as an ingredient for cement. This makes our cement kiln quite unlike incinerators in that it generates no residue. Through these facilities and activities, the Tokuyama Factory is continuing "Venture Spirit & Innovation" toward the realization of a recycling-oriented society.

Integrating with Communities

Tokuyama Blending in with Society

Tokuyama Factory RC Community Dialogues

On August 18, 2010, the Fiscal 2010 RC Community Dialogue took place at Tokuso Kaikan. With the objective of gaining the understanding of community associations around the Tokuyama Factory concerning the Company's environmental, safety and disaster prevention efforts, this event was the seventh of its kind.

It drew 23 participants from community associations and three from the Shunan City Government. Mr. Nakamura, deputy general director of the Department of the Environment and Sewerage of the Shunan City Government, delivered a presentation on new rules for waste sorting.

A survey conducted prior to the event revealed that members of the community associations were concerned about fire and explosions, dust and soot and smoke from chimneys. In response, through the event, which included a factory tour, our explanations focused on the Company's measures, including activities to prevent accidents and disasters, actual actions to be taken in case of fire (measures for process safety) and initiatives to reduce dust and soot (measures for environmental protection).

At the event and afterwards, participants made comments such as, "Seeing actual sites was really helpful," "I was impressed with Tokuyama's measures for environmental protection, disaster prevention and safety promotion" and "I feel a little safer now after hearing explanations on Tokuyama's management and preventive initiatives for process safety and disaster prevention." Though being grateful for these supportive comments, we felt that it is necessary for us to constantly strengthen our monitoring and management activities.

Disaster Drill

On November 12, 2010, the Fiscal 2010 Yamaguchi Prefecture General Disaster Drill for Petrochemical Complexes and Related Facilities was held on the premises of the Tokuyama Factory.

Conducted in line with Yamaguchi Prefecture's disaster prevention plan for petrochemical complexes, this annual disaster drill is designed to allow facility operators to familiarize themselves with disaster response activities to be jointly undertaken with related local authorities in the event of an actual disaster. Moreover, this drill aims to strengthen collaborative ties among these facility operators and local authorities.

The drill was conducted on the assumption that a 7.6-magnitude earthquake—measured at an intensity of lower six in Shunan City—had occurred in eastern Yamaguchi Prefecture. Other conditions were also assumed, including the onset of a fire at a heavy oil pump within the Tokuyama Factory, the spread of fire to adjoining heavy oil tanks and a heavy oil leak into the sea due to aftershocks. A total of about 310 people from 19 organizations participated in the drill, using 11 vehicles and nine ships.

Feedback on Tokuyama's RC Community Dialogue

Kazutoshi Wada
Local resident, Chairman of Shunan City East Tonda Area Council of Social Welfare

Tokuyama proactively discloses information.

I was born in an area on the other side of the river where the Tokuyama Factory is located and have lived there all my life. I remember when I was a kid, roof gutters would often get clogged with cement ash if we did not wash it away. Japan was in the middle of a high economic growth period then, and the concept of environmental pollution was not so common among the public. So, I suppose, "what's done is done." We can't change the past.

Today, however, corporations cannot exist without giving consideration to environmental issues. Currently, various corporations are holding RC community dialogues in eastern Yamaguchi Prefecture. Tokuyama started its unique RC Community Dialogue earlier than any of these corporations. In addition to this program, Tokuyama is implementing proactive initiatives, including safety and disaster prevention measures, while promoting communication with local community associations. Therefore, I affirm that Tokuyama is actually promoting corporate management in harmony with society, as its Basic Policy states.

Still, like the Great East Japan Earthquake, unexpected events can happen anytime. So, on behalf of all members of neighboring communities, I strongly hope that Tokuyama will do its best, taking steps to ensure safety and prevent accidents and disasters.

Feedback on Resident Evacuation Drill

Shigetaka Fujisawa
Disaster prevention staff (Advisor), Disaster Prevention Division, Disaster Prevention Construction Department, Shunan City Government

Many local residents participated in the drill, showing concerns about emergency evacuation.

As part of the Fiscal 2010 Yamaguchi Prefecture General Disaster Drill for Petrochemical Complexes and Related Facilities, we conducted an emergency evacuation drill for local residents. Before the day of the drill, we were worried that not so many people would join the drill because it was organized as a daytime event on a weekday. However, probably due to a series of recent disasters frequently reported on various news programs, many local residents participated in the drill, showing strong concern about disaster prevention.

All participants responded seriously at the signal advisories for evacuation made by police cars and Shunan City government vehicles. Elderly participants were running as fast as they could, and people were helping those on wheelchairs in need of nursing care to get to designated evacuation sites. After the drill, many participants asked us various questions, including where to evacuate to, how to evacuate and who will give them evacuation advisories and will lead them to evacuation sites. We answered those questions in detail, and participants seemed to have familiarized themselves with the emergency responses to be taken.

Meanwhile, the event provided us with a good opportunity to witness the seriousness of local residents concerning disaster prevention and evacuation measures. They proactively joined lectures and firefighting training using water extinguishers, while tasting emergency foods. The drill was held for a short period of time, but it offered the city government an invaluable experience. We would like to hold other similar events in cooperation with local corporations.

Children at Oodori Elementary School

"Mikage" Book Donation Program

Tokuyama began this program as a project commemorating its 60th founding anniversary. The year 2010 marked the 34th event under this program. The program title "Mikage" reflects two things: Tokuyama Factory's address, at 1-1 Mikage-cho; and the Japanese term "Okage" (Chinese characters for "Mikage" can be pronounced also as "Okage") meaning indebtedness and gratitude.

In 2010, Tokuyama donated ¥100,000 to each of 49 elementary and junior high schools in Shunan City. With this year's donations, the amount of donations to date, including book coupons and bookshelves, totaled ¥170.65 million.

The photos presented above and to the right were taken when General Manager Tetsushi Yamada of the Tokuyama Factory and other Tokuyama employees visited Shunan City Municipal Oodori Elementary School in June 2010. (This elementary school merged with Shunan City Municipal Numagi Elementary School at the end of March 2011.)

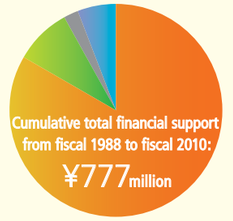
Tokuyama Science Foundation

The Tokuyama Science Foundation was established on September 19, 1988, to commemorate the 70th anniversary of Tokuyama's founding. This mission of the foundation is to offer financial support for research into new materials and related subjects in science and technology and to raise awareness of science and technology, thereby enabling socioeconomic development and the improvement of people's lives.

The foundation has to date offered a cumulative total of ¥777 million for 665 projects. Many who enjoyed support from the foundation as youths are today leading professors at universities nationwide.

Exhibition: An Exciting World of Chemistry (Kochi City, Kochi Prefecture)

All recipients of research grants in fiscal 2009



Research grants: ¥648 million to 333 recipients

The foundation offers research grants to young researchers aged 45 or younger at universities and research institutions in Japan. After the financial support period, a research presentation meeting takes place with the participation of all recipients.

Financial support for international exchange:
¥67 million to 248 recipients

The foundation subsidizes the participation of young researchers aged 45 or younger at universities and research institutions in Japan at international meetings held outside Japan. After returning to Japan, the recipients are required to submit reports on the results.

