UBE Group

CSR Report 2012

Focusing on Harmonious Coexistence with All Stakeholders

Wings of Technology and Spirit of Innovation

UBE INDUSTRIES,LTD.

Pursuing the Full Potential of UBE's Advanced Materials

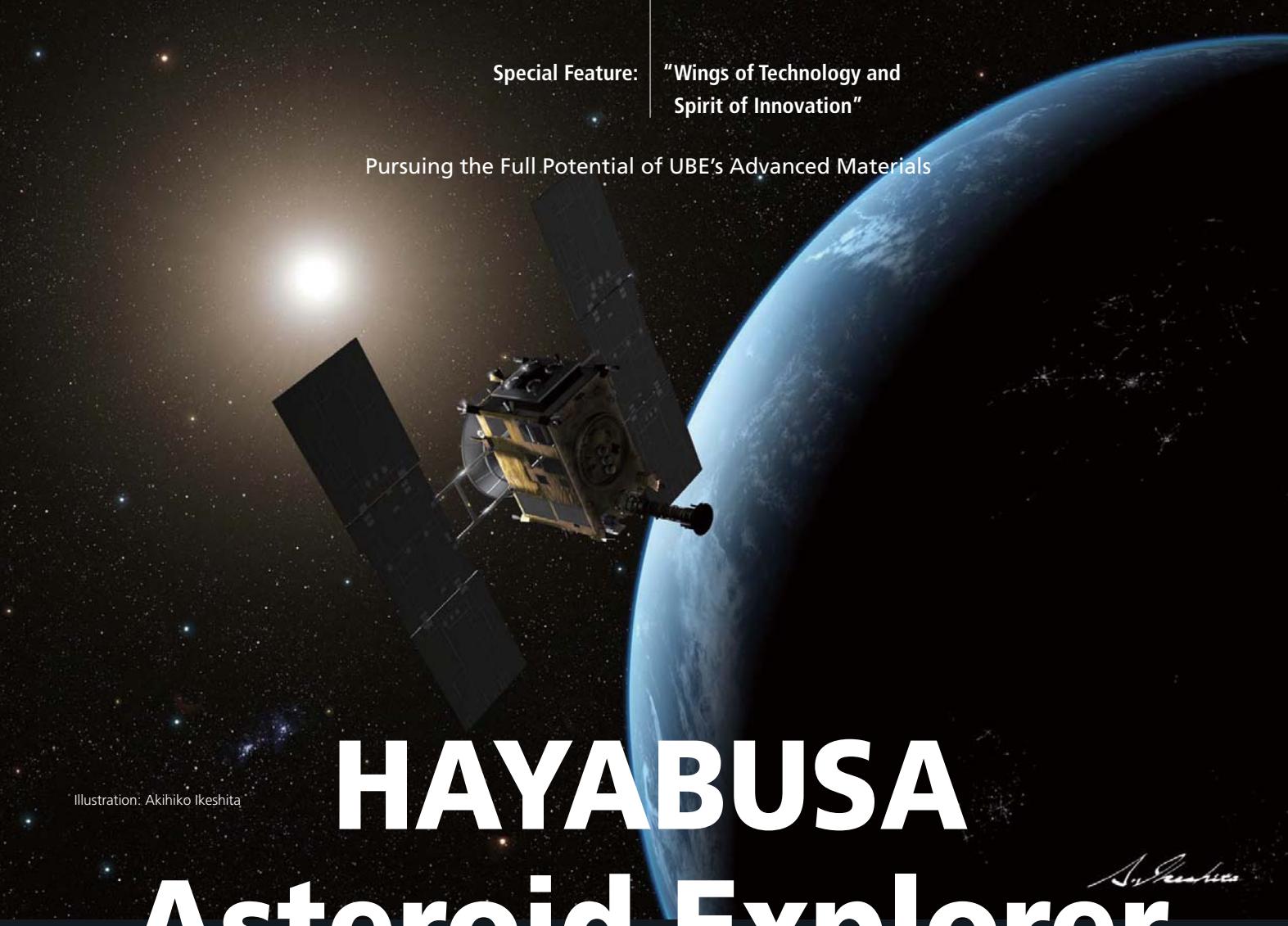
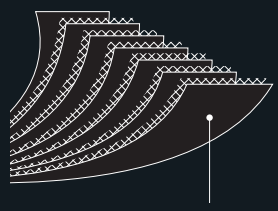


Illustration: Akihiko Ikeshita

HAYABUSA Asteroid Explorer

UBE's *Thermal Blanket* provided ongoing protection to HAYABUSA

Launched on May 9, 2003, the HAYABUSA asteroid explorer made its way through space to the Itokawa asteroid. Despite suffering various setbacks along the way, including a fuel leak and communications loss, HAYABUSA successfully landed on and collected samples from the asteroid. The capsule sent from HAYABUSA containing these samples returned to Earth on June 13, 2010, successfully completing a mission that was a historic first for mankind. Throughout its long solitary journey, which took seven years to complete, UBE's *Thermal Blanket*, made of multi-layered thermal control material, continuously protected HAYABUSA from the harsh environment of space. Temperatures in space range from greater than +100°C in sunlight and less than -100°C in the shade. The extreme temperature fluctuations can impede the normal functioning of the explorer's fuselage and internal equipment, making the risk of malfunction more likely. With a bright and sparkling green-gold appearance, *Thermal Blanket* quietly realized its critical mission of protecting HAYABUSA from such temperature fluctuations.



Layers of polyester film (both sides of which are coated with vapor-deposited aluminum) are alternately superimposed onto separators. The outermost layer is coated, in turn, with a vapor-deposited aluminum polyimide film. Finally, these layers are stitched together by hand.

Developed to survey asteroids, the HAYABUSA explorer's objective was to land on the surface of Itokawa (which has an orbit similar to that of Earth), collect samples and return them to Earth. In general, asteroids revolve around the sun in virtually the same condition with regard to surface crust as when they were formed. The samples brought back from Itokawa are expected to help solve the mystery behind the formation of the solar system, making them extremely valuable specimens for humankind. Microscopic particles extracted from Itokawa are currently being analyzed using the world's most advanced precision equipment. HAYABUSA's triumph demonstrated the success of a variety of new technologies in meeting the challenges of space, and these successes are steadily being applied to its successor, HAYABUSA-2. The UBE Group will continue to lend its support to the Japan Aerospace Exploration Agency (JAXA) in the years ahead.

Distance traveled by HAYABUSA:

6,000,000,000km

HAYABUSA flight time:

62,217hours, 21minutes, 47seconds

The Use of UBE Technology in Satellites and Explorers Is Testament to Its Reliability and Performance

Satellites and explorers use components and materials produced by a wide array of companies. Naturally, the companies that provide these items must possess highly advanced technologies and demonstrate unsurpassed performance.

Once launched, most satellites spend years orbiting the Earth, while explorer missions can last decades. If a mechanical failure occurs in space, no one can be dispatched from Earth to make repairs. Consequently, every component and material used in a fuselage must have a high degree of performance and quality. Only companies that boast leading-edge technologies are capable of supporting this field of endeavor through the manufacture of such items. Satellites and explorers are the amalgamations of the most advanced technologies and materials available.

UBE's Role in Maintaining Thermal Control Determined the Success or Failure of the HAYABUSA Mission

HAYABUSA was a great triumph for JAXA and thermal control was key to this success. The various types of electronic equipment installed in satellites and explorers operate in a normal temperature range of -10°C to +60°C, just like electronics used on the ground. In space, however, the temperature differential can exceed 200°C depending exposure to sunlight as well as solar proximity. Given the impact of this harsh external environment, UBE's *Thermal Blanket*, consisting of multi-layered thermal control material produced by the Aerospace Materials Business Group, plays a key role in protecting the electronic equipment installed in satellite and explorer fuselages. Wrapping the fuselage and equipment like a blanket, *Thermal Blanket* shielded the unit from outside heat to prevent electronics from being impacted by temperature changes. In addition, *Thermal Blanket* was designed to also block the strong UV radiation coming from the sun and unfiltered by the vacuum of space, thus preventing the fuselage from deteriorating. *Thermal Blanket* was used to control heat on HAYABUSA's main body, observation camera and other sections.

The UBE Group's Polyimide Film Offers Thermal Protection Using Japanese Technology

UBE drew on internal technologies to successfully commercialize polyimide film in 1982. This film has since been sold worldwide under the name *UPILEX*. Despite combining the superior features of high insulation performance with low electric permittivity, initially *UPILEX* sales were continually beset with setbacks due to the lack of a market for the product. However, uses for *UPILEX* increased thanks mainly to expanding sales of electronic substrates used in mobile phones and flat-screen TVs. *UPILEX* also found applications in the aerospace field, where it gained ground as an original technology. *Thermal Blanket* was the first used for the February 1989 launch of the aurora observation satellite, AKEBONO. *Thermal Blanket* consists of layers of *UPILEX* and aluminum film designed to meet exacting functional requirements that are then carefully sewn together manually by specially trained employees. The outermost layer is composed of *UPILEX*, which has a beautiful, bright and sparkling green-gold appearance. As a result, any satellite or explorer using this material can be recognized immediately.

The Thermal Control Technology behind the Great Leap Forward

UBE's thermal control technology helps maintain proper temperatures within satellites, explorers and other space vehicles, allowing electronic equipment to function. In the vacuum of space,

Thermal control film

A *Thermal Blanket* being sewn

©JAXA

©JAXA

Contributing to the Global Environ

constant attention must be paid not only to external heat, but internal heat as well. Almost all fuselages are equipped with a radiator to draw off accumulated internal exhaust heat from electronic equipment to prevent internal temperatures from climbing.

However, the continual drawing off of exhaust heat causes internal temperatures to decrease when the electronic equipment is not operating. In this event, heaters activate to maintain the proper temperature, but such heaters consume the satellite's limited power resources. The Smart Radiation Device (SRD) was developed to address this problem. A letter-sized section of HAYABUSA's surface was covered with 40x40mm panel-shaped SRDs. Not requiring electricity, SRDs expel heat when the fuselage temperature increases and curb heat discharge when temperatures fall, reducing the need for the heater and thus power consumption. In addition, the use of SRDs as futuristic radiators for use in antennas and other equipment exposed to the vacuum of space is being investigated. UBE is currently the only manufacturer providing SRDs to JAXA.

The Role of Polyimide Products Has Expanded in the Aviation Field

The UBE Group has developed a wide array of products that use polyimide, the applications for which are expanding in the aviation industry.

Aircraft use massive amounts of fuel and emit a significant volume of CO_2. Addressing this issue, the aviation industry is promoting reductions in fuel consumption and CO_2 emissions by decreasing aircraft weight. In response to this, the UBE Group is proposing the use of its original materials as an alternative to metal. Such materials include *UPIMOL*, which is formed out of powdered polyimide; *UPILEX Foam*, a material that uses polyimide foam to greatly improve heat resistance and insulation; *PETI-330*, an additional polyimide resin developed using technologies provided by NASA; and *PETI Prepeg*, which incorporates a thermally resistant carbon fiber reinforcement material. These materials are being evaluated by aircraft manufacturers looking to promote research on ways to improve the environment friendliness and fuel efficiency of fuselages.

Innovations to Replace Metal with Plastic and Fibers

On aircraft, heat from the engines is fed into the interior and mixed with cool outside air to ensure controlled on-board temperatures. Switching to lightweight and highly thermally resistant *UPILEX Foam* as the insulation for piping through which the hot air from the engine passes can help reduce aircraft weight. In addition, using heat-resistant composite materials made from *PETI-330* and *PETI Prepeg* as an alternative to the aluminum and titanium alloys used around engines is expected to contribute to aircraft weight reduction.

Using the resin transfer molding (RTM)*[1] method, manufacturers form *PETI-330* into composite components that boast ultra-heat resistance due to thermal curing. Moreover, this material offers a considerable reduction in aircraft weight compared with metal. For example, if half of the titanium alloy used in Boeing 787s was replaced with 100% composite materials, the aircraft weight would be reduced 3%

ment through Advanced Materials

UPILEX Foam

PETI-330

TYRANNO FIBER

UPI White

Shinobu Watanabe
President of Specialty Chemicals & Products Company

Widening Polyimide Chains

UBE is the only manufacturer in the world to undertake the uniform production of polyimide products using the ingredient BPDA. With ever-widening applications for this product, we are expanding our lineup of these optimal polyimide products for the aerospace and a variety of other fields.

The polyimide film, *UPILEX*, and the copper-clad laminate, *UPICELL*, are not only used in circuit boards installed in such items as smartphones, LCD televisions and computers, their applications have rapidly expanded to include solar cell substrates. In addition, we aim to increase business applications of the polyimide varnish *U-Varnish* for next-generation substrates.

UBE is promoting new development of gas separation membranes that use polyimide hollow-fiber membranes in the biogas CO_2 separation and other environmental fields.

(approximately six tons),*2 significantly contributing to improvements in fuel efficiency.

*1. A forming method in which plastic is melted under high temperatures and poured into dies to form desired shapes and then cured using high heat.

*2. Based on UBE Group trial calculations

TYRANNO FIBER, Another Advanced Material from UBE

Beyond polyimide products, UBE offers *TYRANNO FIBER*, an advanced material that reduces aircraft weight. *TYRANNO FIBER* is a ceramic fiber incorporating titanium, carbon and oxygen that features thermal resistance to above 1,000°C. The feasibility of using *TYRANNO FIBER* as a substitute material for jet engine components is being investigated.

In addition, *UPI White* is a white paint developed based on the polymer that is the basic component of *TYRANNO FIBER*. *UPI White* was selected for use on the high-gain antenna of a magnetospheric explorer being developed by JAXA for the BepiColombo project, a joint JAXA-Europe Space Agency (ESA) mission that aims to survey Mercury in 2014.

TYRANNO FIBER also contributes to the development of environment-friendly products. For instance, following the introduction of restrictions on diesel vehicle emissions in October 2003, numerous diesel vehicles were equipped with diesel particulate filters (DPFs) made with *TYRANNO FIBER* in order to conform to these regulations. Such applications are being used in South Korea, with diesel vehicles installed with such DPFs being driven in Seoul. In cooperation with a shipping company, DPF manufacturer ACR Co., Ltd. is conducting trials of *TYRANNO FIBER* -based DPFs in diesel ship engines.

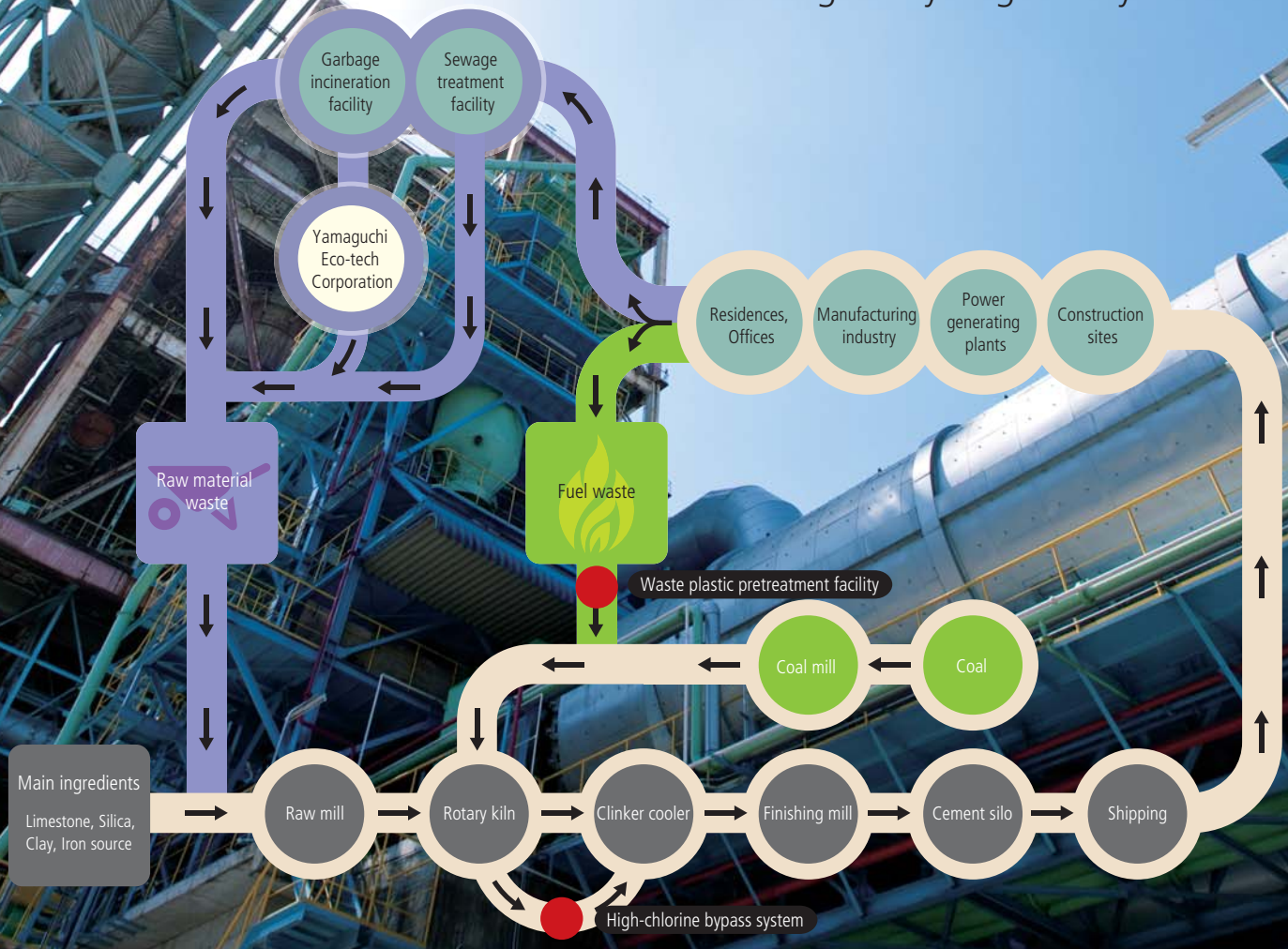
The use of *TYRANNO FIBER* is expanding within the aerospace, environmental and industrial fields. *TYRANNO FIBER* is essential for realizing greater high-dimension energy efficiency, lower CO_2 and NO_X emissions and ultra-fast transport due to its ability to bring its superior features to bear even in harsh conditions. The UBE Group will pursue this potential in a broad array of fields.