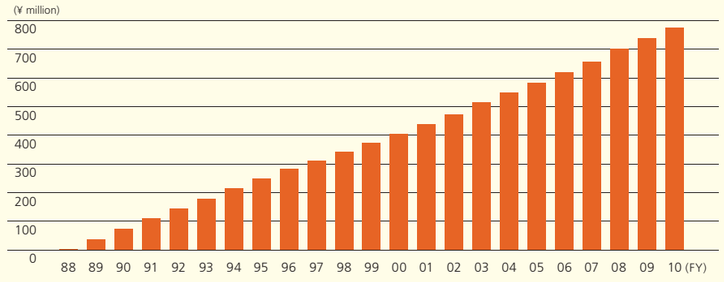
Financial support for international symposia:
¥18 million to 34 projects

The foundation provides financial support for the operations of international conferences to enable researchers to exchange information with peers overseas.

Grants for campaigns on science and technology:
¥44 million to 50 projects

The foundation backs campaigns that present the excitement and wonders of science and technology to children. The Chugoku/Shikoku Branch of the Chemical Society of Japan plays a central role in organizing a series of exhibitions titled "An Exciting World of Chemistry" in the summer vacation season. In Yamaguchi Prefecture, there are "invention clubs" for boys and girls operating in seven cities, towns and villages.

Cumulative Total of Grants and Financial Support



Integrating with Communities

Passing on Tokuyama's "DNA" to the Next Generation

Background of the Establishment of the Technical Training Center

Tokuyama established the Technical Training Center within the Tokuyama Factory in Shunan City, Yamaguchi Prefecture in 2007—the first year of the mass retirement of "baby boomers" in Japan. This center provides young employees, ranging from new employees to team leader candidates, with education and training focusing on actual plant and other on-site operations. Through various education and training programs, Tokuyama is working to develop these employees' skills so that they can proactively learn, think and take action.

Looking into recent trends, schools are strengthening IT education while sacrificing practical training on mechanical and electrical operations. Due to such trends, young employees often lack the basic knowledge required to work in chemical plants. Turning to problems specific to manufacturing frontlines, an increase of automated processes and a decrease of the frequency of regular repair work have reduced opportunities for these employees to understand facility mechanisms through hands-on experience with actual machines and equipment.

So to effectively solve all of these problems and raise the level of overall skills of its young employees, Tokuyama has established the Technical Training Center. This center has created curricula that make use of actual machines and equipment. In addition, the Company has appointed five veteran plant operators as dedicated trainers, including senior contract workers who are continuing to work after reaching retirement age.

Technical Training Center

Training plant

Practical training on operational management

Practical training on electric sequence control

Inter-Generation Technology Transfer and Safety Assurance

On-site plant operators are required to have sound judgment, such as that to immediately stop the operation of machines when an emergency occurs. They are also required to have risk intelligence, including complete knowledge about procedures to prevent workers from getting caught in operating machines and equipment.

At Tokuyama, we recognize that it is paramount through education and training programs to enable our employees to conduct their work without calamities. In recent years, our new employees particularly lack the ability to predict or foresee risks and hazards. Therefore, to make them fully aware that they are working under conditions that can be dangerous beyond their imagination, our programs are centered on the slogan, "Experience, feel and learn."

For example, in the hazard experience program, we purposely drop a machine tool from a high place on a pot, in place of a skull, to point out the significant impact of falling objects. Also, we make trainees wear special gloves and arrange for their fingers to become softly jammed in machinery, while suspending them with a safety belt. Through this program, trainees experience the pain and severity inherent in plant operations and strive to improve their awareness toward hazard prediction and risk management.

For education and training on manufacturing technologies, a brine generation training plant has been installed within the center. Using this plant, we allow trainees to experience the entire production process, from the formulation of operational plans, preparation for operations, actual operations and quality checkups to shipment. Also, we offer them opportunities to make judgments, implement response measures and complete recovery work by intentionally causing plant failure. Through such practical training, we are working to nurture plant operators capable of proactively learning, thinking and taking action even in the case of plant troubles.

By consistently providing learning experience through the Technical Training Center, Tokuyama is effectively transferring its manufacturing expertise and veteran operators' techniques, all of which collectively constitutes the "DNA" of the Company, to younger generations.

Experiencing the use of safety belt

Training on flange coupling

Tokuyama's Strengths Underpinned by Its People

Keiji Abe
General Manager, Technical Training Center

I would like new Tokuyama employees to understand that factories and plants are full of risks and dangers. I would like them to learn the seriousness of it: one subtle error in following prescribed procedures can lead to a major accident, and they could get hurt, or even lose their life.

Today, an increasing number of plants are implementing safety measures. So, the number of people who actually experience dangerous situations in plants is decreasing. This is fortunate. However, we cannot really reproduce situations that make people undergo such situations in actual plants. This is why we came up with and introduced our unique programs, where we make our trainees experience getting caught in machinery and make their fingers experience the pain when jammed in machines. Through these programs, we emphasize the slogan "Experience, feel and learn," making our trainees remember the pain when actually experiencing dangerous situations.

The time allowed for new employee training is limited—only about 20 days. We have to be really focused, concentrating on teaching the bare essence of what they are going to learn on site. So, we have developed our curricula to cover a minimum of subjects—subjects that our trainees probably should experience beforehand so that they blend in smoothly with the workplace to which they will be assigned.

Meanwhile, our plant operators on site must have an extensive range of skills and knowledge. These include: (1) management during the steady operation of plants based on accumulated experience; (2) procedures for shutdown, startup and other non-routine operations; (3) knowledge about raw materials and products; (4) knowledge about chemistry, chemical engineering and facility management; and (5) problem-solving capabilities required to promote safety activities and improvements on site. To enable our plant operators to sharpen their skills and knowledge in these areas, we provide manufacturing skills education, aside from new employee training. Through this education program, we offer lectures on such subjects as operational management, chemical engineering, electrical engineering, instrumentation, machinery and problem solving.

Explaining these activities may sound like we are teaching our trainees everything from A to Z. That is not the case at all. In fact, we are working to realize education and training programs where trainees learn by themselves through their own thinking processes. Ultimately, we aim to establish a system to educate and train our employees so that they can proactively learn, think and take action. In fiscal 2010, 662 trainees, including 298 people working at the Company's contractors and other corporations, took our education and training programs.

It is one of our missions at the Technical Training Center to nurture young generations to have such capabilities, thus passing on Tokuyama's "DNA" to these new generations. After all, the next generation will determine the future of the Tokuyama Group.

Also, we will welcome new local employees, hired in Malaysia, to the Tokuyama Factory in 2011. Humble though its efforts may be, the Technical Training Center would like to make contributions to Tokuyama's globalization.

Experiencing loose scaffolding

Experiencing getting caught in rollers

Practical training on chemical engineering calculation

Practical training using fire-fighting equipment

Practical training on high-voltage switchboard operation

Promoting Environmental Management

Tokuyama's Environmental Management:
Performance for Fiscal 2010

Protecting the Global Environment

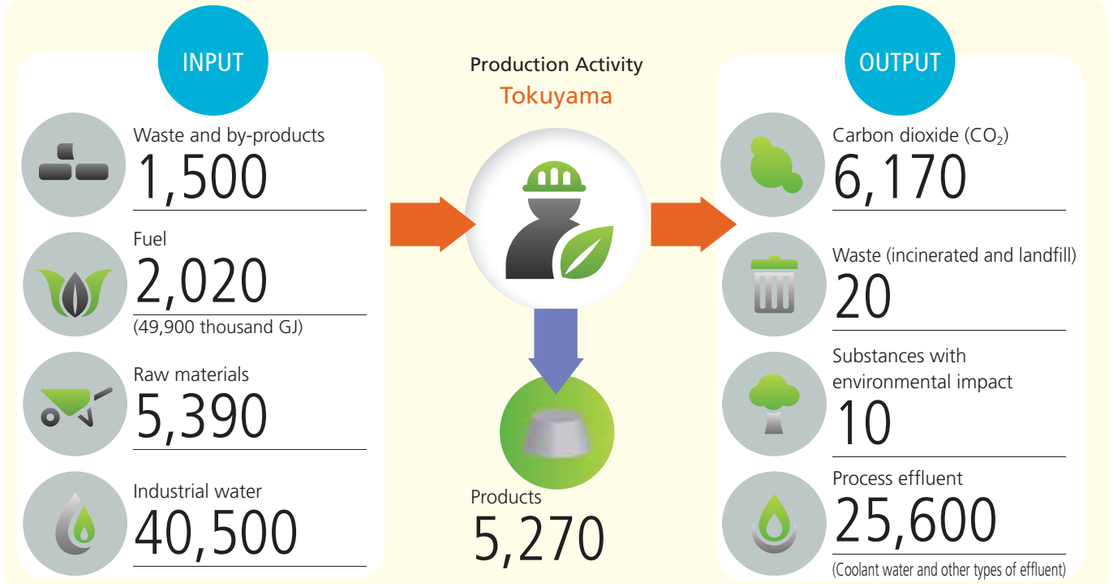
One of our most important corporate social responsibilities is to actively protect the global environment. Tokuyama practices environmental management with an emphasis on environmental perspectives in all of its business activities.

Tokuyama's Environmental Performance for Fiscal 2010

Tokuyama strives to obtain accurate data on the input and output of materials and substances in its business activities and reduce the environmental impact of these activities to meet its environmental targets.

Flow of Materials in Business Activities

(Unit: 1,000 metric tons)



Fiscal 2010 Results of Environmental Preservation Activities (Tokuyama Factory)

Rating: ○: Satisfied; ×: Not satisfied

Category	Items		Fiscal 2010 Target (Reference Fiscal Year: 2007)	Fiscal 2010 Result (Reference Fiscal Year: 2007)	Rating	Fiscal 2011 Target (Reference Fiscal Year: 2010)
Environmental Impact Reduction	Atmosphere	Soot and Dust	±0% (Compared to the average emission from fiscal 2005 to 2007)	−41%	○	±0% (Compared to the average emission from fiscal 2005 to 2007)
	Water Quality	COD	−7%	−23%	○	±0%
		Nitrogen	±0%	−2%	○	±0%
		Phosphorus	±0%	−49%	○	±0% (Compared to the average emission from fiscal 2005 to 2007)
	PRTR	PRTR	−47%	−45%	×	±0% (Compared to the average emission from fiscal 2005 to 2007)
		Hazardous Air Pollutants (VCM, EDC)	−24%	−22%	×	(To be included in PRTR)
	Energy Conservation	Unit Energy Consumption Index	22% lower than the fiscal 1990 level	24.6% lower than the fiscal 1990 level	○	—*
Global Environment Conservation	Recycling	Rate of Effective Waste Utilization	Maintain at 94%	94%	○	Maintain at 94%
Waste Reduction	Zero Emission	Zero-Emission Rate	Maintain at 99.9%	99.9%	○	Maintain at 99.9%

In fiscal 2010, Tokuyama satisfied its targets for air and water pollutant reductions, energy conservation, recycling and zero emissions.

* Tokuyama has not set an energy conservation target for fiscal 2011. The Company has set the target for fiscal 2012 at "24% lower than the fiscal 1990 level."

Environmental Accounting

To accurately grasp and analyze the amounts of investments and costs associated with environmental preservation activities and improve the effectiveness of environmental investment, Tokuyama has implemented environmental accounting since fiscal 2000.

Environmental Costs

Investments relating to pollution control, global environmental conservation, resource recycling and management activities accounted for 57%, 40%, 0.3% and 1.5%, respectively, of Tokuyama's total environmental investment during fiscal 2010. Costs relating to pollution control, resource recycling and global environmental conservation accounted for 68%, 16% and 10%, respectively, of the Company's total environmental costs for the same period. Major environmental investments included the installation of new neutralizing facilities, the replacement of existing neutralizing facilities and the installation of new facilities for the treatment and stabilization of waste.

Environmental Preservation Costs

Category		Major Activities	Amount Invested (¥ million)	Costs (¥ million)
Costs in the Business Areas	Pollution Control	Installation of new neutralizing facilities, replacement of existing neutralizing facilities	1,186	4,958
	Global Environmental Conservation	Installation of new facilities for the treatment and stabilization of industrial waste	825	709
	Resource Recycling	Effective use of resources	6	1,171
Upstream and Downstream Costs			0	0
Management Activity Costs		Environmental analysis equipment, etc.	30	290
Research and Development Costs			0	14
Social Activity Costs		Greenery development, production of CSR report	21	17
Costs for Environmental Damage		Imposition, management of a former mining site	0	140
Total			2,068	7,299

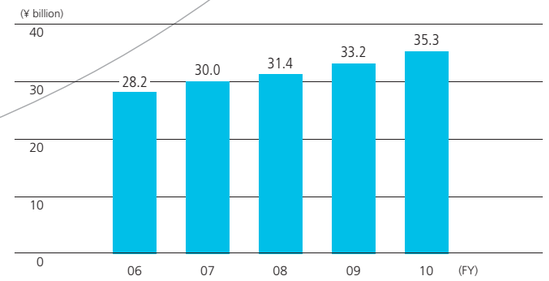
Economic Benefits

To analyze the economic benefits, we calculate nothing but the real benefits of gains on reduction in energy consumption, gains on sale of valuable waste, gains on reduction in waste disposal costs through waste recycling and gains on reduction in raw material and fuel costs through waste recycling. Thus, Tokuyama does not calculate de facto economic benefits based on estimates whatsoever. In fiscal 2010, Tokuyama achieved economic benefits totaling approximately ¥1.4 billion, up about ¥50 million from fiscal 2009.

Economic Benefits in Fiscal 2010

Category	Material Benefit (1,000 metric tons)	Economic Benefits (¥ million)
Gains on Reduction in Energy Consumption		177
Gains on Sale of Valuable Waste	85	355
Gains on Reduction in Waste Disposal Costs through Waste Recycling	200	521
Gains on Reduction in Raw Material and Fuel Costs through Waste Recycling	201	363
Total		1,416

Cumulative Total Environmental Investments (since fiscal 1990)



Commitment to the Prevention of Global Warming

Prevention of global warming is key to the future of the human race. Tokuyama is making steady energy conservation achievements in its business activities while supporting energy conservation in employee households.

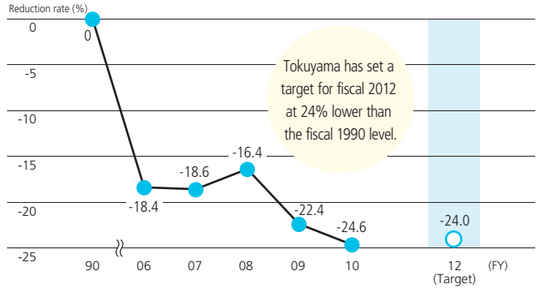
Promotion of Energy Conservation

Tokuyama consumes a huge amount of energy in manufacturing its core products, such as caustic soda, cement and polycrystalline silicon. Carbon dioxide, one of the greenhouse gases, is generated chiefly by burning fossil fuels and also by the decarboxylation of limestone used as a raw material in cement production.