Aiming for the Creation of a Sustainable Society through Advanced Technologies

The UBE Group strives to provide materials capable of adapting to various technological advances. The aerospace field has for many years evaluated new materials based on its demand for high-dimensional safety. The performance of proven technologies in the aerospace field contributes to further developments within society. The UBE Group cooperates in the development of new satellites and explorers that seek to solve the mysteries of space while striving to contribute to the creation of a sustainable society by providing products and materials that help realize viable, next-generation aircraft with superior environmental performance. There is no doubt that these initiatives are directly linked to the UBE Group's corporate philosophy, "living and prospering together."

Resource Recycling Initiatives

The UBE Group continues to take on the challenge of reusing waste materials with the aim of creating a recycling society.



Cement Manufacturing Resource Recycling Flow

The Kanda Cement Factory's waste plastic pretreatment facility

UBE's Resource Recycling Front-Line Base

In line with its mission to protect the environment, UBE recycles such waste materials as coal ash, sludge, ash, soil generated by construction and waste plastic. At present, Japan produces approximately 430 million tons of waste annually, about 20 million tons of which is processed and disposed of at final disposal sites. However, such waste materials contain the same ingredients as the clay, iron-rich materials and other raw materials used to make cement and can be used as an alternative fuel. Therefore, the adequate pretreatment of waste materials enables cement factories to reuse them in the same manner as natural resources. In addition, using cement kilns at the high calcining temperature of 1,450°C completely degrades the hazardous substances found in these waste materials. Cement factories able to engage in the safe, stable and long-term recycling of large amounts of waste materials (which would otherwise simply be incinerated or buried) are referred to as "ultimate resource recycling factories."

Accepting Waste Materials

UBE accepts and uses waste materials only if they meet a strict set of criteria established to address such concerns as: "do these materials conform to cement quality standards?" and "will be there any environmental impact on factories and/or local communities from the use of such materials?" Only waste materials that are safe to use can be recycled to produce cement, which is indispensable to upgrading infrastructure.

Taking on the Challenge of Using the Industry's First Alternative Fuel Technologies

The amount of waste that can be recycled into alternative raw materials for cement has almost reached its limit. Conversely, the conversion of waste into alternative fuels still has room to grow. The Kanda Cement Factory—UBE's main waste material treatment facility—proactively uses waste materials that are still not widely recycled due to the presence of high amounts of chlorine. Previously, cement factories did not accept waste materials that contained chlorine due to quality-related restrictions and the tendency of this chemical to corrode equipment and impair operations.

We developed technology to address these issues after undertaking a serious investigation into how to make active use of this type of troublesome waste. This technology is applied to high-chlorine bypass facilities (installed in fiscal 2005) capable of eliminating chlorine to the maximum extent possible from the cement production process and boasts the industry's highest extraction ratio of 10%. In fiscal 2011, a waste plastic pretreatment facility was developed for the purpose of extracting chlorine before using waste plastic as an alternative fuel. This facility is the first in the industry capable of converting waste plastic into a solidified, chlorine-free equivalent to coal. After commencing full-scale operations, UBE took the initiative in accepting automobile shredder residue and other waste materials that are difficult for other companies to use because they contain high concentrations of chlorine. Thanks to this technology, such materials will be converted into alternative fuel.

In addition, since the amount of waste materials used as cement raw materials has almost reached its limit, we are helping to prolong the life of final disposal sites by shifting toward the use of ash produced by municipal garbage incinerators. UBE cement factories accept and use municipal garbage ash produced in Yamaguchi Prefecture. Such ash is treated by Yamaguchi Eco-tech Corporation (a joint venture established in 2001 with Tokuyama Corporation) to remove chlorine and foreign substances. We plan to expand the use of ash that contains a significant amount of metal and other foreign substances by introducing pretreatment facilities that remove them.

In any event, the UBE Group is fully displaying its strengths by taking on the challenge of using original technologies.

Natural Resource Recycling Status

Cement has a vital role to play as a material indispensable to social infrastructure construction and urban development. Demand for cement is once again expected to increase due mainly to post-disaster reconstruction as well as structural maintenance and upgrading.

UBE produced 7.6 million tons of cement in fiscal 2011 (the combined total of the Ube, Isa and Kanda factories) and accepted waste materials and byproducts (including gypsum used as an additive in cement finishing) amounting to 3.22 million tons. As a result, UBE used approximately 420 kg of recycled waste materials and byproducts to produce one ton of cement.

The UBE Group will continue to take on the challenge of developing a variety of technologies to contribute to the creation of a resource recycling society.

Waste plastic before treatment. Metal fragments and other foreign substances must be removed.

Waste plastic before treatment is correctly sorted by ultimate use

Inserting waste plastic into treatment facility

Thinking about Cement

Message from the President

Michio Takeshita Ube Industries, Ltd. President and Group CEO, Representative Director

The environment in which companies operate is undergoing major changes due to such factors as economic stagnation in advanced countries and intensifying competition in emerging and other markets. In light of the growing importance of CSR, what types of corporate activities are being demanded by stakeholders? Ms. Junko Nagata has been examining the UBE Group's CSR activities over the past four years, and we have invited her to share her opinions with President Takeshita.

Learning about UBE through factory tours

● **Nagata:** This was my first opportunity to take a tour of an UBE factory located in the Ube District. I come from Fukuoka Prefecture, and UBE cement has a very visible presence in the region. Even so, I was surprised to find out how large and dynamic cement factories and mines are when seen in person.

I also toured the production line for lithium-ion battery separators and other facilities at the Ube Chemical Factory. From the outside these facilities look old fashioned, but, as soon as I stepped inside, my perception changed completely. The most advanced materials are produced in cleanrooms. The difference between the outside and inside was astonishing. Something told me that this very discrepancy was an indicator that UBE may well be an interesting company.

Interviewer

Junko Nagata

Born and raised in Fukuoka Prefecture, Ms. Nagata was the first woman to enter the Japan Coast Guard Academy and became the youngest captain to be assigned to the patrol vessel *Matsunami*. Ms. Nagata is currently an associate professor at Osaka City University's Graduate School for Creative Cities. With a specialty in public management and decision making, Ms. Nagata conducts research from a public perspective on corporate social responsibility (CSR). Ms. Nagata also serves as a board member on various national and regional government councils and research committees and engages in hands-on activities to revitalize local communities and bring about social change.

Official website: **http://junko-nagata.com/** (Japanese language only)

● **Takeshita:** The contrast is not particularly special only to UBE, but, judging from the outside appearance, you would not be able to tell how much our business has changed over the years.

● **Nagata:** Indeed, *Thermal Blanket* multi-layered thermal control material looks like a pretty average film but it was used as a protective layer on HAYABUSA and other satellites and explorers. I never would have imagined that such a material would be used in space. *Thermal Blanket's* thin and simple-seeming design would imply that its high-performance and high-function properties have been condensed.

● **Takeshita:** UBE does not produce a large amount of *Thermal Blanket* as it has only specialized satellite-related applications. Nevertheless, I think this product could play an important role in helping to familiarize the world with UBE's technological capabilities. In addition, I believe that manufacturing materials used in space is source of great pride for our employees.

● **Nagata:** I think the spirit of innovation displayed in UBE's new businesses is remarkable.

Product Manufacturing DNA and R&D

● **Nagata:** Although UBE started out in the coal business, it has expanded into wide array of businesses, including the production of pharmaceuticals and numerous types of specialty materials. Your original coal-based chemical operations have flowered into a business handling a multitude of chemical products. Nonetheless, can UBE maintain sustainable growth without expanding its product lineups beyond what it already offers? At the same time, I get the feeling that UBE businesses are highly diversified. In any case, I am very interested in learning how each of UBE's businesses has undergone changes while

Junko Nagata Associate Professor, Graduate School for Creative Cities, Osaka City University

maintaining continuity over the Company's 100-plus year history.

● **Takeshita:** In the area of chemicals, we provide such general-purpose items as caprolactam (a basic raw material for nylon) and ammonia as well as advanced materials that include *Thermal Blanket* and separators. Without a doubt, I think we may have stretched ourselves a bit thin from a selection and concentration perspective. Moreover, the daily changes taking place in the global market pose major challenges. We have tried to ensure that UBE's business structure has the ability to flexibly adapt to such environmental changes. In fact, we are one of the few companies that have not diverged from our original business fields, which are chemicals, cement, machinery and energy.

Since starting out in coal mining in the Ube district, our birthplace, we have consistently transformed ourselves in response to trends and the changing structure of industry in each of these four fields.

● **Nagata:** What are your thoughts on R&D?

● **Takeshita:** We prefer not to push any strong policies in this area, choosing instead to respect the autonomy of our R&D managers. It is important for a chemical manufacturer to know how to identify and nurture the seeds of ideas. This approach has benefited UBE, allowing it to maintain a certain amount of freedom within its R&D activities.

Almost every UBE product started with the seed of an idea. The commercialization of many of our products began with an effort to determine what types of applications and breakthroughs are possible using UBE's products and technologies. Such is the case with our current focus, battery materials. Along with separators, which are made from polypropylene and polyethylene, electrolytes are one of the materials that comprise lithium-ion battery materials. Developed from C1 chemicals derived from coal chemistry (in which UBE boasts a long history), dimethyl carbonate (DMC) is used as a solvent to make electrolytes.

Focusing on product manufacturing underpinned by our original technological capabilities, UBE's R&D approach has a tradition of anticipating the needs of each generation as well as being undaunted by the challenges that come with changing times.

● **Nagata:** Do you feel that encouraging this level of freedom to create new technologies and products is part of UBE's corporate culture?

● **Takeshita:** Certainly. However, although we grant a degree of freedom to our R&D staff, it is sometimes necessary to take a step back to gain perspective. Objectively speaking, this involves asking such questions as "is this R&D theme in line with technological and market trends, on par with that of other companies, and leading to a breakthrough?"

● **Nagata:** Are you promoting partnerships and technological exchanges with universities?

● **Takeshita:** Yes. We are participating in partnerships and exchanges with a number of universities. In fact, we concluded a comprehensive R&D cooperation agreement in 2004 with Yamaguchi University. The Yamaguchi University campus and our main factory are both located in Ube City. We continue to maintain this agreement. The degree to which universities in particular have become more open to innovation in recent years is remarkable. In light of this, we are promoting partnerships with various universities in the areas of basic research and R&D into next-generation products in every field we do business in.

Responding to Changing Operating Conditions

● **Nagata:** The number of Japanese companies that are turning in poor performances is increasing due to global economic stagnation and the impact of the strong yen. How is UBE responding the changing external environment?

● **Takeshita:** Because we sustained comparatively minor damage from the Great East Japan Earthquake and flooding in Thailand, our results were strong and steady until the first half of fiscal 2011. During the second half, however, we felt the impact of the global economic recession. In particular, the European debt crisis sparked a major drop in Chinese exports to Europe and, in turn, the volume of Japanese exports to China fell. This has led to many Japanese device manufacturers—many of them our customers—seeing their domestic business operations shrink.

Nevertheless, I believe that China, India, Indonesia and other Asian economies will continue to expand despite the current minor slowdown. The

proximity of a growing Asia is a geographical advantage for Japanese companies, including UBE.

The UBE Group's ratio of overseas sales to net sales exceeded 30%. Of this, 70% was accounted for by sales to Asia. As a result, I don't feel overly pessimistic about the fall in worldwide markets.

● **Nagata:** The appreciation of the yen and other factors have accelerated the shift toward establishing overseas production bases and what is often referred to as the hollowing of domestic industry. What do you think about this?

● **Takeshita:** Looking at the entire Group, the balance we have maintained between buying and selling has minimized the effect of the strong yen. Having said that, the mainstay products that we export have suffered from deteriorating profitability and lower competitiveness while the decrease in demand from domestic customers is an area of concern.

A major problem for domestic industries is the cost of electricity and other forms of energy. I think Japan's position on trade agreements is another factor hampering the competitiveness of Japanese companies. The government must eliminate factors inhibiting fairness and competitiveness by signing free trade agreements (FTAs), changing tax regulations and other measures. In so doing, the government can improve the global competitiveness of Japanese manufacturers as well as maintain employment and the dynamism of domestic industries. If this is not done, industrial hollowing will accelerate even further.

● **Nagata:** I completely understand what you are saying. I believe that if the national government does not support the sustainable growth of Japanese industry (including basic R&D, particularly in the area of science and technology), Japan's international competitiveness will not improve.

Environmental Contributions

● **Nagata:** What is the focus of the next generation of products and technologies that UBE aims to create?

● **Takeshita:** We are promoting the initiative, "endeavor to develop environmentally friendly technologies and products," as part of the Group's mid-term management plan, Stage Up 2012—New Challenges. Right now, every manufacturer seems to have the same idea, particularly in the areas of vehicle weight reduction, energy conservation and generation, recycling and health care. Many companies are pursuing next-generation product R&D from the angle of promoting environment-friendly businesses. I believe that businesses that are at odds with maintaining the Earth's sustainability will have a difficult time growing.

● **Nagata:** In light of the global focus on environmental problems, how to effectively use such natural resources as petroleum and coal has become a major issue.

● **Takeshita:** Looking at the future sustainability of petroleum and coal, carefully conserving these resources is the absolutely most important way to ensure the continued affluence of society. As a company that uses considerable amount of coal, our impact on the global environment is significant. Knowing this, we work to use coal more effectively and have expanded efforts to recycle biomass- and fuel-related waste materials.

● **Nagata:** What specific initiatives has UBE been undertaking?

● **Takeshita:** Although we have been promoting the use of wood biomass and waste plastic as alternative fuels for some time, we recently began importing palm kernel shells (PKS), a material left over after extracting palm oil. PKS is mixed with coal and used as a fuel for on-site power generating plants located in the Ube District and the Isa Cement Factory in Mine City. Looking ahead, we are planning to extend the use of PKS beyond the Group to include outside users.

Coexisting with Local Communities

● **Nagata:** In terms of coexisting with local communities, chemical and cement factories are located relatively close to the residential districts of Ube City. Including environmental preservation efforts, what are you doing to promote the concept of living and prospering together with local communities?

● **Takeshita:** We have maintained business operations in Ube City since our foundation. Because of this, we feel a strong sense of responsibility for the burdens placed on the local community from UBE's business activities. Determining how to live and prosper together with Ube City is a necessary part of our efforts to contribute to local communities in a manner that is keeping with the times.

● **Nagata:** From the perspective of safety, it is clear that UBE has made concerted efforts in such areas as curbing noise and wastewater discharge. Nevertheless, in the interest of taking another step forward, in what "soft" areas other than safety and employment should UBE be contributing to society and local communities in order to make residents feel good about UBE's presence? If some sort of "breakthrough value" is created, I believe this would build a new relationship that encourages compatibility and mutual prosperity.