Aware of the high priority of preventing global warming, the Company is conducting energy conservation activities to reduce carbon dioxide emissions. The Tokuyama Factory is responsible for more than 99% of the Company's energy consumption. In fiscal 2010, the Tokuyama Factory promoted the use of fuels alternative to coal, and it enhanced energy conservation. As a result, the Tokuyama Factory managed to lower its unit energy consumption index (with unit energy consumption in fiscal 1990 set as 0) by 2.2 percentage points to -24.6%. This figure indicates that the Tokuyama Factory has already achieved its fiscal 2012 target of lowering the unit energy consumption index to -24.0% or less.

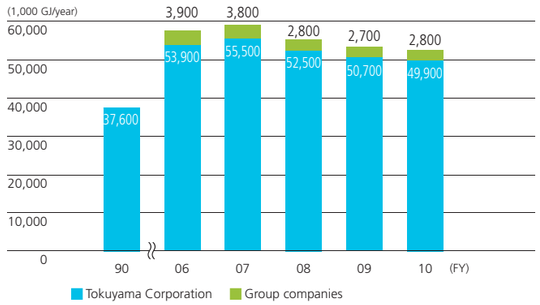
In fiscal 2010, the Cement Manufacturing Department, the Si Manufacturing Department and the Steam & Power Generation Department worked on projects to improve unit energy consumption. They have developed projects which will, when successfully completed, reduce the Tokuyama Factory's energy consumption by 0.7% (equivalent to reducing CO_2 emissions by approximately 30,000 metric tons per year). These departments are currently implementing these projects. The Tokuyama Factory continues to encourage some departments to promote improvement efforts in fiscal 2011.

Unit Energy Consumption Index* (Tokuyama Factory)

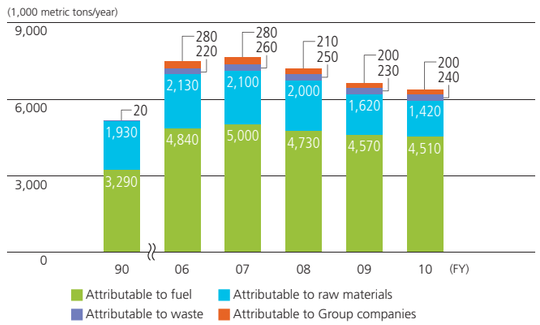


* The unit energy consumption index is calculated using a method recommended by the Japan Chemical Industry Association (JCIA).

Energy Consumption



CO_2 Emissions



Presentation on results of unit energy consumption improvement projects

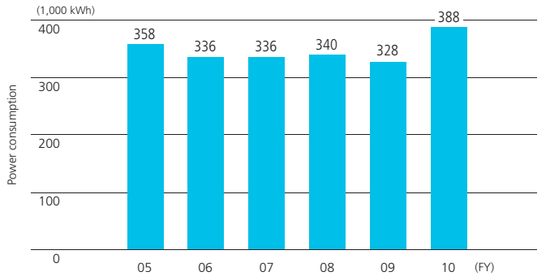
Contributing to Global Warming Prevention Efforts in the Consumer and Transportation Sectors

Through the provision of Shanon—a plastic window sash that supports energy conservation in residential houses—silica for energy-saving tires and other products, the Tokuyama Group has been helping to reduce CO_2 emissions in the consumer and transportation sectors, in which CO_2 emissions have significantly increased. We focus our efforts on the development of technologies that contribute to the prevention of global warming through such initiatives as the development of a new production method for polycrystalline silicon for solar cells, the development of electrolyte membranes for fuel cells and so forth.

Efforts at Our Offices

Tokuyama takes part in the Cool Biz campaign that began as a national movement in the summer of 2005. In addition to our conventional energy conservation efforts at our offices, we have encouraged our employees to work in light clothing and introduced thorough temperature control of air conditioners. As a consequence, the Tokyo head office was able to keep its power consumption below 400,000 kilowatts per hour in a record-setting heat wave during the four-month period from June to September 2010.

Cool Biz Benefit (Tokyo head office; from June to September)



Global Warming Prevention Support Program

In April 2008, Tokuyama set up this program to encourage Tokuyama Group employees to take action aimed at helping prevent global warming, as part of its environmental, energy-saving and social contribution activities from the standpoint of CSR promotion. Through the program, the Company covers part of the costs incurred by employees purchasing and installing specific eco-friendly products closely related to the Group's business, namely the plastic window sash for residential use and the solar power generation system. Its objective is to help reduce CO_2 emissions in the household sector by raising Group employees' awareness of global warming and encouraging them to save energy.

The table below shows the status of use of the program by Group employees in the past three years.

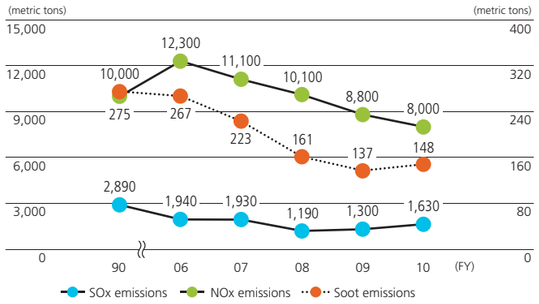
Status of Use of the Global Warming Prevention Support Program

	Plastic Window Sashes		Solar Power Generation Systems	
	Number of Cases of Subsidization	(Units)	Number of Cases of Subsidization	(kW)
Fiscal 2008	12	177	6	24.01
Fiscal 2009	7	141	8	33.35
Fiscal 2010	7	91	30	129.41
Total	26	409	44	186.77

During fiscal 2010, the number of plastic window sashes purchased by Group employees remained flat year on year. On the other hand, the number of solar power generation systems purchased by Group employees expanded roughly fourfold from fiscal 2009. This indicates that the awareness of renewable energy use has increased in employee households. The program use status is regularly reported on the Group's intranet site, which has been designed to raise employee awareness of global warming through, for example, the introduction of external websites related to global warming.

Intranet site dedicated for the program

SOx, NOx and Soot Emissions

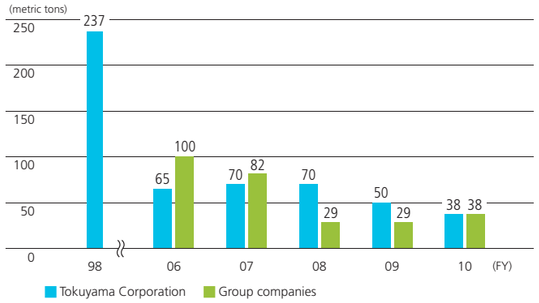


PRTR*1 Substance Emissions

Twenty-six substances among those handled by Tokuyama in fiscal 2010 are subject to notification under the Pollutant Release and Transfer Register (PRTR) legislation. In fiscal 2010, the Company continued to promote Companywide efforts to reduce the emission of PRTR substances. As a result, our total PRTR substance emissions stood at 38 metric tons, a substantial 24% reduction year on year.

*1 The pollutant release and transfer register (PRTR) refers to a system of collecting and publishing data on the sources of hazardous substances, the amounts of such substances emitted into the environment or carried away from business sites in the form in which they are contained in waste.

PRTR Substance Emissions



Reduction of Air and Water Pollutants

Actively seeking to protect the environment, Tokuyama has a long record of initiatives to reduce environmental pollutants released into the atmosphere and into water environments.

Air Pollutant Emissions

We have equipped our boilers, cement kilns and other sources of air pollutants with such emission control systems as flue gas desulfurizers, denitration equipment, low NOx burners and high-performance dust collectors in an attempt to reduce sulfur oxides (SOx), nitrogen oxides (NOx) and soot emissions.

In fiscal 2010, SOx and soot emissions increased, while NOx emissions declined.

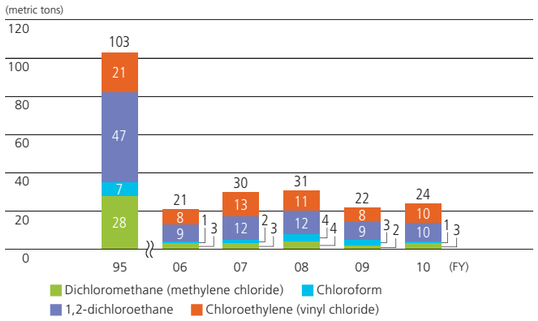
Countermeasures against Dioxin

Waste incinerators, waste oil incinerators and part of vinyl chloride monomer manufacturing facilities are subject to regulations under the Special Measures Law for Countermeasures against Dioxins. Tokuyama measures dioxin concentrations in flue gas and wastewater, and the figures remain far below the control levels.

Hazardous Air Pollutant Emissions

Tokuyama sets out a voluntary reduction plan for four substances that it produces, including chloroethylene, among the 12 substances subject to voluntary control in accordance with the Air Pollution Control Law. In accordance with the plan, the Company consistently implements measures to reduce the emission of these substances.

Hazardous Air Pollutant Emissions



Industrial Effluent and Water Pollutant Emissions

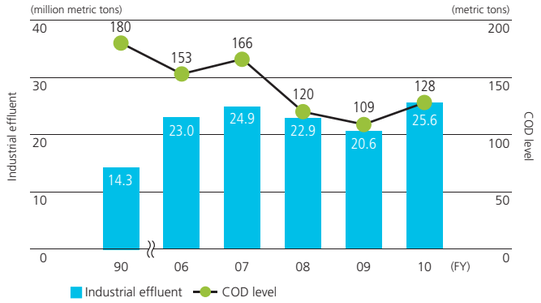
To meet the statutory limits as well as the limits agreed with local governments, the Tokuyama Factory has set tighter voluntary limits to carry out stringent control through pollutant monitoring and purification using wastewater treatment equipment.

The levels of COD,*2 nitrogen and phosphorus are subject to regulation in terms of total emissions in relation to water quality. To ensure compliance with indicators for these three items, Tokuyama is working to reduce the levels of their emissions through the use of activated sludge treatment facilities and other equipment.

In fiscal 2010, in line with an increase in production facility utilization, the COD level slightly rose year on year. In contrast, nitrogen and phosphorus emissions declined year on year.

*2 Chemical oxygen demand is an indicator used to measure water quality and refers to the amount of oxygen required to oxidize organic compounds in water.

Industrial Effluent and COD Level



Nitrogen and Phosphorus Emissions

(metric tons)

	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Nitrogen	110	112	108	140	110
Phosphorus	3.9	4.5	2.9	3.6	2.3

Reducing Waste and Promoting Recycling

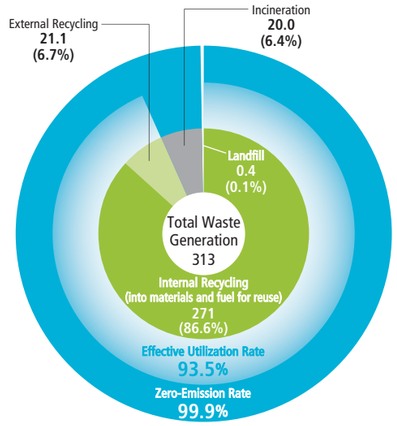
As a result of its exhaustive efforts to reduce and recycle waste, Tokuyama maintained the effective waste utilization rate at 94% and the zero-emission rate at 99.9% in fiscal 2010.

Waste Management

In fiscal 2010, Tokuyama generated 313 thousand metric tons of waste. The Company actively recycled them internally and externally, mainly reusing them as raw materials and fuel for cement production at the Tokuyama Factory. Packing materials, pallets and other wood waste were crushed into woodchips so that they could be effectively used as fuel at power plants. As we worked diligently to recycle waste into raw materials for cement, we maintained our effective waste utilization rate at almost 94%. We stepped up our activities for reusing and reducing waste and, accordingly, maintained our high landfill zero-emission rate at 99.9%.

Breakdown of Industrial Waste by Treatment for Fiscal 2010

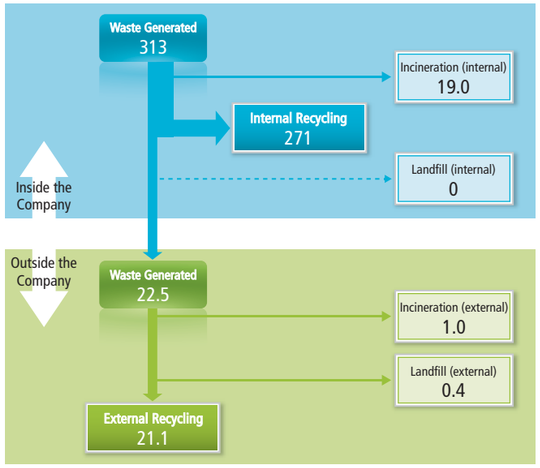
(Unit: 1,000 metric tons)



$$\text{Effective Utilization Rate (\%)} = \frac{\text{Recycling Volume (internal and external)}}{\text{Total Waste Generation}} \times 100$$

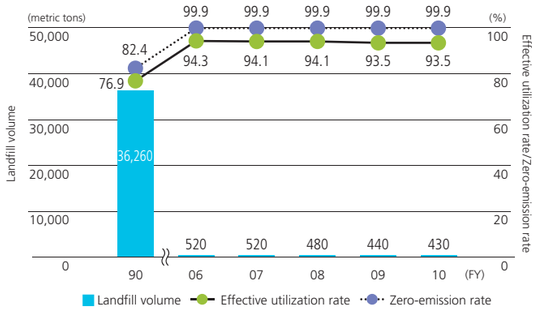
$$\text{Zero-Emission Rate (\%)} = \left[1 - \frac{\text{Landfill Volume (internal and external)}}{\text{Total Waste Generation}}\right] \times 100$$

Flow of Industrial Waste Treatment



* Figures are for fiscal 2010 and in the unit of 1,000 metric tons.

Landfill Volume, Zero-Emission Rate and Effective Utilization Rate



Management and Treatment of PCB Waste

The Tokuyama Group has 82 transformers and capacitors containing polychlorinated biphenyl (PCB).*1 The Group has already stopped using them. In compliance with the Special Measures Law for the Proper Treatment of Polychlorinated Biphenyl Waste, they are retained and managed in an appropriate manner. Legislation requires all PCB waste to have been treated by July 2016. In accordance with the plan of the Japanese government, wide-area PCB treatment facilities are being constructed at various locations in Japan, and some of these facilities have started operation. Taking advantage of the early registration program, the Tokuyama Group finished its registration to Japan Environmental Safety Corporation (JESCO) in December 2005 and commenced the treatment in fiscal 2009. In the future, we will properly treat our PCB waste in line with the timetables of the wide-area treatment project in separate districts.

*1 PCB is an organic chlorinated compound that emits dioxins when burnt at a low temperature. Chemically stable and excelling in thermal resistance, chemical resistance, insulation and other electric characteristics, it was formerly used in many different electric products including transformers and capacitors. However, it has been banned from production or utilization since 1972 because of its hazardousness to humans. Transformers, capacitors and other PCB-containing products that have already been distributed have to be retained at business establishments.