● **Takeshita:** From this point forward, we are scaling back our social contributions in "hard" areas. Looking ahead, we aim to contribute to local communities in various ways that, as you pointed out, will make residents feel good about the Company's presence in Ube City. In addition, we intend to pursue business activities that will inspire pride among community residents.

From this perspective, we need to increase a more accurate awareness of the UBE Group. To that end, we are considering publishing a community magazine in the Ube District that highlights the types of products made at each factory and the steps we are taking to maintain safety. The magazine will also showcase local employees in every issue. I think that publishing such a magazine will help close the gap between UBE and local residents.

● **Nagata:** I think that type of initiative is fantastic.

By the way, UBE has a conscientious and serious approach to business that I very much admire. However, looking at the Company from a different

perspective, it appears that it is not much fun. During the factory tour, the external appearance of the buildings and facilities did not evoke a sense of friendliness or flexibility. What do you think, for example, about painting pictures that are appealing to local residents on the double trailer rigs used for transporting coal and cement products, factory walls and other structures? It would be worth a try given that you operate in the local community. UBE would receive very positive PR by visually conveying its friendliness and openness.

● **Takeshita:** Thank you for your suggestion. I would like to give this a try on our ready-mixed concrete trucks and factory walls to make our facilities appear more inviting.

● **Nagata:** I had an opportunity to visit Libertas Ube, Ltd. In addition to employing persons with disabilities, I would like to see Libertas Ube contribute by hiring elderly people in the future. I would like to see you raise social awareness regarding Libertas Ube's activities by giving them more public exposure.

● **Takeshita:** Even in Ube City, many residents don't know about Libertas Ube, a special-purpose subsidiary* of UBE that focuses on employing persons with disabilities. Without actually visiting Libertas Ube, people remain unaware of the various individuals who have been given the opportunity to use their abilities by working with us. I would like to showcase UBE's employment of persons with disabilities in the community magazine I mentioned earlier.

● **Nagata:** I toured the UBE-i-Plaza comprehensive information center located on the first floor of the head office. I was pleasantly surprised by the large number of items on display, which gave me a better understanding of the UBE materials used in everyday products.

*A subsidiary established with the aim of promoting the employment of people with disabilities.

Creating Comfortable Working Environments for Employees

● **Nagata:** What is your approach to maintaining dialogue with employees?

● **Takeshita:** I hold corporate briefings for managers in each region once a year to explain the Company's performance and other matters. In addition, I convene roundtable meetings with front-line employees on a monthly basis.

● **Nagata:** I find the term "roundtable meeting" rather interesting.

● **Takeshita:** During these meetings, I get together with around 15 employees for two hours. Each employee is encouraged to freely voice his or her opinion, and I respond and express my own ideas. These meetings gather together a wide age range of people, from young employees in their 20s to veterans in their 50s.

● **Nagata:** What do employees talk about the most?

● **Takeshita:** Employees speak most often about human resources development and staffing shortages. When such topics come up, I encourage employees to offer their ideas. To this end, we discuss desirable methods for employee development in the workplace that focuses on the department and particular job rather than using a top-down system.

● **Nagata:** People employed at companies that are similar in size to UBE often tell me that the president is remote and they have never spoken with him or her. I think roundtable meetings and other initiatives that bring you closer to employees is an excellent way to build an open corporate culture.

● **Takeshita:** Roundtable meetings bring to light any communication shortfalls within our workplaces. To date, 250 people have participated in roundtable meetings, which I want to continue holding in an informal and open manner for many years to come.

The UBE Group's CSR

● **Nagata:** Finally, in terms of CSR, what is required of the UBE Group?

● **Takeshita:** As part of corporate management, CSR defines how a company fulfills its role as a member of society. From a social contribution perspective, steadily engaging in CSR activities that we are well suited to and do not cause us to overreach our abilities is fundamental.

● **Nagata:** When I examine the UBE Group's CSR activities, my first impression is that it is meeting the needs of society through its main businesses. I would like to see you continue undertaking CSR through your products and services, which includes developing environment-friendly items and employing people with disabilities. Also, instead of acting as an individual chemical manufacturer, I would like to see UBE become an industry leader conveying a broader CSR vision that encompasses developing the next generation of employees as well as defining the future role of the chemical industry.

The plant tour and today's interview have given me a greater appreciation of UBE. Please continue to create products and technologies that are useful to society. Thank you very much.

Corporate Profile

Corporate Profile

Company Name: Ube Industries, Ltd.
Founded: June 1, 1897
Consolidated: March 10, 1942
President and Group CEO: Michio Takeshita
Capital: ¥58.4 billion (as of March 31, 2012)
No. of Employees: 11,081 (consolidated) 3,773 (unconsolidated)
(as of March 31, 2012)

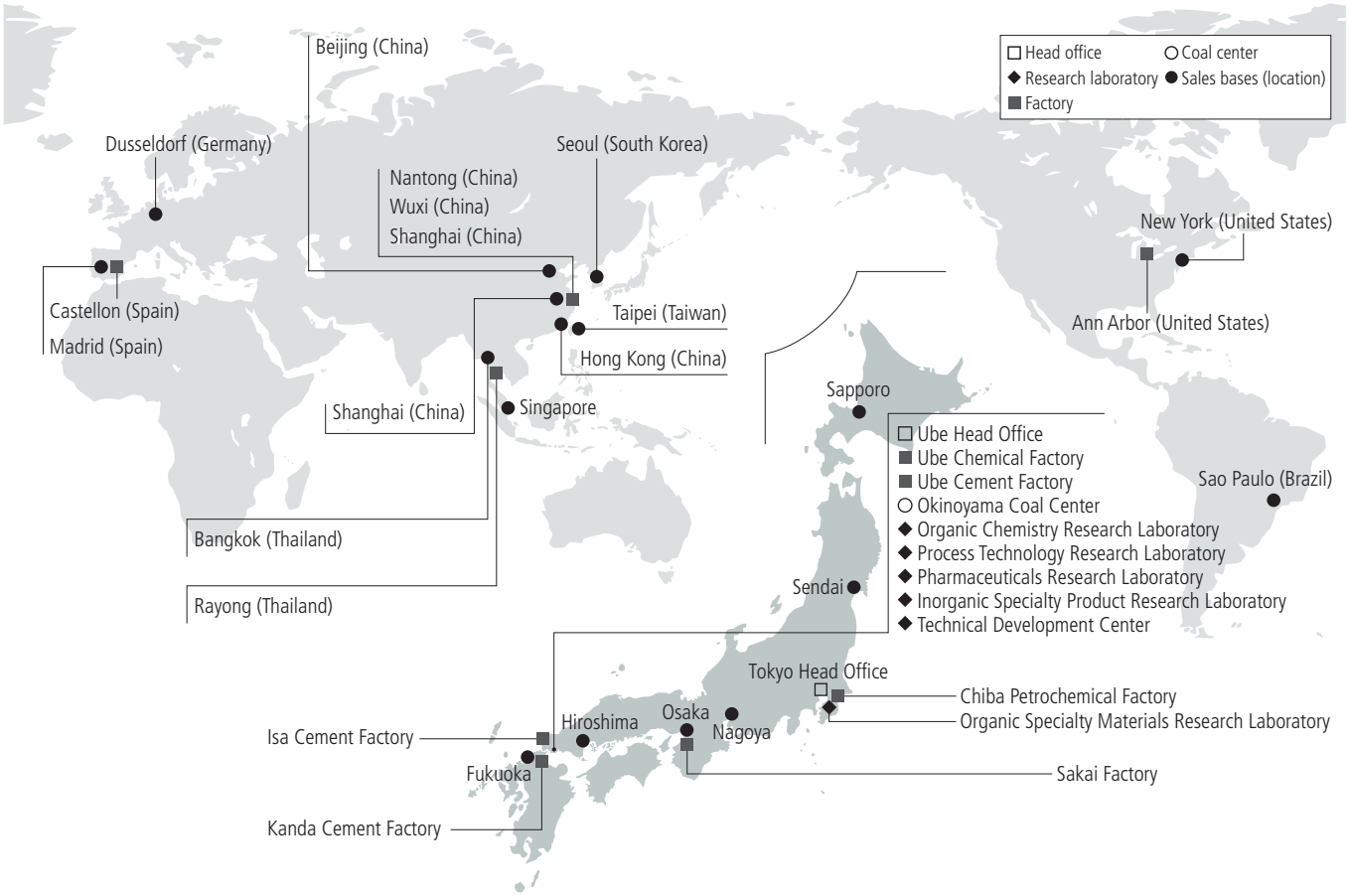
Business Profile

Business Segment Name	Main Products
Chemicals & Plastics	Nylon resins, caprolactam (a basic raw material for nylon), synthetic rubber, ammonia
Specialty Chemicals & Products	Specialty products such as battery materials and polyimide, fine chemicals
Pharmaceutical	Drug discovery, manufacturing of pharmaceutical active ingredients and intermediates
Cement & Construction Materials	Cement, ready-mixed concrete, construction materials, recycling of resources, calcia/magnesia
Machinery & Metal Products	Molding machines, industrial machinery
Energy & Environment	Coal, electric power

Fiscal 2011 Topics

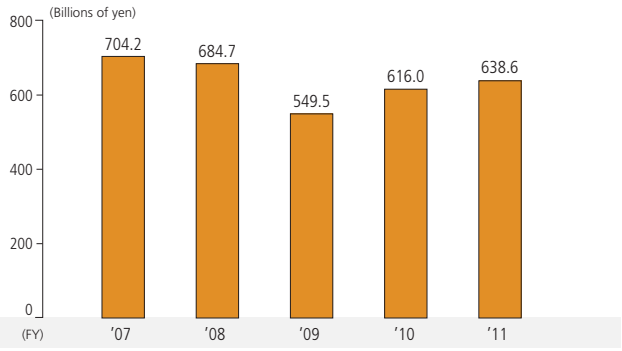
June 2011	• Commences commercial operations of new 1,6-hexanediol factory in Thailand
August	• Ube Material Industries, Ltd. and Sojitz Corporation participate in a caustic lime business in China • Establishes a joint venture to produce substrate materials for next-generation displays with the South Korean company, Samsung Mobile Display Co., Ltd.
September	• Begins commercial operations of a separator manufacturing facility (7th train) • Commences commercial operations of UBE's fourth pharmaceutical manufacturing facility
October	• Acquires license and concludes a joint development contract related to glaucoma drugs with Santen Pharmaceutical Co., Ltd. • Celebrates the 50th anniversary of the UBE Biennale modern Japanese sculpture exhibition
December	• Completes expansion of annual caprolactam production capacity by 20,000 tons in Thailand • Establishes a joint venture to produce the electrolytes used in lithium-ion secondary batteries with U.S.-based The Dow Chemical Company • Establishes a local machinery sector-related subsidiary in India • Changes the name of the ANA Hotel UBE to ANA CROWNE PLAZA UBE • Establishes a local subsidiary in Taiwan
January 2012	• Completes expansion of silicon nitride manufacturing facilities
March	• Completes construction of waste plastic pretreatment facility at the Kanda Cement Factory

Business Bases in Japan and Overseas

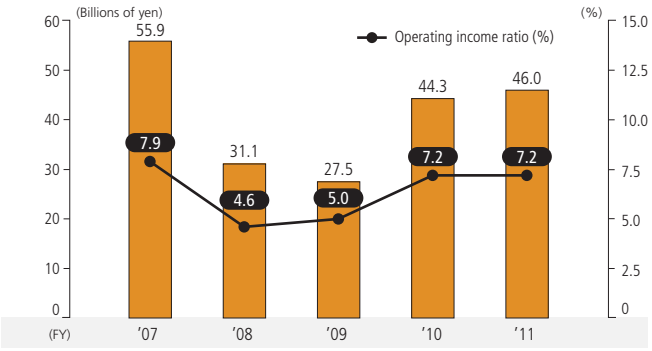


Major Financial Data (Consolidated)

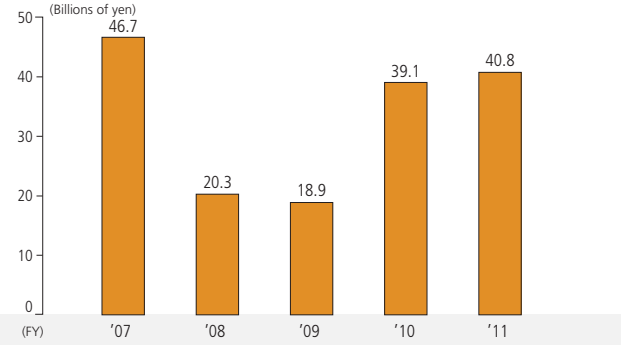
Net Sales



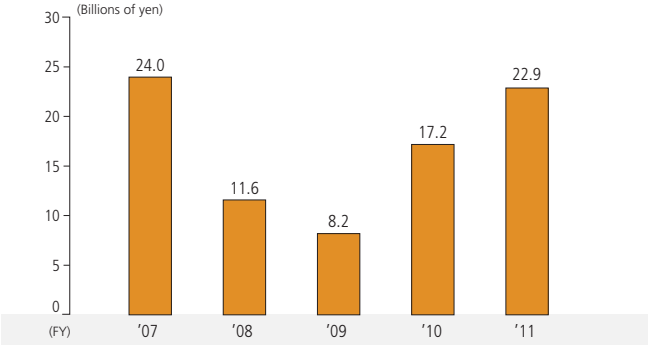
Operating Income and Operating Income Ratio



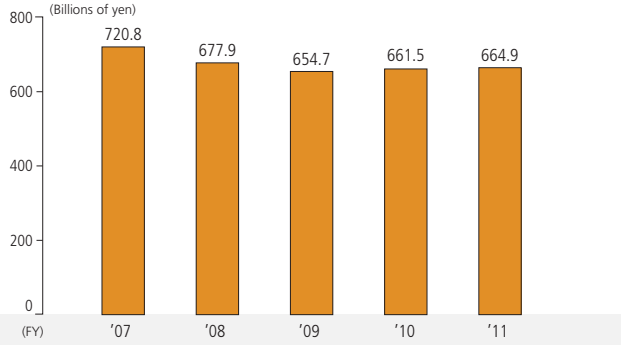
Ordinary Income



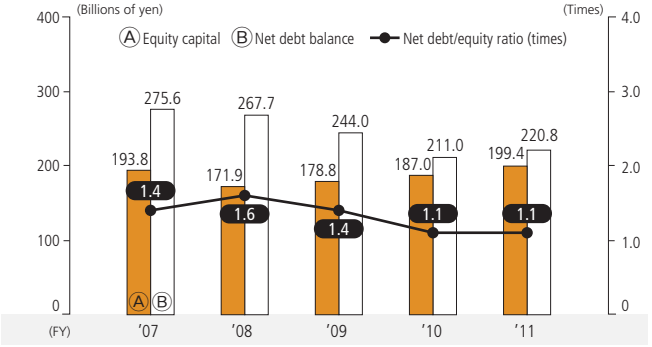
Net Income



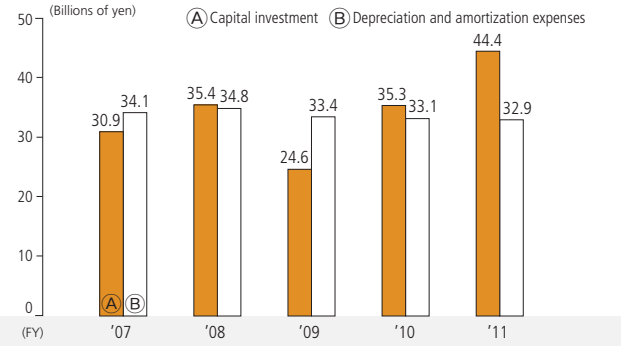
Total Assets



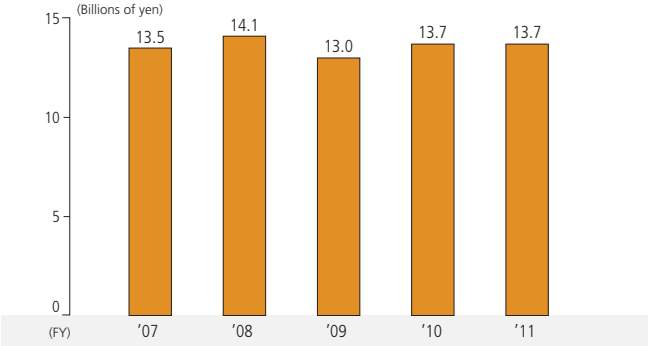
Equity Capital, Net Debt and Net Debt/Equity Ratio



Capital Investment, Depreciation and Amortization Expenses



R&D Expenditures



The Spirit of "Living and Prospering Together with the Local Community"

This is UBE's corporate philosophy and core CSR concept and has been passed down for over 110 years

■ Promoting the Management Philosophy, "Living and Prospering Together" to Create Ideal Local Communities

Sukesaku Watanabe, the founder of UBE Kosan, was a businessman who loved his hometown. Strongly believing in the importance of maintaining close links with local communities while pursuing business development, Watanabe undertook various initiatives to upgrade the civil and social infrastructure of the region. Such initiatives included establishing an electric company that provided the region's first electric lighting, constructing water supply facilities and railroads, and setting up schools to foster the development of human resources. Sukesaku Watanabe's favorite phrase, "living and prospering together with the local community," forms the basis of the UBE Group's CSR activities.