Tetsushi Yamada
General Manager of the Tokuyama Factory

Tokuyama Factory

Location: 1-1, Mikage-cho, Shunan-shi, Yamaguchi Prefecture, Japan

Employees: 1,719

Factory Area: 1,910,000 square meters (total area)

Main Products: Cement, inorganic and organic chemical products, polycrystalline silicon, fumed silica, vinyl chloride monomer and others

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
SOx Emissions	Metric tons	1,940	1,930	1,190	1,300	1,630
NOx Emissions	Metric tons	12,300	11,100	10,100	8,800	8,000
Soot Emissions	Metric tons	267	223	161	137	148
Industrial Water Consumption	Million metric tons	45.8	41.1	40.6	41.8	40.5
Effluent	Million metric tons	22.8	24.8	22.8	20.5	25.5
COD Level	Metric tons	148	161	116	107	124
Total Nitrogen Emissions	Metric tons	110	112	108	140	110
Total Phosphorus Emissions	Metric tons	3.9	4.5	2.9	3.6	2.3
PRTR Substance Emissions	Metric tons	63	67	66	48	37
Waste Generated	Thousand metric tons	360	363	344	300	312
Final Waste Disposal Volume	Metric tons	480	480	460	420	417
Energy Consumption*	Thousand GJ	53,900	55,400	52,400	50,600	49,800
CO_2 Emissions (attributable to fossil fuel)*	Thousand metric tons	4,840	5,000	4,730	4,570	4,510
Complaints	Complaints	3	6	0	1	5

* The calorific power and other figures have been recalculated retrospectively to 1990, following the amendment of the Act on the Rational Use of Energy.

Emissions and Transfer of PRTR Substances in Fiscal 2010

Unit: metric tons (mg-TEQ for dioxins)

Substance	Government Ordinance Number	Emissions				Amount Transferred
		To Air	To Water	To Soil	Subtotal	
1,2-Dichloroethane	157	10.1	0.0	0.0	10.1	0.8
Chloroethylene (vinyl chloride)	94	9.8	0.0	0.0	9.8	0.0
Cresol	86	0.0	5.8	0.0	5.8	0.0
Chloromethane (methyl chloride)	128	3.2	0.0	0.0	3.2	0.0
Toluene	300	2.7	0.0	0.0	2.7	62.9
Water-soluble zinc compounds	1	0.0	2.4	0.0	2.4	0.0
Dichloromethane (methylene chloride)	186	1.5	0.0	0.0	1.5	0.0
Chloroform	127	0.8	0.0	0.0	0.8	0.0
1,2-Epoxypropane (propylene oxide)	68	0.4	0.0	0.0	0.4	2.1
1,2-Dichloropropane	178	0.4	0.0	0.0	0.4	171.2
2,2'-Azobisisobutyronitrile	16	0.0	0.0	0.0	0.0	0.0
Carbon tetrachloride	149	0.0	0.0	0.0	0.0	0.0
Hydroterphenyl	238	0.0	0.0	0.0	0.0	1.1
Water-soluble copper salt	272	0.0	0.0	0.0	0.0	0.4
Hydrazine	333	0.0	0.0	0.0	0.0	0.0
Hydrogen fluoride and its water-soluble salt	374	0.0	0.0	0.0	0.0	0.0
Benzene	400	0.0	0.0	0.0	0.0	0.0
Boron compounds	405	0.0	0.0	0.0	0.0	0.0
(Dioxins)	243	11.7	0.3	0.0	12.0	0.0
Total (excluding dioxins)		28.8	8.2	0.0	37.0	238.5

Substances are listed in descending order of emissions and, for substances with no emissions, in order of government ordinance number., Emissions to water indicate the release into public waters., Amount transferred indicates the sum of the quantity transferred to sewerage and the quantity subject to intermediate treatment., Total figures are rounded to the first decimal place.

Shingo Matsuoka
General Manager of the Kashima Factory

Kashima Factory

Location: 26, Sunayama, Kamisu-shi, Ibaraki Prefecture, Japan

Employees: 77

Factory Area: 101,000 square meters

Main Products: Tokuyama Corporation's Kashima Factory
Pharmaceutical bulks (X-ray contrast agents, stomach and duodenal ulcer treatment drugs); optical materials (plastic lens monomer, light modulating materials, hard coating solutions); materials for electronic materials and metal washing solutions

Main Products: Tokuyama Dental Corporation's Kashima Factory
Dental materials (restorative materials, adhesives, denture relining materials, impression materials and investing materials)

At the Kashima Factory, we have positioned the appropriate management of chemical substance handling as its most important issue and have simultaneously promoted waste recycling. As a result, we achieved the record-high effective waste utilization rate of 82% in fiscal 2009. In fiscal 2010, however, the rate dropped to 73%, equivalent to that in fiscal 2008. Behind this unfavorable result was the launch of manufacturing operations for new products, which led to changes in the composition of our waste. We will actively seek ways to realize material and thermal recycling for new categories of waste with the aim of improving our effective utilization rate again for all the waste we generate.

On the other hand, our final landfill volume remained almost flat year on year, at 12 metric tons.

Tokuyama Dental Corporation has changed the materials of some products from dichloromethane to water-based materials, as part of efforts to reduce dichloromethane emissions into the atmosphere.

The Kashima Factory suffered no damage to its human resources due to the Great East Japan Earthquake. However, we were forced to temporarily suspend our plant operations, owing to damage to some of our facilities and the disruption in the supply of utilities. Through factory-wide recovery efforts, we resumed the operation of all of our facilities by May 2, 2011.

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Industrial Water Consumption	Thousand metric tons	110	107	78	44	77
Effluent	Thousand metric tons	125	129	95	58	93
COD Level	Metric tons	5	5	4	2	4
PRTR Substance Emissions	Metric tons	3	4	5	4	2
Waste Generated	Metric tons	779	965	770	560	857
Final Waste Disposal Volume	Metric tons	34	32	27	11	12
Energy Consumption	Thousand GJ	53	58	55	53	60
CO_2 Emissions (attributable to fossil fuel)	Metric tons	2,170	2,320	2,230	2,110	2,340
Complaints	Complaints	0	0	0	0	0

Emissions and Transfer of PRTR Substances in Fiscal 2010

Unit: metric tons

Substance	Government Ordinance Number	Emissions				Amount Transferred
		To Air	To Water	To Soil	Subtotal	
Dichloromethane (methylene chloride)	186	1.3	0.0	0.0	1.3	3.9
Toluene	300	0.5	0.0	0.0	0.5	75.2
Chloroform	127	0.4	0.0	0.0	0.4	6.9
Acetonitrile	13	0.0	0.0	0.0	0.0	1.4
1,4-Dioxane	150	0.0	0.0	0.0	0.0	0.0
N,N-Dimethylformamide	232	0.0	0.0	0.0	0.0	17.8
Triethylamine	277	0.0	0.0	0.0	0.0	2.7
2-Vinylpyridine	338	0.0	0.0	0.0	0.0	0.2
2,3-Epoxypropyl Methacrylate	417	0.0	0.0	0.0	0.0	0.0
Methyl Methacrylate	420	0.0	0.0	0.0	0.0	0.0
Alpha-Methylstylene	436	0.0	0.0	0.0	0.0	0.0
Total		2.2	0.0	0.0	2.2	108.1

Substances are listed in descending order of emissions and, for substances with no emissions, in order of government ordinance number., Emissions to water indicate the release into public waters., Amount transferred indicates the sum of the quantity transferred to sewerage and the quantity subject to intermediate treatment., Total figures are rounded to the first decimal place.

Activities of Group Companies

Tokuyama understands that RC activities should be conducted on a Groupwide basis. To support their activities, the Company has signed RC management agreements with Tokuyama Group companies, both inside and outside Japan, that are engaging in production activities.

We collect data on the environmental impact of Group companies and their safety management indicators and conduct safety, environmental and quality audits at the rate of several Group companies per year. By means of these actions, we monitor and enforce RC activities conducted at individual Group companies. Also, changes and other movements in statutory regulations and other information are shared with our Group companies.