■ Promoting the Management Philosophy "Creating Industries with Infinite Possibilities from the Finite Resources of Coal" to Foster a Frontier Spirit

Anticipating a future in which there would be no coal left to mine, Watanabe espoused the philosophy of "creating industries with infinite possibilities from the finite resources of coal" in order to ensure the continuing prosperity of local communities. Consequently, he focused his efforts on making the transition from the coal mining industry to new, developing industries. In particular, Sukesaku Watanabe had the foresight to use soil removed from mines to create waterfront landfills that could serve as industrial sites. In addition, he established harbor jetties and railroads while opening steel, cement and chemical factories. Such facilities currently form the foundation of the UBE Group. In line with Watanabe's philosophy of taking on new business challenges, UBE cultivates a corporate culture that encourages a spirit of challenge that fosters a frontier spirit in every employee.

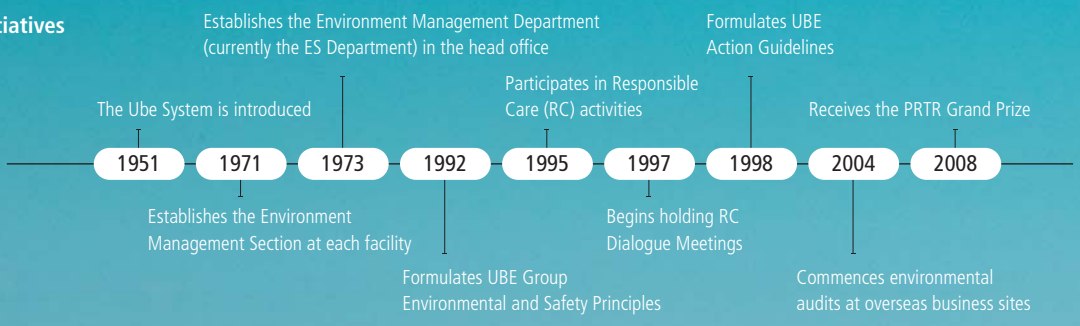
■ Undertaking the "Ube System" Pollution Prevention Initiative through Dialogue with Industry, Government, Academia and Citizens

Japan's period of rapid economic growth produced air and other types of industrial pollution in a number of places. Ube City was no exception. With a spirit of autonomy that emphasizes independent action to protect one's community, however, in 1951 Ube City launched a pollution prevention committee chaired by the mayor and comprising representatives from industry (including UBE), government, academia and members of city council. The proactive dialogue and information disclosure that took place among these parties led to the formulation of independent pollution prevention measures and constitute the beginning of what is now known as the Ube System. These efforts predated the Japanese government's Environmental Pollution Prevention Act by 15 years.

During a visit to the United States around that time, then UBE Vice President Kanichi Nakayasu was astonished to find out how the city of Pittsburgh had solved its severe air pollution problem in a very short time period. Having studied this accomplishment, immediately upon his return to Japan Nakayasu began promoting an environmental pollution initiative spearheaded by measures to control dust emissions. Ever since, the UBE Group has steadily implemented voluntary environmental preservation measures at all Group factories.

In 1997, Ube System environmental protection initiatives were globally recognized, with Ube City being awarded the Global 500 Award by the United Nations Environmental Programme (UNEP).

Environmental Protection Initiatives



Ube City

Group Vision: Wings of Technology and Spirit of Innovation

That's our DNA driving our global success. The Ube Group will embrace a frontier spirit in seeking to achieve coexistence with the global community driven by the limitless possibilities of technology, while continuing to create value for the next generation.

The UBE corporate philosophy, "living and prospering together with the local community," and a spirit of unremitting self-reform comprise the UBE Group vision. This Group vision is being passed along to every employee. The UBE Group's strengths lie in business activities centered on product manufacturing through the use of original technology as well as a proactive approach that meets the needs of the age. Expanding these strengths worldwide, we will work to realize sustainable development around the globe with the aim of achieving "global coexistence."

The UBE Group works to achieve sustainable business and social development by positioning its **Basic CSR Policy** at the center of its business activities. In so doing, we are fulfilling our responsibility to maintain coexistence between business and society. In addition, we adhere to **UBE's Action Guidelines** in order to realize proactive CSR activities and, in turn, attain the trust of all stakeholders.

UBE Group Basic Policies for CSR

- Continually improve profits and earnings and maintain a sound financial position in order to increase corporate value
- Provide products, services, and systems that contribute to safety and the environment, reduce the use of harmful materials and waste, and institute policies for the prevention of global warming in order to contribute to the conservation of the global environment
- Establish compliance procedures to improve corporate governance and create a better working environment as a part of our activities to contribute to society

Nine Chapters of the UBE Action Guidelines

Chapter 1 Corporate Mission and Social Responsibility

We will strive to create new value and achieve sustainable growth as a corporation, while actively fulfilling our corporate social responsibilities in contributing to the sound growth of society.

Chapter 2 UBE Group and the Law

We will comply with applicable legislation and our company regulations, conducting ourselves as a member of a sound society. We will refrain from any ties or transactions with antisocial forces, and will not bow to the unreasonable demands of antisocial forces.

Chapter 3 Business Activities and Creating Value

We will develop and supply technologies, products and services that are safe and serve useful purposes, in order to earn the confidence of the public.

Chapter 4 Fairness and Integrity

We will strive to promote fair and open competition while executing our work with integrity as we pursue our business activities both at home and abroad.

Charter 5 Safety and the Environment

We are committed to safety, and will actively and voluntarily implement initiatives to conserve the global environment as an issue facing all humankind.

Chapter 6 UBE Group and Human Rights

We will respect human rights and create healthy and positive workplaces that are comfortable to work in, as we pursue our business activities both at home and abroad.

Chapter 7 UBE Group and Information

We will strive to protect information and engage in appropriate disclosure of corporate information, while actively and thoroughly facilitating communication with society.

Chapter 8 UBE Group and the International Community

We will contribute to the growth of the regions we are involved in, as a member of the international community.

Chapter 9 Summary: Building a Firm Foundation of Corporate Ethics

We will build a firm foundation of corporate ethics, based on the Ube Action Guidelines and through close cooperation between UBE Group companies and our business partners.

Revised July 2009

CSR Management

CSR Promotion System

We have established the Group CSR Committee as a top-level decision-making body with regard to the UBE Group's Basic CSR Policies. It is composed of members of the Group Management Committee and is chaired by the Group's CEO (president). The Group CSR Committee makes decisions on and revises important matters related to the Group's Basic CSR Policies and CSR promotion activities, and it assesses the results of the Group's CSR-related activities.

● Group CSR Committee System

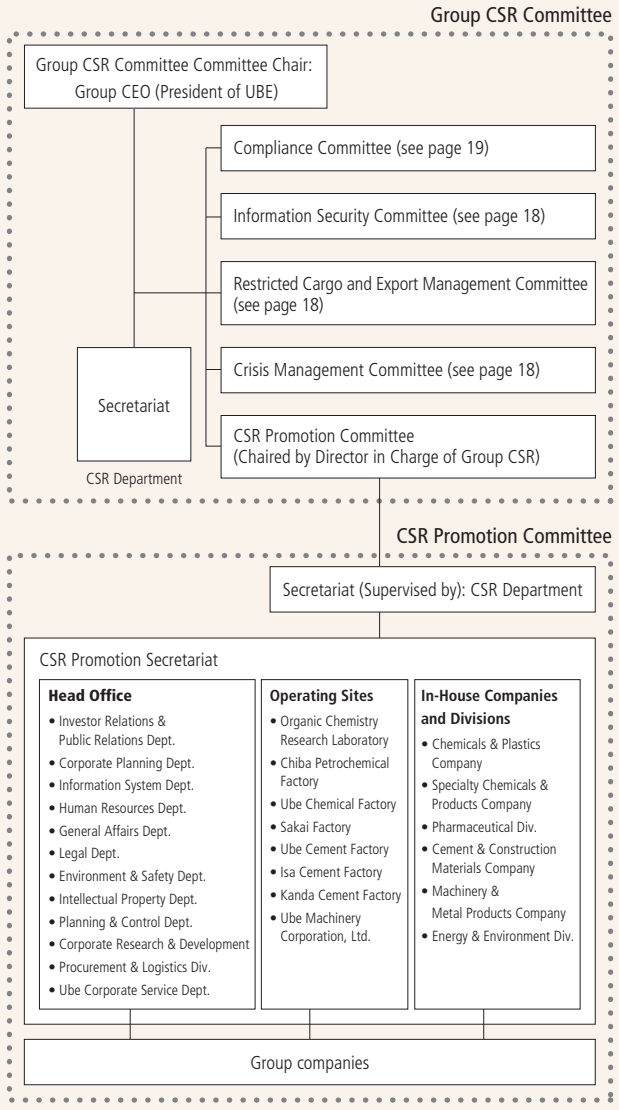
With the idea that CSR is an integral part of its management, the Group CSR Committee establishes the CSR matrix, and five specialized committees undertake deliberations, reporting and revisions related to specific action plans. Through this system, the Group aims to harmoniously coexist with society by promoting fair corporate activities that deepen the level of trust between the Group and its numerous stakeholders, including shareholders, customers, suppliers, employees, local communities and governments.

● Significance of the UBE Group CSR Matrix

The CSR matrix clarifies the contents of CSR issues, broken down by stakeholder, that must be addressed by every UBE Group executive and employee based on the Group's CSR Mission.

The UBE Group thoroughly promotes Groupwide awareness of its CSR matrix, while regularly making revisions to specific initiatives listed in the CSR matrix.

CSR Promotion System



UBE Group's CSR Mission

The UBE Group increases corporate value and contributes to stakeholders through fair corporate activities. At the same time, the Group maintains business continuity and sustainable growth as it harmoniously coexists with society over the long term.

Shareholders

- Continuous improvement of corporate value
- Stable and appropriate provision of dividends
- Appropriate information disclosure

Customers

- Provision of products and services that are safe, of high quality and useful, at reasonable prices
- Prompt response to customer needs

Suppliers

- Fair and unbiased trade

Employees

- Appropriate salaries
- Stable employment
- Human resource development
- Sharing of information and targets
- Support for higher quality of life

Local communities and government

- Stable and fair employment
- Appropriate tax payment
- Contribution to and dialogue with the local communities

UBE Group's CSR Matrix (Items for medium- and long-term initiatives broken down by stakeholder)

Basic policies		Items for medium- and long-term initiatives	Page included	Groupwide organization	Primary department in charge
Corporate governance and internal control ● To establish highly transparent corporate governance and an efficient and disciplined enforcement system ● Ensure ongoing business operations by formulating a business continuity plan (BCP)	Shareholder	• Enhancement of corporate governance and internal control • Stable and appropriate provision of dividends • Further strengthening of profit base and improvement of financial structure	17,18 21 12,21	• General Meeting of Shareholders • Board of Directors • Internal control system • Outside directors • Group Strategic Management Committee • Crisis Management Committee	• Corporate Planning Dept. • Auditing Dept. • General Affairs Dept.
	Customer	• Assurance of fair trade and competition	22		
	Supplier	• Fair and unbiased purchasing	22		
	Employee	• Awareness of management policies • Better understanding of CSR activities • Business performance based on assigned roles • Cultivate a sense that employees have a stake in management operations (through stock options, etc.)	13 15 14 23		
	Local community, society and government	• Appropriate tax payments • Maintain an appropriate relationship of trust with government agencies and other bodies	23		
Compliance ● To comply with corporate ethics and social norms without fail ● To comply with laws, regulations and contractual obligations ● To eliminate the presence of antisocial elements	Shareholder	• Prevention of insider trading • Appropriate and timely disclosure of information	21	• Compliance Committee • Hold conferences regarding the Act against the Delay in Payment of Subcontract Proceeds • Restricted Cargo and Export Committee	• Legal Dept. • Procurement & Logistics Div. • Corporate Planning Dept.
	Customer	• Compliance with related laws and regulations, including the Antimonopoly Act • Strict confidentiality of customer information, etc.	19-20		
	Supplier	• Respect for intellectual property • Compliance with related laws and regulations, including the Act against the Delay in Payment of Subcontract Proceeds, etc. to Subcontractors and the Law for Securing the Proper Operation of Worker Dispatching Undertakings and Improved Working Conditions for Dispatched Workers • Refusal to deal with antisocial elements	22 20 19		
	Employee	• Promotion of understanding and awareness (including overseas subsidiaries) of the Action Guidelines for Business Conduct, etc., thorough compliance education and improvement of compliance-related systems (reporting, consultations, etc.) • Provision of thorough compliance training as well as information on laws and regulations that must be adhered to and the upgrading of compliance-related systems (reporting, consultations, etc.)	14 19-20		
	Local community, society and government	• Compliance with related national laws, regulations and ordinances, more stringent prefectural standards, and other agreements	19-20		
Environment, safety, and quality ● To conduct business activities in consideration of the environment ● To provide environmental information ● To manufacture and provide safe, high-quality products and services in a safe manner using safe technologies	Shareholder	• Promotion of better understanding of environment-, safety-, and quality-oriented management	33	• Group Environment and Safety Committee • Group Product Safety Committee • Crisis Management Committee	• Environment & Safety Dept. • General Affairs Dept.
	Customer	• Development and provision of products and services that help reduce environmental impact • Provision of safe, high-quality products and services • Compliance with related laws and regulations	49-54 22 44		
	Supplier	• Implementation of more measures for the reduction of environmental impact • Clarification of product safety and quality requirements • Promotion of green purchasing	33-47 22		
	Employee	• Improvement of education and awareness concerning the environment, safety and health, quality, and energy conservation • Realize safe and comfortable workplaces	25 27,48		
	Local community, society and government	• Compliance with environment-, product-, and service-related laws and regulations • Proactive measures to reduce environmental impact • Ensure the safety and security of the local community • Consider ways to ensure biodiversity preservation	44 1-6, 33-48 21,23,41		
Information disclosure and communication ● To disclose information to stakeholders appropriately and in a timely manner and expand communication channels with them ● To appropriately manage information	Shareholder	• Disclosure of information about management status, CSR, and risks • Provision of appropriate information to investors and analysts • Organization of a general meeting of shareholders in an open manner	12 21 21	• Information Security Committee	• Information System Dept. • General Affairs Dept. • Investor Relations & Public Relations Dept.
	Customer	• Provision of appropriate information about products, services, and safety • Protection of personal information	22		
	Supplier	• Clear statement of procurement policies • Promotion of communications • Appropriate administration of confidential information	22		
	Employee	• Promotion of in-house communications • Disclosure of information about working conditions • Management of information security and protection of privacy • Promotion of better understanding of the treatment of intellectual property rights	23 26 18 22		
	Local community, society and government	• Promotion of better communication with the local community, society, government and related organizations (through the UBE-i-Plaza and RC Regional Dialogue, etc.) • Establishment of favorable relations with mass media companies	23		
Human rights and labor ● To respect the human rights of people who are affected by the Group's corporate activities ● To respect the human rights of employees, including those of partner companies	Shareholder	• Promotion of better understanding of and increased support for human rights	24, 26	• Personnel Policy Committee • Human Rights Education Promotion Committee	• Human Resources Dept.
	Customer	• Consider people with disabilities when providing information about products and services • Provision of advertisements that are not disagreeable to consumers	C4		
	Supplier	• Provision of equal trading opportunities	22		
	Employee	• Improvement of the personnel system to enable a variety of employees to display their abilities • Improvement of health and safety at workplaces and better health management by employees • Sincere dialogues with employees and the labor unions • Discontinuance of discriminatory employment practices and provision of equal employment opportunities • Education on respect for human rights	24,25 27 26 25, 26 26		
	Local community, society and government	• Creation and assurance of employment • Compliance with labor-related laws and regulations • Discussion and dialogue toward the creation of a society with high respect for human rights	25, 26 20 24, 26		
Social contribution ● To conduct social contribution activities toward the creation of a sound and sustainable society	Shareholder	• Promotion of better understanding of and increased support for corporate social contribution activities	13-15	• CSR Promotion Committee	• CSR Dept.
	Customer	• Promotion of better understanding of corporate social contribution activities	13-15		
	Supplier	• Promotion of better understanding of corporate social contribution activities	13-15		
	Employee	• Encouragement of and support for voluntary participation in social activities	26		
	Local community, society and government	• Promotion of social contribution activities • Better understanding of corporate social contribution activities	28-32 55, 56		

Corporate Governance and Internal Control

Basic Policies

- To establish highly transparent corporate governance and an efficient and disciplined enforcement system
- Ensure ongoing business operations by formulating a business continuity plan (BCP)

Initiatives to Establish and Maintain Corporate Governance

Board of Directors

Three outside corporate directors have been appointed to the Board of Directors to bring a third-party perspective to decision making, thereby ensuring transparency and objectivity in management. Composed of seven corporate directors, of whom three are appointed from outside the Company, the Board of Directors is chaired by a director who, in principle, is not an executive officer. In addition, UBE has positioned a Nominating Committee and an Evaluation and Compensation Committee as subsidiary entities of the Board of Directors, allowing greater flexibility in the activities of the Board. Both of the committees are chaired by outside directors.