In addition, we provide Group companies with assistance in acquiring ISO 14001 and ISO 9001 certification.

Status of ISO 9001 and ISO 14001 Certification

Group Company	ISO 9001	ISO 14001
Sun•Tox Co., Ltd.	●	●
Excel Shanon Corporation	●	—
Tohoku Shanon Co., Ltd.	●	●
A&T Corporation	●	●
Figaro Engineering Inc.	●	●
Tokuyama Dental Corporation	—*	●
Tokuyama Siltech Co., Ltd.	●	●
Sun Arrow Chemical Co., Ltd.	—	●
ASTOM Corporation	●	●
Shin Dai-ichi Vinyl Corporation	—	●
Tokuyama Polypropylene Co., Ltd.	●	●

●=Certified ●=Included in certified sites
*Certified under ISO 13485

Sun•Tox Co., Ltd.

Established: February 14, 1992
Ownership: Tokuyama Corporation (100%)
Head Office: Tokuyama Bldg., 1-4-5, Nishi Shimbashi, Minato-ku, Tokyo, Japan
Business: Manufacture and sale of biaxial-oriented polypropylene films and cast polypropylene films

Kanto Plant

Location: 3075-18, Shimasu, Itako-shi, Ibaraki Prefecture, Japan
Employees: 191 Site Area: 55,800 square meters

Toshiyuki Yamaoka
Plant Manager

Located in the Itako Industrial Park in Ibaraki Prefecture, the Kanto Plant produces 25,000 metric tons of biaxial-oriented and cast polypropylene films per year. As a Type I Energy Management Designated Facility, it has been taking steps to ensure effective energy utilization by introducing in-house power generation facilities and energy-efficient facilities, among other initiatives.

At the same time, we are capitalizing on our three management systems for occupational safety and health (OSHMS), for the environment (ISO 14001) and for quality (ISO 9001), to make steady improvements throughout the plant.

The Kanto Plant was affected by the Great East Japan Earthquake on March 11, 2011. Fortunately, none of our staff were injured. However, we had to temporarily stop our plant operations due to damage to some facilities. We worked to recover our facilities quickly and asked the Tokuyama Plant to perform alternative production as much as possible. Still, we regrettably caused a lot of trouble for some of our customers, as we could not meet all their demand. Based on the lessons we learnt through this experience, we aim to enhance our business continuity plan.

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Waste Generated	Metric tons	52	60	34	43	56
Final Waste Disposal Volume	Metric tons	9	29	5	16	38
Energy Consumption	Thousand GJ	313	310	327	334	344
CO_2 Emissions	Thousand metric tons	18	17	18	18	19
SOx Emissions	Metric tons	0.6	0.4	0.4	0.3	0.3
NOx Emissions	Metric tons	0.5	0.7	0.7	0.5	0.6
Soot Emissions	Metric tons	0.03	0.04	0.08	0.05	0.04

Tokuyama Plant

Location: 7-7, Harumi-cho, Shunan-shi, Yamaguchi Prefecture, Japan
Employees: 148 Site Area: 24,100 square meters

Koji Tanaka
Plant Manager

Located on the premises of the Higashi Plant in Tokuyama Corporation's Tokuyama Factory, the Tokuyama Plant produces 21,000 metric tons of biaxial-oriented polypropylene films, which are mainly used for food wrapping, per year. In environmental aspects, we work together with Tokuyama Corporation's Tokuyama Factory to address environmental conservation and to carry out ISO 14001 activities. The Tokuyama Plant is continuing with its positive efforts to slash manufacturing losses, and through such efforts we have more than halved our waste generation. Also, we are promoting activities to recycle all waste materials attributable to manufacturing losses.

It obtained certification for the Occupational Safety and Health Management System (OSHMS) in February 2008. In fiscal 2009 and 2010, no disasters occurred at our plant. Going forward, we will continue to promote safety and health activities centered on risk assessment, and develop them into a management system through a PDCA cycle. Under the slogan of "Take pleasure in production, be stringent with quality and adhere to safety," the Tokuyama Plant aims to implement plant management in a manner that earns it the trust of society, the customers and employees.

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Waste Generated	Metric tons	180	200	120	90	80
Final Waste Disposal Volume	Metric tons	1	11	20	6	9
Energy Consumption	Thousand GJ	456	463	413	414	434
CO_2 Emissions	Thousand metric tons	27	27	24	25	26
PRTR Substance Emissions	Metric tons	—	—	—	0.1	0.1
Complaints	Complaints	0	0	0	0	0

Sun Arrow Chemical Co., Ltd.

Established: February 1, 1999
Ownership: Tokuyama Corporation (100%)
Head Office: Kitahama Chuo Bldg., 2-2-22, Kitahama, Chuo-ku, Osaka, Japan
Business: Manufacture and sale of polyvinyl chloride compounds

Tokuyama Plant

Location: 1-2, Harumi-cho, Shunan-shi, Yamaguchi Prefecture, Japan
Employees: 24 Site Area: 3,280 square meters

Yasuto Yasuzawa
Plant Manager

Located on the premises of the Higashi Plant in Tokuyama Corporation's Tokuyama Factory, our Tokuyama Plant manufactures polyvinyl chloride compounds for plastic window sashes, which, after the governmental housing eco-point program, are increasingly recognized as having energy conservation effects. While it is common practice to add lead-based stabilizer to polyvinyl chloride compounds, we continued our efforts to develop a lead-free formula in fiscal 2010, as we did in fiscal 2009, in response to the requests of users.

To protect the environment, we closely studied making effective use of combustible waste in accordance with Tokuyama Corporation's Tokuyama Factory Environment Management Program. As a result of our efforts, we have established a method to recycle the waste into fuel for cement production. With respect to safety, health, security and disaster prevention, we carried out full-participation Five-S activities, accident prevention activities, hazard prediction training and activities to maintain a trouble-free status. As a result of these activities, we have successfully maintained our zero-accident and zero-disaster record since the company's establishment. As a member of the Tokuyama Group, we will continue to operate the plant with a commitment to environmental conservation, safety and security.

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Power Consumption	Thousand kWh	3,540	3,470	2,810	2,662	2,735
Waste Plastics Generated	Metric tons	186	158	157	119	124
Waste Plastics Effectively Used	Metric tons	186	158	157	119	124
Final Waste Disposal Volume (external)	Metric tons	0	0	0.6	3.8	12.5
Steam Consumption	Metric tons	240	240	240	240	240
Industrial Water Consumption	Thousand metric tons	65	65	65	65	65

Tokuyama Polypropylene Co., Ltd.

Established: April 2, 2001
Ownership: Tokuyama Corporation (50%) and Prime Polymer Co., Ltd. (50%)
Head Office: 1-1, Harumi-cho, Shunan-shi, Yamaguchi Prefecture, Japan
Business: Manufacture and sale of polypropylene resin and polypropylene compound resin

Tokuyama Plant

Location: 1-1, Harumi-cho, Shunan-shi, Yamaguchi Prefecture, Japan
Employees: 63 Site Area: 70,997 square meters

Koshi Mayama
Plant Manager

Our Tokuyama Plant is located on the premises of the Higashi Plant, which constitutes part of the Tokuyama Factory of Tokuyama Corporation. The plant manufactures and sells 200,000 metric tons of polypropylene resins and 7,000 metric tons of soft polyolefin resins each year. This plant runs three systems for safety management, environmental management, and quality management and undertakes RC activities in tandem with the Tokuyama Factory. With respect to safety management, we perform risk assessments of processes, facilities, and work. We are also promoting Companywide accident prevention and hazard identification activities to eradicate accidents, disasters and risks. As a result of these efforts, we succeeded in maintaining the zero-accident and zero-disaster status that we have enjoyed for 36 years, since the days when we operated as Tokuyama Corporation's Polypropylene Manufacturing Department.