Executive Officer System

In June 2001, UBE adopted an executive officer system with the aim of separating governance and management functions. The management team currently consists of 23 executive officers, of whom three are also directors. Executive officers carry out business operations in accordance with management policies determined by the Board of Directors, using authority delegated to them by the President and Representative Director. To realize flexible personnel matters with regard to directors and fully enforce a performance-related pay system, corporate director and executive officer terms of service last for one year.

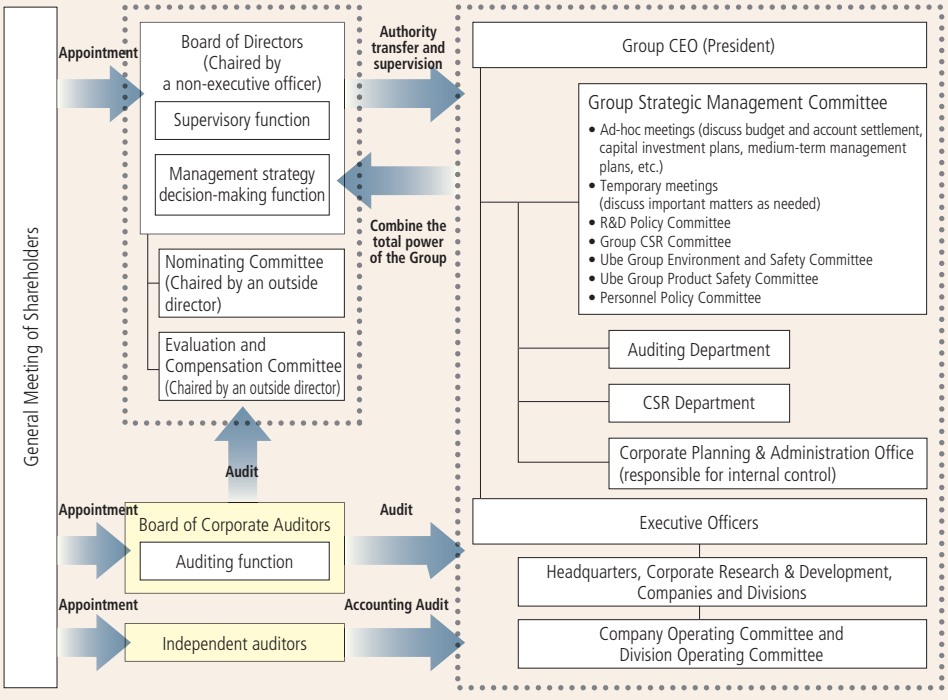
Audit System

Internal audits are conducted by UBE's Auditing Department, which reports directly to the CEO. Audits cover the entire UBE Group, including UBE's overseas subsidiaries. By checking the status of internal control and compliance with laws and regulations as well as adherence to manuals, UBE endeavors to identify potential risk across all areas of its business activities. Moreover, as a member of companywide risk management organizations such as the Compliance Committee, the head of the Auditing Department collaborates with each committee and is working to strengthen risk management systems.

The corporate auditor organization consists of four corporate auditors, of whom two are appointed from outside the Company. The task of corporate auditors is to ensure that directors and executive officers perform their duties appropriately by attending important meetings, including meetings of the Board of Directors, by examining important accounting documents and by receiving reports on operations from directors and other officers.

The corporate auditors and the Auditing Department regularly exchange information, and when the auditors conduct audits, some of the Auditing Department staff will accompany and support them as required. The auditors and the Auditing Department thus work in close cooperation with each other. The corporate auditors also regularly meet the independent auditors to hear about their auditing plans and to obtain information about the implementation status. In addition to receiving audit reports from the Group's corporate auditors, audit training sessions and exchanges of opinions are held regularly for the purpose of improving the quality of the audits.

Corporate Governance Structure



Decision-Making System

Board of Directors

On behalf of shareholders, the Board of Directors discusses and makes decisions on the issues provided for by the Companies Act, the basic policies of the Company and important enforcement issues from medium- to long-term perspectives.

Group Strategic Management Committee

The Group Strategic Management Committee is responsible for discussing and making decisions on key matters concerning resource allocation, items that need to be adjusted from an overall Group perspective, and other key matters that affect the Group as a whole in accordance with the Group Management Guidelines and Group Strategic Management Committee rules.

Company Operating Committee and Division Operating Committee

The Company Operating Committee and the Division Operating Committee are responsible for discussing and making decisions on key matters, such as business strategy, at their respective levels. They engage in these activities for Ube Industries and other UBE Group companies in accordance with the Group Management Guidelines and Company/Division Operating Committee rules that govern their operations.

Risk Management Systems

Companies conduct activities to make maximum profit while dealing with a range of risks. The UBE Group is developing and reinforcing its risk management system so that it can implement appropriate measures to identify and assess the probability and impact of risks that might prevent the attainment of its business objectives.

In order to deal with specific types of risks, we have established the Group Environment and Safety Committee and the Group Product Safety Committee. For the entire Group, these two committees formulate and actively implement policies concerning the environment and safety, and product safety, respectively. In addition, the Group has established the following committees to deal with individual risk categories.

● Information Security Committee

Due to the digitization of a wide range of information, companies are facing the risk of information leakage, falsification and loss, and these risks are having a serious influence on their corporate activities. The UBE Group has established its information security policies to ensure information security, and it is raising employees' awareness of these policies and monitoring their compliance. We also established information security rules and regulations to ensure appropriate information management.

In addition, UBE provides information security training via e-learning for all employees once a year as well as opportunities to learn about the latest information security measures.

● Restricted Cargo and Export Management Committee

We constantly reinforce awareness within the Group of the fact that the basic requirement of export management is to prevent the illegal export or supply of goods and technologies that are subject to export controls under laws and regulations designed to maintain international peace and stability, such as Japan's Foreign Exchange and Foreign Trade Act.

● Crisis Management Committee

In order to deal with environment- and safety-related accidents and disasters, including those at factories, and occupational injuries, the UBE Group established crisis management regulations, a crisis management manual and other measures to respond to emergencies that could occur either in Japan or overseas. Through such measures, the Group maintains a system that enables rapid and appropriate responses to a variety of incidents, thus minimizing the impact on its business operations. Moreover, the Overseas Crisis Management (OCM) committee has been established within the Crisis Management Committee to take charge of crisis management for employees who are on business trips or working overseas.

Response to Disasters

Based on our response to the March 2011 Great East Japan Earthquake, we revised and tested our employee safety assurance measures and instituted specific improvements. In addition, the Group revised the business continuity plans (BCPs*1) of each business division and factory in anticipation of earthquakes in the Tokyo metropolitan area as well as the Tonankai and Nankai regions.

In February 2012, we established a disaster response headquarters and conducted more practical BCP field drills Companywide (which included the introduction of a model conference) to ensure preparedness in the event of an earthquake occurring directly under the Tokyo metropolitan area.

In October 2011, various regions of Thailand sustained massive flooding damage after a period of heavy rain. Immediately after the flooding began, the Group confirmed the safety of local employees and directed its Japanese employees' family members to temporarily return to Japan. Moreover, we provided instructions regarding infectious disease prevention and the stockpiling of daily necessities. UBE donated ¥10 million to flood stricken areas, while the local subsidiary, UBE Chemicals (Asia) Public Co., Ltd., provided relief funds, drinking water, sandbags and other emergency supplies. In addition, company vehicles and employee volunteers were dispatched to support the residents of flood-stricken areas, which included delivering supplies.

The Group has formulated a new manual for how to comprehensively respond to future outbreaks of new influenza strains both in Japan and overseas. We have established and are raising awareness of emergency response teams and our action plans for each outbreak stage. The fundamental purpose of these actions is to ensure the safety of employees and their families, prevent the spread of viruses and minimize the possible impact of such outbreaks on corporate activities.

Staff Message

Yasushi Oba, Group Leader, Environment and Safety, Quality Assurance, Chiba Petrochemical Factory

Reflecting the Lessons Learned from Last Year's Earthquake in Disaster Prevention Plans and Future Issues

The Chiba Petrochemical Factory uses seismographs to measure the strength and speed of earthquakes. Responses to such events are based on this data. On March 11, 2011, the initial strong tremors caused us to immediately conduct checks of the plant. Despite the tremors registering below the level requiring stoppage, plant operations were voluntarily suspended following the second tremor. When tsunami warnings were issued, the emergency headquarters directed all staff members to evacuate to the roof of the main plant. Thankfully, no one was injured and the facilities did not sustain any serious damage. We had established criteria and conducted training to ensure with absolute certainty that every employee was aware of the tsunami warning and evacuated to a safe area. Looking ahead, we will work to enhance the plant's capabilities to prevent accidents (including those due to disaster) and further enhance our crisis response capabilities, which involve the timely communication of adequate information to governments, citizens and other stakeholders during emergencies.

Glossary

*1. BCP (business continuity plan): A plan made to minimize the suspension of business in the event of a disaster and to recover its functions as early as possible to ensure business continuity.

Compliance

Basic Policies

- To comply with corporate ethics and social norms without fail
- To comply with laws, regulations and contractual obligations
- To eliminate the presence of antisocial elements

Measures to Ensure Effective Compliance

In order for a business to develop in a healthy and sustainable manner together with society, it is important to be fully prepared to counter potential risks rather than simply focusing on increasing profits. The UBE Group always puts strong emphasis on compliance.

The UBE Group promotes upgrades to its compliance system in such organizational areas as nominating compliance officers as well as establishing divisions responsible for compliance and an internal notification system. In addition, the Group works as one to cultivate an organization culture that prevents and does not tolerate compliance violations by focusing mainly on employee training.

Measures to Eliminate Antisocial Elements

In recent years, the economic activities of organized crime groups and other antisocial elements has become more subtle. Concealing their true identities, these antisocial elements disguise themselves as private enterprises and undertake business transactions in ways that mimic the activities of legitimate companies. The use of the profits of such transactions for illegal activities is cause for concern. The UBE Group formulated the Basic Policy for Anti-Social Forces in order to clarify its firm stand against these antisocial elements and declare to all parties concerned (both within and outside the Group) via the UBE website its unwavering commitment to upholding this policy (July 2010). To avoid being involved in transactions with antisocial elements, the Group is promoting training, raising awareness as well as upgrading contract forms and countermeasure manuals.

Clarifying and Increasing Awareness of Guidelines That Ensure Compliance

Increasing Awareness of UBE Action Guidelines (see page 14)

To raise awareness of UBE Action Guidelines, which are behavioral standards that must be adhered to, the Group posts the guidelines on its intranet and distributes a booklet version to all executive officers and employees. The Group also created a case example guidebook that details how UBE Action Guidelines apply in specific situations. This document is made available to all executive officers and employees via the Group's intranet.

Moreover, the Group is working to maintain a common corporate ethical baseline by distributing an English version of UBE Action Guidelines to all overseas Group companies.

Organizational Control Measures

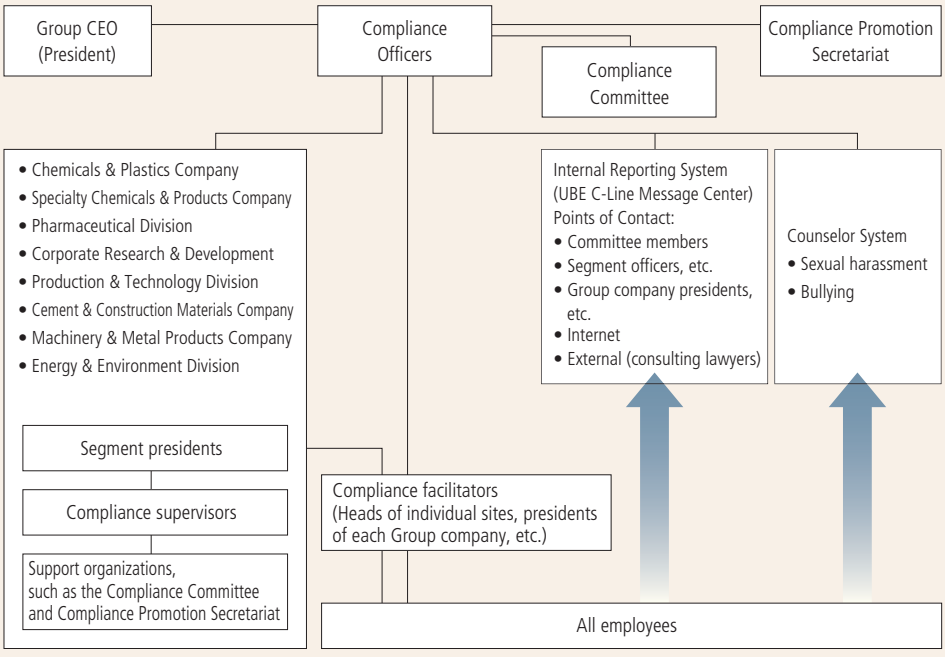
Clarifying the Individuals and Department Responsible for Ensuring Compliance

We appoint two UBE executive officers to function as compliance officers and charge them with ensuring compliance Groupwide. In addition, we established the Compliance Promotion Secretariat within the UBE Head Office, to develop and implement compliance policies. Comprising compliance supervisors from UBE's offices, facilities and administrative departments as well as from each Group company, the Compliance Committee regularly holds meetings to promote information sharing wherein examples of compliance violations and preventive measures are presented.

Overview of Systems Ensuring Compliance

- **Compliance Officer (CO)**
  Two directors have been appointed as Compliance Officers (one of whom was appointed as Chief Compliance Officer). Their task is to promote and ensure compliance throughout the UBE Group by supervising compliance-related activities.
- **Compliance Committee**
  The Compliance Committee advises the Compliance Officers and deliberates on important compliance-related issues. To ensure transparency, a legal adviser (a consulting lawyer) has been invited to serve as an outside committee member.
- **Compliance Promotion Secretariat**
  This unit administers compliance-related activities under the direction and supervision of the CO.

Compliance System



UBE C-Line Internal Notification System

We established the UBE C-Line Internal Notification System as a hot line that enables the reporting by executive officers and employees of compliance-related problems directly to the divisions responsible for compliance. The system links to external contacts (lawyers) to allow the quick identification and correction of compliance-related violations.

Holding compliance workshops and other measures to raise awareness of the UBE C-Line Internal Notification System, we have seen an increase in the number of reports using this system in recent years. The Compliance Promotion Secretariat directly addresses these reports by considering the best way to respond on a case-by-case basis.

Training and Awareness Raising Measures

Providing Information on Compliance

We continue to provide the information necessary for ensuring compliance. Examples of this include establishing a special webpage on the Group's intranet that displays a practical guide and provides information on amendments to such laws as the Antimonopoly Act and the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors. In addition, we use various media targeted by type of information to communicate data on compliance-related topics. This includes listing detailed information on the results of compliance awareness surveys in internal newsletters.

Online Education via e-Learning

We hold online e-learning training sessions twice per year that focus on actual compliance-related incidents that can happen within the Group. Various case studies and themes are covered in these sessions, ranging from problems shared by all executive officers and employees, including sexual harassment, bullying and copyright infringements, to more specialized problems, including regulations on industrial waste treatment, bid-rigging, cartels and unfair subcontractor transactions.

Compliance Workshops

To supplement e-learning training sessions, we have been holding workshops in sequence since fiscal 2009 that focus on themes covering all areas of compliance at UBE Group offices and facilities. Over the past two years, approximately 260 of these workshops have been held, with over 7,000 executive officers and employees participating. We will continue to undertake compliance workshops in the years ahead.

Awareness Raising and Training on Individual Laws

We annually hold conferences regarding the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, targeting managers in charge of purchasing and manufacturing. In addition to information exchange activities, the Group provides opportunities for executive officers and employees to study legal regulations in depth via e-learning. This includes open lectures within the Group on such legal regulations as the Antimonopoly Act, Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors and Unfair Competition Prevention Act.

Number of Internal Notifications (Fiscal 2011)

Classification	Number of cases
(1) Human relationship issues in the workplace (power and sexual harassment, etc.)	7
(2) Labor management issues in the workplace (inappropriate administration of work hours, etc.)	2
(3) Business conduct issues in the workplace (improper actions, etc.)	1
(4) Combination of (1) to (3)	5
(5) Other	3
Total	18

A training session on the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors at Ube Techno Eng. Co., Ltd.

Staff Message

Koichi Tanaka, Manager, Legal Dept.,
General Affairs & Human Resources Office

Steadily Working to Raise Compliance Awareness

This year marks my fourth year as a member of the Compliance Promotion Secretariat. During that time, the number of e-learning training sessions has increased and we have gradually expanded measures for ensuring compliance, including asking for submissions for our compliance slogans from Group employees and their families. Initially, I came in contact with a few employees who had difficulty understanding what the word "compliance" meant since it is a loan word from English. However, I believe that compliance awareness has been growing in recent years at many UBE business offices and Group companies thanks in large part to the success of individual workshops.

The formulation of measures to ensure compliance is not as simple as finding the "correct" answer. Instead, it involves a process of continual trial and error. Looking ahead, I would like to undertake initiatives that will establish a corporate culture that is praised by society for encouraging executive officers and employees to place the highest priority on compliance.

Information Disclosure and Communication

Basic Policies
- To disclose information to stakeholders appropriately and in a timely manner and expand communication channels with them
- To appropriately manage information

Relationships with Shareholders and Investors

Interactive Communication through IR Activities

UBE always conducts its IR activities in good faith, striving to promote understanding of the UBE Group's management strategy and business conditions in capital markets and to implement transparent management in order to earn the trust of the market. To this end, we are disclosing information related to management strategy and business conditions in a timely, appropriate and fair manner. In addition, we are actively increasing opportunities for interactive communication with market participants, such as shareholders, investors and securities analysts, thereby promoting mutual understanding and incorporating market perceptions and evaluations into our management.

Based on the aforementioned IR policy, we are holding briefing sessions and tours of our factories that target both domestic and foreign investors as a means of improving direct communications with them. We are also dispatching a range of information through our website.

The following were the main IR activities conducted in fiscal 2011.

- Results briefings for institutional investors and securities analysts
  (Held after full-year results were announced)
- Web-based conferences for institutional investors and securities analysts
  (Held on the day that quarterly results were announced)
- Overseas IR
  (Individual visits to institutional investors in Europe, the United States and Asia: Three times)
- Small meetings held with the President (Two times)
- Factory visits (Two times)
- Individual interviews with institutional investors and securities analysts
  (Approximately 240 per year)

We publish a semiannual financial report entitled *Stockholder Communication* for individual shareholders to introduce UBE's business details and strategies in a more intelligible manner. UBE will continue to adhere to its commitment to timely, appropriate and fair information disclosure, and it will enhance interactive communication with investors.

Ordinary General Meeting of Shareholders

UBE holds its ordinary general meeting of shareholders in Ube City, Yamaguchi Prefecture, where the Company was founded, in late June of every year. More than 1,000 shareholders attend this meeting each year. After the meeting, we hold business briefings that help shareholders deepen their understanding of UBE's business, including a brief explanation by the president of what progress has been made in the medium-term management plan. We also provide notification of the meeting in a timely manner via our website to increase the availability of relevant information and provide enough time for shareholders to fully examine the meeting agenda. These actions are undertaken with the aim of making UBE's ordinary general meeting of shareholders more open and transparent.

Analyst meeting

Dividend Policy

UBE recognizes the payment of dividends to shareholders as an important responsibility to be fulfilled by the Company for its shareholders and makes it a fundamental policy to pay dividends at a level that is commensurate with its earnings results. At the same time, we must also bear in mind the need to maintain an adequate level of retained earnings in order to secure profits for shareholders on both a medium- and a long-term basis. We determine the amount of dividends to be paid to shareholders based on these overall considerations. Based on our current medium-term management plan, we will pursue a steady increase of the dividend payment amount in line with the improvement of our business performance, setting the target payout ratio at 20% to 25%. In fiscal 2011, we increased our dividend per share to five yen.

Ratings

UBE regards "sustained improvement of its financial position" as one of its key management priorities, and the entire UBE Group has been making efforts to achieve this target. At the same time, UBE steadily promotes improvements in financial indices. UBE's current rating by the Japan Credit Rating Agency, Ltd. improved one notch from BBB+ ("positive") in fiscal 2010 to A- ("minus"). We will push ahead to sustain the improvement of our financial position and upgrade our rating.

Socially Responsible Investment (SRI) Index Rating

UBE has been selected by the FTSE4Good Global Index, a leading SRI index, since 2004. This index measures the performance of companies that meet globally recognized corporate responsibility standards in terms of environmental measures as well as employment, labor and human rights issues and is thus important as an investment selection standard for investors deeply concerned with CSR.

In addition, Morningstar Japan K.K. has selected UBE to be included in the "Morningstar Socially Responsible Investment Index" (MS-SRI) since 2009. In this first SRI index in Japan, the social character of companies is comprehensively rated in five areas (corporate governance/accountability, markets, employment, social contributions and the environment). Along with this rating, the names of companies that comprise this index are determined based on market liquidity. Out of a total of 1,000 companies, UBE was selected along with 150 others for inclusion in the MS-SRI index in 2011.

Development Bank of Japan (DBJ) Gives UBE Its Highest Environmental Rating

The DBJ evaluates the environmental management systems of Japanese companies and, on the basis of these evaluations, gives an environmental rating upon which loan conditions are set. In February 2012, UBE received the DBJ's highest environmental rating and was given a special award as a model company that implements the highest level of environmental management in its industry. UBE's reception of this year's special award (its third time to do so since fiscal 2008) was attributable to the outstanding evaluation its proactive biodiversity-oriented measures earned.

Measures to Increase Customer Satisfaction

Participation in Chemical Safety Management Initiatives in Japan and Overseas

UBE has been actively gathering and communicating the hazard information of our chemical products primarily by taking part in the ICCA*1 HPV Program*2 and the Japan Challenge Program.*3

Through the Japan Chemical Industry Association (JCIA), we also actively participate in and support the ICCA in its voluntary Long-range Research Initiative (LRI),*4 which focuses on the effects of chemical substances on human health and the environment. Since fiscal 2011, we have been participating in the Japan Initiative of Product Stewardship (JIPS)*5 promoted by the JCIA while promoting risk assessments based on the gathering and communication of hazard information.

Intellectual Property Initiatives

UBE promotes intellectual property-related activities using a "three-in-one" strategy that encompasses the Intellectual Property Department as well as the Company's R&D and business divisions. The purpose of this approach is to acquire patents that strengthen business operations, which are the source of UBE's competitiveness.

Guest Message

Kazuya Senda, Patent Attorney, Kisaragi Associates

Global Intellectual Property Strategies

In recent years, production bases and markets for products and services have expanded from economic zones centered on Europe and the United States to include the BRICs as well as Vietnam, Indonesia and the Philippines. This expansion has made devising intellectual property strategies more complicated. The selection of countries in which to acquire intellectual property is not based simply on markets and production sites, but must also include an examination of such factors as a country's approach to intellectual property, its judicial system and national character. This is definitely no easy task. Kisaragi Associates functions as an agent for the UBE Group, supporting its intellectual property acquisition activities not only in Japan but also in various foreign countries. Looking ahead, we will do our best to support worthwhile global intellectual property strategies that are stronger and more cost effective by rapidly incorporating information from various countries.

In order to raise awareness of intellectual property rights, we established the Intellectual Property and Information Solutions Committee and foster a corporate culture that values intellectual property. In addition, the Group appoints a manager in charge of patent acquisition in each product area while working to increase the skill level of its inventors by implementing various types of employee training.

The Group's efforts to encourage the development of global intellectual property are contributing to the sustainable growth of corporate value in this area.

UBE Engages in Purchasing Activities That Thoroughly Adhere to Its Purchasing Policies

Approach to Green Purchasing*6

In line with the Law on Promoting Green Purchasing, the UBE Group encourages its employees to choose eco-friendly products when purchasing stationery goods, copy paper, work uniforms and toner. We aim to increase the use of eco-friendly copy paper to 100%; UBE's percentage already stands at over 99%, exceeding the Group's target of 75%. In addition, vegetable oil-based ink has been used to print this CSR report on paper certified by the FSC.*7 Through these efforts, the UBE Group's green purchasing rate has improved to 70%, a 4% increase compared with fiscal 2010.

Measures Concerning CSR Procurement

The Group is introducing the CSR Procurement Initiative*8 in its three-year plan that began in fiscal 2010. The CSR Procurement Initiative establishes a set of criteria for deciding which suppliers to do business with based on the status of their CSR measures. In fiscal 2011, we surveyed suppliers to determine the current status of their CSR activities.

Basic Purchasing Policies

Fair and Unbiased Transactions

We are committed to treating our suppliers in a fair and unbiased manner based on free competition and constantly search for opportunities to deal with new suppliers. We will cooperate with suppliers on a fair and equal footing and promote mutual understanding and relations of trust over a long-term basis.

Objective Selection of Suppliers

We will choose suppliers from the viewpoint of economic rationality by comprehensively examining their quality, prices, and delivery schedules.

Compliance with Laws and Regulations, and Confidentiality

We will comply with all related laws and regulations and with social norms, and we will protect all the confidential information obtained in our purchasing activities.

Green Procurement and Purchasing

We will choose environment-friendly products in our purchasing activities.

Glossary

*1. ICCA: International Council of Chemical Associations

*2. HPV Program: International safety management activities that involve gathering information on and evaluating the hazards of High Production Volume Chemicals. The HPV Program is being actively promoted by the OECD and ICCA.

*3. Japan Challenge Program: Chemical safety inspection program that gathers information on the safety of existing chemical substances in Japan through industry-government collaboration and disseminates that information throughout Japan and the rest of the world.

*4. Long-range Research Initiative (LRI): Long-term voluntary research promoted by the ICCA and JCIA

*5. Japan Initiative of Product Stewardship (JIPS): Voluntary risk management of chemical substances promoted by the JCIA

*6. Green purchasing: To purchase products and services that have minimal environmental impact from suppliers who are committed to reducing their environmental impact, considering not only the quality and price of the products, but also the environment.

*7. FSC: Forest Stewardship Council

*8. CSR Procurement Initiative: The procurement of goods and other items using a set of criteria based on the status of a company's CSR measures.

Internal Communication

With the aim of improving its CSR, the UBE Group encourages internal communication. We convene corporate briefings for corporate officers and managers as well as roundtable meetings for corporate officers and employees. The casual exchange of opinions among participants is a characteristic of these gatherings. In addition, the Group utilizes its intranet, internal publications and other forms of communication to deepen mutual understanding. Such efforts foster the development of a sense of unity within the Company and increase employee morale.

Communication with Local Communities, Society, Government and Individual Organizations

● Responsible Care (RC) Regional Dialogue Meetings

The local member companies of the Japan Chemical Industry Association (JCIA) RC Committee (formerly known as the Japan Responsible Care Council (JRCC)) hold RC Regional Dialogue meetings every two years as well as other types of RC Dialogue meetings annually with the purpose of building relationships of trust with local residents. The member companies of the JCIA RC Committee held the 8th RC Regional Dialogue meetings in the Yamaguchi western district in November 2011 and in the Sakai/Senboku district in February 2012.

In February 2012, they held the 9th annual RC Dialogue meeting in the Ube district. Following a plant tour and an explanation of RC activities undertaken in the last year, Ube City presented a summary of the types of complaints received and other issues. The group discussions that followed focused mainly on chemical substance management and odor pollution.

● Tours of Local Industrial Facilities

The UBE Group participated in tours of local industrial facilities entitled, "Social Tours for Grownups" in fiscal 2011. These tours are conducted by a local council established to promote industrial tourism in the cities of Ube, Mine and Sanyoonoda. Various tours were undertaken at UBE Group facilities, with 1,349 people participating. Such activities included a tour showcasing the production and history of cement (Isa Cement Factory and highlighting roads used exclusively by UBE); a tour highlighting the Okinoyama Coal Center and its founder Sukesaku Watanabe (UBE-i-Plaza, Ube Machinery Corporation, Ltd.); a tour of the Ube Cement Factory and Ube Steel Co., Ltd.'s recycling facilities in Ube City; exhibits of Mine City limestone in Ube City (Ube Material Industries, Ltd.); and a tour showcasing energy use and Sanyoonoda City's operations (Okinoyama Coal Center).

● Participation in Local Events

In October 2011, the Chiba Petrochemical Factory participated in the Joso Ichihara Kokufu Festival, while the Group employees in the Chiba district held the Fourth Annual UBE Friendship Festival in November 2011. In addition, the Factory provided bubble wrap to Iwaki City, Fukushima Prefecture, for cold-proofing temporary housing used by disaster victims.

The Ube Chemical Factory held the "The Sixth Chemical Summer Festival" in August 2011, in which as many as 2,600 people participated. Each UBE Group company displayed exhibits at the Yamaguchi Ikiiki Eco Fair held in September 2011. This fair was part of Kirara Product and Exchange Fair 2011, the largest event of its kind held in Yamaguchi Prefecture. In November 2011, employees and their families from 13 Group companies participated in the 60th Ube Festival.

● Business Facility Tours

We invite various stakeholders, beginning with nearby schools, to tour our business facilities. In fiscal 2011, the number of people participating in tours at the Company's comprehensive information center, UBE-i-Plaza, reached 7,000. In June 2011, the Chiba Petrochemical Factory held a facility tour for 62 local high school and university students. In August 2011, the Sakai Factory held a training course for Sakai City teachers, giving them an opportunity to gain hands-on experience at its separation membrane manufacturing facility as well as to exchange opinions with employees. The Sakai Factory also held facility tours in September 2011 and February 2012 for 125 students attending two nearby technical high schools.

● Volunteering in Afforestation and Flower Campaigns

In December 2011, the UBE Group participated in the Fourth Forest Creation Experiential Activity for Water Conservation, sponsored by the Mine City Office of Yamaguchi Prefecture's Agriculture, Forestry & Fisheries Department, with 81 employees taking part in the pruning, thinning and planting of Japanese cedars.

Employees also voluntarily plant flowers within the premises of UBE Group sites. In fiscal 2011, the Ube Chemical Factory once again competed in flowerbed contests held by Ube City, winning the outstanding performance award in the best-performing organization category. In addition, the Ube Chemical Factory won the Ube City Mayor's and Idea awards in the spring and the Ube Chamber of Commerce Award fall of that year.

9th Dialogue meeting in Ube

"The Sixth Chemical Summer Festival"

Training course held for Sakai City teachers

Human Rights and Labor

Basic Policies

- To respect the human rights of people who are affected by the Group's corporate activities
- To respect the human rights of employees, including those of partner companies

Fundamental Philosophy

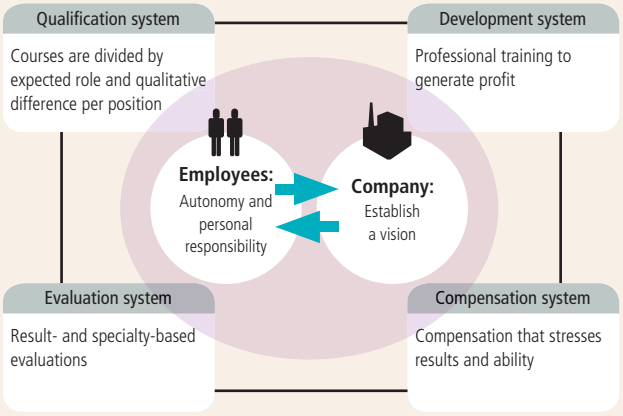
Respect for Human Rights

In its Action Guidelines for Business Conduct, the UBE Group will respect human rights and develop healthy, bright and motivating workplaces. We regard respect for human rights as a fundamental rule guiding the corporate activities of the UBE Group.

Ideal Personnel

The UBE Group gives top priority to human resources among its management assets, and it is committed to developing highly skilled professionals who can act independently and produce results. The basic image that the UBE Group promotes for individual employees is that of someone who has unparalleled skills, sets their own goals, works independently and takes on new challenges while being unafraid of change.

The Interconnecting Aims of Each System



Personnel System

UBE has introduced an evaluation system that incorporates a goal management system and a performance-based component. By organically linking the development, evaluation, qualification and compensation systems, and impartially evaluating individual efforts, UBE seeks to create a workplace that is challenging and motivating for every employee.