We renewed our five-year accreditation obtained in 2005 for the safety inspection defined under the High Pressure Gas Safety Act in fiscal 2010. In addition, we acquired a two-year renewal accreditation and a four-year new accreditation for open boiler inspections defined under the Industrial Safety and Health Act. Building on these accreditations, we are further promoting voluntary safety initiatives.

In fiscal 2011, we will step up RC activities in a bid to maintain our zero-accident and zero-disaster record, to reduce our environmental footprint, and to eliminate all customer quality complaints.

Performance Data

	Unit	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Industrial Water Consumption	Thousand metric tons	387	417	322	354	329
Waste Generated	Metric tons	161	141	158	134	180
Final Waste Disposal Volume	Metric tons	25*	4	16*	6.5	3.8*
Unit Energy Consumption Index (Fiscal 2002 = 100)	%	79	85	98	97	86

* Year with periodic maintenance

Third-Party Comments

A Review of Tokuyama's *CSR Report 2011*

Eriko Nashioka
Certified Public Accountant, Certified Tax Accountant and Director of the Institute for Environmental Management Accounting

A part-time lecturer in environmental accounting and environmental auditing for the Faculty of Commerce of Doshisha University. In 1991, she joined the Environmental Auditing Section, the Third Department at the Osaka Office of Ota Showa & Co., currently Ernst & Young ShinNihon LLC, where she worked as a consultant concerning accounting audits (the Commercial Code, the Securities Exchange Law and the Small and Medium-sized Enterprise Investment Business Corporation Act), environmental accounting and environmental reports. She completed her studies in environmental management at the Doshisha University Graduate School of Policy and Management in 1997. From April 2001 to March 2004, she was chief researcher in the Enterprises and the Environment project run by the Kansai Research Center of the Institute for Global Environmental Strategies. In April 2004, she joined the management of the Institute for Environmental Management Accounting. She was involved in a number of committees, including the technical subcommittee on sustainability information disclosure in the Management Research Committee of the Japanese Institute of Certified Public Accountants and other committees under the Ministry of the Environment and the Ministry of Economy, Trade and Industry. She is a member of the primary screening committee for the Environmental Report Award co-organized by Toyo Keizai Inc.

Tokuyama Taking Firm Steps toward Achieving its Centennial Vision

Tokuyama announced its Centennial Vision in 2008, envisioning the direction and future of the Tokuyama Group toward 2018, the year that will mark the centennial anniversary of its founding. This report clearly communicates that Tokuyama has taken specific steps toward achieving this long-term vision in the past three years. The three basic strategies under the Centennial Vision are defined as: (1) "Growing," involving the overseas expansion of businesses integral to society; (2) "Creating," embodying the development of new businesses into a new era; and (3) "Integrating," encompassing the strengthening of international competitiveness and communication capabilities. By clarifying central strategies, it is now easier to see how the Group is moving forward to achieve the Centennial Vision.

Reconfirming Tokuyama's Societal Role

The establishment of a new Malaysian production base must have been an important decision. I understand that Tokuyama is diversifying and globalizing its flagship production bases from the standpoint of accurately fulfilling its supplier responsibilities and facilitating effective risk management. This Malaysia project tells us that Tokuyama's strategies have been launched for full-fledged implementation. Also, Tokuyama is accelerating new businesses—such as those expected to be essential components of tomorrow's society—by providing materials and components for solar power generation and LEDs. As such, Tokuyama has positioned contributing to advances of today's and tomorrow's society as its societal role and incorporated this stance into its strategies. This is very encouraging, boosting our expectations for the future development of the Tokuyama Group.

Time is Ripe for Tokuyama to Introduce Global Approach in CSR

Regarding the Tokuyama Group Code of Business Activities, which serves as guidelines for Group members to refer to on various occasions, I believe that it must be a set of principles that are easy to understand, disseminate and instill worldwide. The code may have some points that can be improved in order to make it function better as a common foundation for all Group members, with many different cultural backgrounds, and to further clarify what CSR means to the Tokuyama Group. Also, I think that CSR-related matters should be quantified as much as possible to present them as CSR indicators. I am confident that the management of such indicators will make Groupwide communication even smoother, while making it even easier for all Group members to share the direction in which Tokuyama is advancing. So, I am looking forward to seeing Tokuyama move up to the next level, establishing such indicators, which will allow both Group members and other stakeholders to understand the Tokuyama Group more accurately.

Sincere Responses Earning the Group Renewed Trust

This report provides thorough explanations for the ongoing situation of the mislabeling problem that the Company announced in 2009. This is very assuring. Sincerity matters. I hope that Tokuyama maintains its open disclosure approach through to the end. In this way, I believe the Company will be able to regain the trust of stakeholders, instilling confidence that such problems will never occur in the Tokuyama Group.

Effectively Using This Communication Tool

This report focuses more on people than previous reports. The people appearing in the report add reality to individual articles. I strongly recommend that Tokuyama use this report to present the Group to increasing worldwide stakeholders, while remaining a company "in harmony with people, society and the environment," as stated on the cover of this report.

In Response to Third-Party Comments

Based on the feedback on our *CSR Report 2010* provided by Ms. Nashioka last year, we worked to make this report as easy as possible for people to understand the direction in which the Tokuyama Group is advancing by centering articles on the Centennial Vision. We are very pleased that she evaluated our efforts highly in this regard.

Moreover, we are grateful that she provided invaluable, thought-provoking comments regarding the promotion of a global approach in our CSR activities. By giving due consideration to her comments, we will tackle the important issues of strengthening our global CSR approach and achieving transparency in our initiatives aimed at enhancing our CSR activities.

Looking ahead, we will continue to improve our CSR reports—one of our most significant tools in corporate communication—thereby making these reports "visualize" the entire Tokuyama Group.

Masao Fukuoka
General Manager of the Corporate Social Responsibility Div.

Ms. Nashioka interviewing members of the Corporate Social Responsibility Division for the preparation of her third-party comments

A night view of the Tokuyama Factory

CSR推進
トクヤマグループ

In line with the restructuring of its CSR promotion structure implemented in April 2011, Tokuyama has created the above symbol for CSR promotion. Depicting a sunflower, the symbol is intended to convey the Company's active, healthy and honest stance toward CSR. Under this symbol, the Tokuyama Group will not only promote compliance and efficiency in its business operations, but will also work to develop into a vibrant, sound corporate entity that provides societal and environmental benefits and is trusted by all stakeholders.

Editor's Notes

This edition of our CSR report has been prepared with an emphasis placed on giving stakeholders a clear insight into Tokuyama's CSR activities.

In this edition, we focused on introducing our three major strategies—namely, "Growing," "Creating" and "Integrating"—designed to propel the entire Group toward achieving its Centennial Vision in 2018. Focusing articles on these strategies, we worked to make readers understand our Group more clearly.

We would be delighted to receive your candid feedback and comments so that we can continue to improve our CSR reports as a tool for communicating with you.

For inquiries, please contact:

Corporate Social Responsibility Division
Tokuyama Corporation
Kasumigaseki Common Gate West Tower, 2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-8983, Japan
Phone: +81-3-6205-4835
Fax: +81-3-6205-4882

*To ensure accessibility to as many readers as possible, our CSR reports are also available via Tokuyama's website.
www.tokuyama.co.jp/eng/enviro/