Human Resource Development

Initiatives

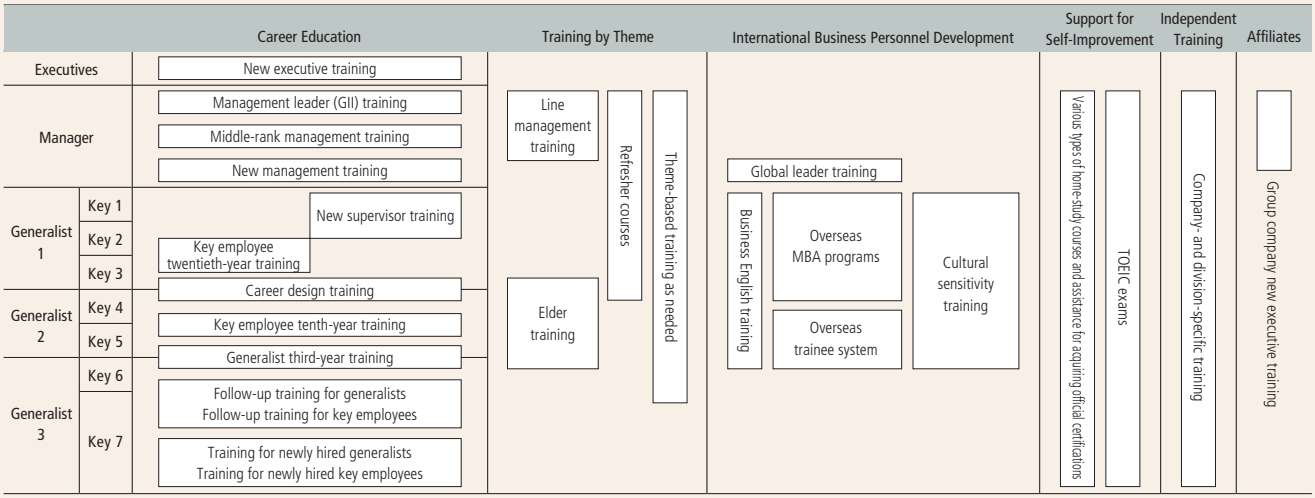
In order to develop superior human resources, we must enhance development in the following key areas: 1) On-the-Job Training (OJT); 2) Instructor-Led Training (Off-the-Job Training); and 3) Self Improvement Support Programs. At the same time, for career development, we have instituted a support system so that all UBE employees can fully exercise their abilities in carrying out their work. Under this system, employees prepare "Career Development Sheets" and "Employee Development Plan Reports," opportunities are provided for interviews with their superiors and, when necessary, the employees are rotated to enable them to gain a broad perspective and learn specialized skills.

Strengthening Global Human Resources Development

Given that the proportion of overseas business development is expected to steadily increase, training and retaining employees who can perform on the global stage has become an issue for the UBE Group. Starting in fiscal 2011, we have been taking steps to further enhance our global human resources development system through such measures as strengthening employee awareness of globalization, expanding opportunities to gain overseas experience, and establishing and revamping individual global training programs.

In addition, human resources managers from Thailand, Spain and Japan gather at the Group's Global Human Resources Meeting to exchange opinions on human resources development and personnel systems in each country. In fiscal 2011, the Global Human Resources Meeting was held in Spain. Looking ahead, the Group will continue to hold the Global Human Resources Meeting on a yearly basis and promote initiatives to address globalization in the area of personnel.

Training System Overview



*Key: Key employee

● Environment and Safety Education

We provide employees with practical education on the environment and safety and encourage all employees to acquire necessary knowledge, practical skills and relevant qualifications, such as the public certification required for the operation of equipment in factories.

In addition, we have incorporated mental health education into career education courses (training for new managers, etc.) to ensure that employees receive appropriate training according to their particular circumstances. We have also included the elements of environmental impact assessment in our in-house documents that are circulated for managerial decision making on capital investment and in written proposals submitted for improvement activities to be conducted within the organization, aiming to raise the environmental awareness of all employees.

Diversification of Employment

UBE recruits and employs personnel from a wide array of fields regardless of gender or social background. Each UBE employee is able to fully exercise his/her abilities to make a useful contribution to the Group's various work settings.

● Reemployment System

In fiscal 2006, the UBE Group introduced a reemployment system for retired workers mainly to assist in employee training by passing down their skills and knowledge to the next generation. The reemployment period is set at one year and can be extended each year. In fiscal 2011, we reemployed about 86% of those who retired that year.

Further Strengthening UBE's Global Human Resources Development System

Below is an introduction of UBE's global leader training program, one initiative aimed at enhancing UBE's global human development system.

● Developing personnel who can perform effectively on the global stage

Creating opportunities for systematically learning the mindset and skills needed for performing leadership roles in the global business environment is indispensable. In terms of future overseas business expansion, the systematic cultivation of global business leaders has become essential. For this reason, we established this global leader training program in fiscal 2011 with the aim of developing globally oriented business leaders. In the first year of the program, 24 young, managerial-level employees recommended from throughout the Company participated in training sessions that lasted for approximately four months.

● About UBE's Global Leader Training Program

The training program was developed based on three pillars: e-learning, workshops and team projects involving small groups. E-learning encompasses four themes: basic knowledge of business administration, marketing, accounting and human resources management. Participants are able to listen to lectures given by notable instructors on each of these themes over the Internet. Guided by facilitators, participants take part in online discussions centering on weekly topics that help solidify the knowledge they have gained.

Workshops are held in sets of three every few days and consist of high-impact classes given by an American instructor and action learning-based lessons. Through these activities, participants build stronger leadership and communication skills as well as more effective presentation methods.

Team projects involve each group setting research themes and conducting research over the four-month training period. On the final day of the program, research results are presented to company managers.

● Looking Ahead

The fiscal 2011 training session participants were all Japanese. In fiscal 2012, however, we will include 10 non-Japanese managers working for overseas UBE Group companies. In so doing, we expect to forge even stronger global ties among UBE Group employees.

Scenes from the workshops

Employment of People with Work Experience

The UBE Group proactively focuses on hiring mid-career workers who have expertise and knowledge in technological areas in which the Group's human resources are insufficient. After entering the Group, these mid-career workers exercise their abilities by using the experience gained at their former workplaces.

Hiring Foreigners

With globalization continuing to increase, UBE Head Office and facilities in Japan need to become more international. Accordingly, we will expand personnel exchanges with the Group's non-Japanese employees based overseas and actively hire foreigners in Japan in order to provide opportunities for employees to use their experience with different values and cultures.

Employment of People with Disabilities

The UBE Group actively undertakes measures to promote the employment of people with disabilities. We organized a network to support the employment of people with disabilities Groupwide. To this end, the Group leverages relevant expertise accumulated by our special-purpose subsidiary, Libertas Ube, Ltd.

UBE's Employment Status

FY		2009	2010	2011
New graduates		143	87	136
	New graduates deployed as generalists	56	38	50
Mid-career employees		13	64	38
Percentage of people with disabilities (annual average (%))		2.15	2.12	2.02
Percentage of reemployment		71	81	86

Quality Working Environments

In order to enable employees to fully display their abilities, the Group promotes comfortable working environments that maintain a good work-life balance while accommodating a variety of different work styles.

Respect for Human Rights at Workplaces

We have established the Human Rights Education Promotion Committee, which provides human rights education to employees, including training for company officers, training separated by workplace and rank, and external training courses. We implement Groupwide training programs via e-learning to ensure that all employees have a proper understanding of and fully recognize human rights issues. Such initiatives help ensure comfortable work environments where employees respect and work comfortably with each other.

Work-Life Balance

Childcare and Nursing Care Leaves

To maintain a good balance between employees' work and private lives, UBE has introduced a childcare and nursing leave system. In addition, depending on how much time they require to take care of their children or other family members, employees can work shorter or flextime hours as well as take time off or limit the number of overtime hours worked.

In accordance with the Law for Measures to Support the Development of the Next Generation, we raised the following three initiatives under our three-year medium-term action plan from fiscal 2010 onward: 1) Expand systems that promote shorter working hours to facilitate child rearing; 2) Increase childcare leave; and 3) Encourage male employees to take childcare leave. We began gradually implementing these initiatives in fiscal 2011.

Incentives for Taking Annual Paid Vacations

As an incentive for getting employees to systematically take annual paid vacations, not only do we ask employees to set scheduled vacation dates in advance for every six-month period, but we also take steps to reduce actual working hours by setting an annual paid vacation incentive day.

Flexible Working Systems

We have introduced flextime, self-managed work* and other systems to enable employees to work in a flexible and efficient manner. We are also committed to appropriately managing employees' working hours. For example, we demand that departments with long overtime work hours implement measures to reduce these hours and arrange consultations between employees and industrial doctors.

* Self-managed work: A system that entrusts employees to voluntarily make decisions regarding how to undertake their duties and the allocation of work time in order to achieve work-related goals.

Leave for Volunteer Activities

The Group has established a system that enables UBE employees to use accumulated leave time for volunteer activities that contribute to society or local communities.

Relationship with the Labor Union

UBE has been maintaining a favorable labor-management relationship based on a collective labor agreement concluded with its labor union. The two parties exchange opinions frankly and discuss matters at various labor-management meetings attended by top management, which helps management raise employees' awareness of its policies and plans and helps the labor union members have their opinions reflected in the corporate management policies.

Staff Message

Lei Xue, Electric Power Control Group, Facility Management Department, Ube Chemical Factory

Gaining the Power to Move Forward Thanks to Everyone's Support

When I first starting working for UBE in 2011, I was very worried about the language barrier and cultural differences. I had absolutely no business experience in Japan, but everyone took an active role in helping me perform my duties smoothly and quickly get up to speed at work. At the same time, they all treated me with kindness. My colleagues would often say "you can do it" and other words of encouragement. This helped me to overcome my fears.

Actively participating in cultural and sporting events has given me opportunities to communicate with other employees. As a result, I have learned about how Japanese companies function and their values as well as appropriate Japanese business language and manners. Since being hired, I have felt that UBE's corporate culture encourages employees to work together as a team to attain goals. I have taken the UBE corporate culture to heart and am committed to moving forward in my career. I want to contribute to UBE's business expansion in China and other overseas markets in the years ahead.

Developing a Comfortable Workplace and Undertaking Initiatives to Maintain Employee Health

Meet and Greet Campaign

We implement the Meet and Greet Campaign throughout the Group to foster employee mental health and comfortable workplaces. Through this campaign, we are encouraging all employees to exchange words of greeting and encouragement as a way of promoting better communications at the workplace. In fiscal 2011, the Meet and Greet Campaign was undertaken throughout the Group.

Mental Health Care

The UBE Group works to increase the mental health of its employees by ensuring that all workplaces have industrial physicians, nurses and other health specialists available. We conducted mental health training sessions focusing on self care and line care for new employees, mid-level non-managers, new managers and mid-level managers in fiscal 2011. In addition, we are working with personnel departments to enhance programs that help employees return to work and are holding mental health presentations with outside lecturers while conducting related training at Group companies.

Measures Concerning the Elderly

We implement health education to encourage older employees to live in a healthy manner well into retirement. As part of these efforts, we offer exercise related guidance at each factory in order to prevent occupational accidents caused by employees being in poor physical condition.

Measures to Counter Lifestyle-Related Diseases

In fiscal 2011, efforts to provide instruction on improving lifestyle habits—based on the Ministry of Health, Labour and Welfare's specified health checkups and specified health guidance measures—have yielded beneficial results for a significant number of employees. Physicians from Ube Industries Central Hospital held lectures on heart disease as part of the hospital's Health Lecture series.

In addition, we are raising employee awareness about the importance of good dietary habits with the help of nationally registered dietitians. In fiscal 2011, the Group further improved the healthfulness of meals it serves to employees at canteens Groupwide.

Doctor's Visits at Overseas Bases

Industrial physicians and health nurses visit and perform health examinations at the Group's overseas bases in order to help preserve the health of Japanese employees and their families. This initiative was implemented in Thailand, Singapore, China and Hong Kong in fiscal 2011.

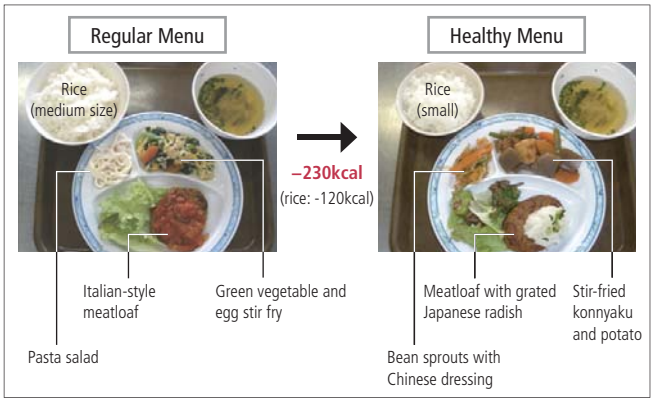
Participating in Blood Drives

UBE Group employees help give back to the local community by actively participating in blood drives. In fiscal 2011, we called upon employees to cooperate with blood drives held at Group offices and facilities.

A health check conducted at an overseas base in Thailand

The Meet and Greet Campaign at Ube Steel Co., Ltd.

An outside lecturer giving a presentation on mental health



Chiba Petrochemical Factory healthy menu

Staff Message

Ichiro Karamatsu, Manager, Health Care & Support Center, General Affairs & Human Resources Office

Protecting Employee Health by Valuing Relationships with People

UBE's Health Management concept—"The UBE Group recognizes that maintaining and promoting the health of its employees is the basis of corporate and social vitality"—constitutes part of the UBE Group Environmental and Safety Principles. In keeping with this concept, I believe that employees working in physically, mentally and socially healthy conditions constitute a foundation for sustainable business activities and are a vital element for improving corporate value. In reality, however, there are employees on leave due to mental health problems, while lifestyle-related diseases along with the risks associated with brain and heart illnesses caused by long-work hours are on the rise. The Health Care & Support Center supports the health of UBE Group employees in line with the keywords, "independent health preservation" and "safety awareness." Valuing relationships with people, we will continue working to protect the physical and mental health of employees.

Social Contribution

Basic Policies
- To conduct social contribution activities toward the creation of a sound and sustainable society

Support of Culture and Art

The UBE Foundation

The UBE Foundation (Director: Hiroaki Tamura) was established in 1959 as the Watanabe Memorial Science Foundation at the bequest of the late Takaji Watanabe, the founding chairman of UBE. The Watanabe Memorial Science Foundation was renamed the UBE Foundation in 1998. In September 2010, the UBE Foundation was certified as an organization operating in the common interest by the Japanese Cabinet Office and registered as a foundation incorporated in the public interest in October 2010. In Japan, the Foundation aims to promote academic research activities, improve research facilities and assist academic researchers in their activities in order to contribute to the future development of academic culture.

In fiscal 2011, the Ube Foundation Grant was awarded to 10 recipients from a total number of 95 applicants. At an award ceremony held in May 2012, Associate Professor Yoshiaki Nishibayashi of The University of Tokyo's School of Engineering gave the keynote address entitled: "Tomorrow's Chemistry: Ammonia Synthesis Beyond the Haber–Bosch Process.

Watanabe Memorial Culture Association

Established in 1936 as a private bequest of the late Sukesaku Watanabe, the founder of UBE, the Watanabe Memorial Culture Association (Director, Hiroaki Tamura) was founded to support a variety of cultural and art-related activities that include lectures and concerts. These efforts are undertaken with the aim of enhancing the well-being of Ube City residents and cultivating local culture. In December 2011, UBE provided grants to the Ube City Folk Orchestra and the Ube Music Appreciation Society in order to contribute to the cultural development of the Ube area. We donated ¥500,000 to both the Watanabe Memorial Book Collection within the Ube City Library and the Watanabe Memorial Culture Association Picture Book Collection in January 2012. Owing to the establishment of the Watanabe Memorial Book Collection in the Ube City Library in 1953, the Watanabe Memorial Culture Association Picture Book Collection exceeds 2,000 volumes, primarily in the field of art. Moreover, the Picture Book Collection for kindergartens and child-care centers contains 2,252 volumes. In March 2012, Ube donated sponsorship funds to the Ube Citizen Educational Lecture program.

The Ube Foundation's research grant presentation ceremony

Ube donated sponsorship funds to the Ube Citizen Educational Lecture program

Social Capital That Revitalizes Local Communities

In line with its corporate philosophy, "living and prospering together," the UBE Group has been investing since its foundation in the creation of numerous forms of local infrastructure with a desire to develop Ube City. This includes sewer systems, dams, electricity, schools, railroads, airports and TV stations. The Group currently operates a hospital, golf course and hotel as part of its efforts to make the kind of social contributions required for the advancement of the local community.

Ube Industries Central Hospital

Ube Industries Central Hospital actively accepts junior high school students to participate in its work experience program, providing them with the opportunity to learn the importance of work and a chance to consider their future career goals. In fiscal 2011, a total of eight students (two students each from four junior schools) gained first-hand work experience in a medical setting. Over a period of two days, students gained a wide array of experience, ranging from helping patients bathe to sweeping floors. The students were also given the opportunity to measure blood pressure, a regular nursing duty. In addition, students aiming to become physicians had a chance to examine the overall condition of patients using a stethoscope in the presence of a doctor. The students were impressed by the hospital staff, expressing such comments as, "I definitely want to work as a nurse in the future," and "this experience has strengthened my resolve to become a doctor." Through this program, Ube Industries Central Hospital is working to educate children, who are our future.

URL:www.ube.co.jp/hospital

Ube 72 Country Club

Since opening the Ajisu Golf Course in October 1961, the Ube 72 Country Club has become well known in the local community. Ube 72 Country Club held a golf tournament and a gala banquet in November 2011 to celebrate the 50th anniversary of its establishment.

URL:www.ube.co.jp/ucc

ANA CROWNE PLAZA UBE

Since opening its doors in 1983 as an upscale urban hotel representing Yamaguchi Prefecture, the ANA Hotel UBE has been popular with members of the local community as a place not only of lodging, but for enjoying fine dining and holding wedding receptions, conferences and other activities. On December 1, 2011, the ANA Hotel UBE was reborn as the ANA CROWNE PLAZA UBE.

URL:www.anacrowneplaza-ube.jp

Charity Concert Held by the Japan Philharmonic Orchestra

Based on the philosophy of "living and prospering together," Ube Industries has been inviting the Japan Philharmonic Orchestra to perform in Ube City since 2008. With the purpose of contributing to the enrichment of local culture through music, we held the fourth UBE Group Charity Concert featuring the Japan Philharmonic Orchestra in September 2011. The day before their performance, members of the Japan Philharmonic Orchestra participated in a "hands on concert" held by the Watanabe Memorial Culture Association for patients admitted to Ube Industries Central Hospital and the Yamaguchi University Hospital. They also held a music clinic for Ube City junior high school student brass bands. A joint concert between the students and the Orchestra members was performed after the clinic.

The proceeds from the fourth UBE Group Charity Concert were donated to help fund recovery efforts following the Great East Japan Earthquake as well as to the local community and schools at a presentation ceremony held in November 2011. In addition, five municipal junior high schools in Ube City were each given a horn, while the Ube City Folk Orchestra and the Ube Music Appreciation Society received monetary donations in December.

Cooperating with the Making of Three HAYABUSA Movies

UBE provided *Thermal Blanket*, the material used on the actual HAYABUSA asteroid explorer, for the making of three movies about the HAYABUSA. These movies were released in sequence starting in October 2011.

- October 2011 release: *HAYABUSA* (20th Century Fox)
- February 2012 release: *HAYABUSA: Harukanaru kikan* (Toei Company, Ltd.)
- March 2012 release: *Okaeri, HAYABUSA* (Shochiku Co., Ltd.)

In June 2011, a PR event was held for the movie, *HAYABUSA*, which was attended by the Japanese actress Yuko Takeuchi and the rest of the cast. A sample of *Thermal Blanket* provided by UBE used during the making of the film was exhibited at the information center HAYABUSA i, which specially opened between June and October 2011. In addition, UBE was introduced as the company that provided *Thermal Blanket* during a PR event held in November for *HAYABUSA: Harukanaru kikan*.

Education and Social Contributions

Chemistry Experiment Events for Children

Every year, UBE invites schoolchildren to attend chemistry experiment programs. The purpose of such activities is to help children experience the fascinating world of chemistry by introducing them to UBE's advanced technologies.

In fiscal 2011, UBE's Organic Chemistry Research Laboratory conducted fun experiments in Ube City in a project that had the children recreate firefly light in test tubes in order to learn about catalysts and DNA. In Tokyo, the Organic Specialty Materials Research Laboratory and the Electronic Components & Materials Business Unit gave children the opportunity to enjoy creating their own original bookmarks using high-performance plastics (polyimide).

At Tsukuba Science Edge 2012, an event held at the Tsukuba International Congress Center in March 2012 for junior and senior high school students, the Aerospace Materials Business Group provided an opportunity for participants to conduct experiments using its thermally resistant materials to learn about how satellites are designed to withstand heat.

Internships

As part of its CSR activities, UBE undertakes internships for graduate, technical college and high school students. In fiscal 2011, we accepted 15 interns from seven technical colleges and universities located in the Chugoku and Kyushu regions. These interns were given the opportunity to receive practical training for five days at Ube Chemical Factory, Ube Cement Factory and the UBE Industries Power Generation Plant, all of which are located in the Ube district. The Chiba Petrochemical Factory and Sakai Factory accept interns mainly from local schools.

In addition, an Ube area laboratory accepted two graduate students for internships that extended from two weeks to several months. These internships focused on specific research themes.





1. Charity Concert
2. Opening ceremony for the movie *HAYABUSA*
3. 23rd Summer Holiday Junior Science Lesson (Ube)
4. Dream/Chemistry-21 Children's Chemistry Experiment Show (Tokyo)
5. Tsukuba Science Edge 2012

Initiatives in Singapore

The UBE Group began participating in volunteer activities sponsored by The Japanese Association, Singapore, in February 2011. These volunteer activities involve conducting musical exercise and foot massage sessions at the rehabilitation centers of area general hospitals. With all employees, including local staff, participating in these activities on a weekly basis, we are deepening our interactions with hospital patients and elderly members of the local community. As the first company to participate in volunteer activities sponsored by The Japanese Association, Singapore, the UBE Group is playing a role in contributing to the local community.

Initiatives in the United States

The UBE Group's U.S.-based subsidiary, UBE America Inc. participates in the Japanese Firms Association of Colorado (JFA) through its branch office located in Denver, Colorado. The JFA operates the Japanese Supplementary School to help maintain the Japanese language skills of expatriate Japanese children and is dedicated to promoting exchanges between businesses based in the area, offering business support and actively initiating interactions with the local community. As part of its efforts to promote exchanges with local communities, the JFA has been planting cherry trees in parks run by the city annually since 2007 in cooperation with the city of Denver. In 2011, the JFA along with local residents planted 50 cherry trees. UBE America served as the chair of the Japanese Supplementary School for a four-year term. During that time, UBE America actively participated in the drafting of anthologies as well as school events.

Initiatives in Spain

The three UBE Group companies in Spain (Controlling Company: Ube Corporation Europe, S.A. (UCE)) comply with the global Responsible Care (RC) initiative and actively expanded their communications with various stakeholders in 2011.

Social Contribution Activities

Through the Red Cross Society, UCE undertook such international contributions as providing monetary donations to assist areas stricken by the Great East Japan Earthquake and flooding in Thailand. In addition, we assisted education projects in developing countries sponsored by UNICEF Spain and provided economic support to local NGOs with the aim of creating education programs and assisting people with disabilities.

Sponsorship of Facility Tours

UCE held tours of its nylon R&D laboratory and factory for 150 high school students, 20 teachers and 60 university students majoring in chemistry. We also conducted factory tours for local government representatives and officials and in February 2012 hosted the Japanese Consul General residing in Barcelona.

Exchanges with High Schools and Universities

Continuing activities undertaken in 2010, in September 2011 UCE sponsored a recycling campaign held in cooperation with the Castellón provincial government, with approximately 1,000 people participating.

Also, in June 2011, UCE implemented a program for engineering and science teachers to observe the UBE Group's business operations. In December, UCE distributed sets of school supplies to six local elementary schools through a program sponsored by the Chemical Education Promotion Association with the purpose of increasing the study and awareness of practical chemistry.





❶ Voluntary activities at a rehabilitation center in Singapore
❷ Planting cherry trees in the United States
❸ Collecting monetary donations in Spain to assist regions stricken by the Great East Japan Earthquake
❹ A factory tour in Spain for students and teachers from Castellón University who are engaged in a plastic research course
❺ Sets of school supplies in Spain

Support for Sports and Cultural Activities

We continued to support volleyball, soccer, basketball and other sports clubs in 2011. In addition, we sponsored the Tarrega International Guitar Competition for the third consecutive year and participated in the Magdalena Festival, which is held in the city of Castellón de la Plana. We also gave our support to such events as a painting contest held for high school students, a local Science Olympics and a photography contest related to the Castellón Marathon.

Activities in Thailand

The UBE Group's bases in Thailand (UBE Chemicals (Asia) Public Co., Ltd., Thai Synthetic Rubbers Co., Ltd., UBE Fine Chemicals (Asia) Co., Ltd.) are actively promoting communication with local residents through multiple activities, based on the idea that the UBE Group is an integral part of the community. In September 2011, the Group received the Thai Ministry of Industry's CSR-DIW Continuous Award for the third time.

Supporting Flood Damage Repairs

In light of the unprecedented flood damage in Thailand, we took part in the filling of sandbags in October 2011. Together with local residents, members of the Royal Thai Navy and students, we filled and then sent 5,000 sandbags to two hospitals in flood-stricken areas. In addition to delivering approximately 1,000 bags of daily necessities to flood-ravaged areas, including water, non-perishable food, rice, mosquito repellant and analgesics, we donated rescue boats, portable toilets and other items.

The Thai UBE Group provided a total of 5 million baht worth of donations and other support via the Thai Ministry of the Interior, including ammonia sulfate fertilizers for flood-stricken areas.

Organization of the One-Day Summer Program

The One-Day Summer Program that we hold for local children—which has become an established custom—marked its 13th anniversary in fiscal 2011. Employees of the Thai UBE Group and local university students participate as instructors in the camp.

Open House and Factory Tours

In May 2011, we held an open house for the local community and a factory tour for government agencies at UBE's caprolactam plant in Thailand. The Thai UBE Group is promoting understanding of its advanced technologies by holding factory tours for high school and university students, giving them a chance to observe UBE's chemical production facilities.

Better Quality of Living

Promoting local community-based activities known as "Better Quality of Living," the Thai UBE Group promoted volunteer activities that help to revitalize the local community. The numerous projects we participate in and support include mobile public health clinics, regional cleanup projects, the Thai Government's Antinarcotics Program and employee volunteer clubs. In June 2011, we donated money to upgrade water and sewage systems used by the local community, enabling a further approximately 200 residents to make use of this system. In August, 400 people, including employees and local residents, planted 4,200 trees in areas adjacent to UBE's production facility.

Sports Promotion

In September 2011, the Thai UBE Group held a friendly soccer tournament involving an NGO, local residents and government agencies. In December, the Group co-hosted the Rayong Marathon as a corporate sponsor. Held for the 11th time, this event became a full marathon in 2011, with approximately 2,000 people participating.

1. Receiving the CSR-DIW Continuous Award in Thailand
2. Filling sandbags in flood-stricken areas in Thailand
3. Filling bags with daily necessities in Thailand
4. Members of the local community and the Thai Ministry of Industry attending a factory briefing session
5. Tree planting in Thailand

UBE Group Social Contribution Activities

Ube-Nitto Kasei Co., Ltd.

Manufacturing bases: Gifu Factory (Gifu City), Fukushima Factory (Kooriyama City)

Ensuring the Safety and Security of Local Communities through Environment-Friendly Business Activities

Author: Masatoshi Hirose, Manager, Environment and Safety Countermeasure Office

Ube-Nitto Kasei manufactures and sells products in a wide array of fields based on its proprietary plastic forming process technologies. We offer such electronic material-related products as materials for optical communication cables and liquid crystal display spacers as well as FRP products that have garnered favorable evaluations in the agricultural, fisheries, construction and civil engineering sectors. Consequently, we have attained a significant market share in many industries.

In January 2009, the Gifu Factory was registered as a Gifu Prefecture Environment-Friendly Business Facility (E Factory), a certification offered by Gifu Prefecture. The Gifu Factory also participates annually in the Gifu Energy Conservation Challenge Business Contest, an event sponsored by Gifu City. In fiscal 2010, we received high ratings and, in turn, a special award in the factory category for CO_2 emission reduction activities we have undertaken to date as well as the development of environment-friendly products, including the honeycomb-structure substrate: *TWIN CONE*, which is used as insulation panels, and *HIDEWRAP* thermal-barrier film for windows.

Ube-Nitto Kasei also actively promotes communication with local communities. This includes holding cherry blossom-viewing parties on factory sites for local residents; engaging in the cleanup of local rivers with local community members; making the Company baseball field available open for use by the public; opening up employee parking lots as regional resource-recycling collection sites; inviting local children to take factory tours; participating in local dialogue meetings; and cleaning up areas surrounding the factories.

Looking ahead, Ube-Nitto Kasei will continue promoting reductions in energy usage as well as improvements in waste material emissions and recycling. At the same time, we will deepen our connections with local communities. Through these activities, we aim to continue living and prospering together with local communities.

Cleaning up the Ronden River with local residents

Gifu Energy Conservation Challenge Business Contest Special Award

Conducting factory tours

Ube Material Industries, Ltd.

Manufacturing bases: Ube Factory (Ube City), Mine Factory (Mine City), Chiba Factory (Ichihara City)

Business Expansion into the Environmental Field

Author: Noriyuki Ito, Manager, General Affairs Department, Administrative Head Office

Ube Material Industries is a leading manufacturer of calcia-related products made from limestone, a raw material that is abundant in Japan. In addition, as the only company in Japan that manufactures and sells magnesia clinker (refractory raw material) derived from magnesium found in seawater, we offer a numerous selection of environment-friendly products. Developing such proprietary, high-value-added products as ultrahigh purity and superfine particle items, we have been concentrating on the production and sale of environmental-improvement materials in recent years. For example, we released *MGO KNIGHT* in April 2012 as a product that helps control the "heat island phenomenon" in urban areas during the summer (please refer to page 53).

We are promoting the three management pillars of "the environment," "safety" and "quality" at our factories. To continue improving in these areas, we are implementing such initiatives as factory inspections undertaken by the president and the establishment of an environment and safety committee. Through these initiatives, we aim to create workplaces that are more environment-friendly, safe and comfortable while achieving a higher level of quality.

We also make every effort to deepen our interactions with local communities. To this end, we enthusiastically volunteer in coastal cleanup activities and participate in such local events as the Ube Festival. In addition, we give back to society through sports, primarily by holding youth soccer tournaments, organizing basketball clinics and obtaining the naming rights for Ube City's Central Park tennis court. Looking ahead, we will strive to contribute to society and the environment in various fields by expanding beyond existing areas using the technologies we have cultivated to date.

A basketball clinic

Ube Material Industries' skincare cosmetic product *FRECERA* was chosen as the nickname for Ube City Central Park tennis court, and was written on the semi-dome roof entrance in April 2011.

Ube Material Industries' basic cosmetic product series

Initiatives for Environment and Safety

At the UBE Group, conserving the environment and protecting health and safety come first in its business operations. This emphasis is necessary in order to provide products and services that make people's lives better and to achieve solid and sustainable growth.

UBE Group Environmental and Safety Principles

As members of society, corporations must be fully conscious of their responsibilities regarding contributions to society, environmental preservation and the maintenance of health and safety in carrying out their corporate activities. The UBE Group shall pursue the following vision in order to fulfill its leadership role and shall work to improve the safety and the quality of the environment among all of its Group companies through the publication of performance reports and the implementation of dialogues with society.

• Operational Safety

Ensuring operational safety shall be the priority in all areas and activities under UBE's commitment to respect human life.

• Process Safety

Maintenance of process safety shall be part of its basic mission as a manufacturer.

• Environmental Preservation

As a responsible corporate citizen, the UBE Group shall act positively to protect and improve both community and regional conditions and work for the preservation of the global environment.

• Product Safety

The UBE Group shall pursue its corporate responsibility in providing its customers and the public with safe and reliable products.

• Health Management

The UBE Group recognizes that maintaining and promoting the health of its employees is the basis of corporate and social vitality.

Revised in April 2010

Michio Takeshita
President and Group CEO, Representative Director Michio Takeshita.

Environment and Safety Management

Environment and Safety Promotion System

The UBE Group has established the Group Environment and Safety Committee and the Group Product Safety Committee as the top decision-making organizational units for the promotion of "Environmental and Safety Principles." These committees—which consist of the members of the Group Strategic Management Committee and are chaired by the CEO—determine and review the Group-level policies and measures relating to the environment, occupational safety, health and product safety.

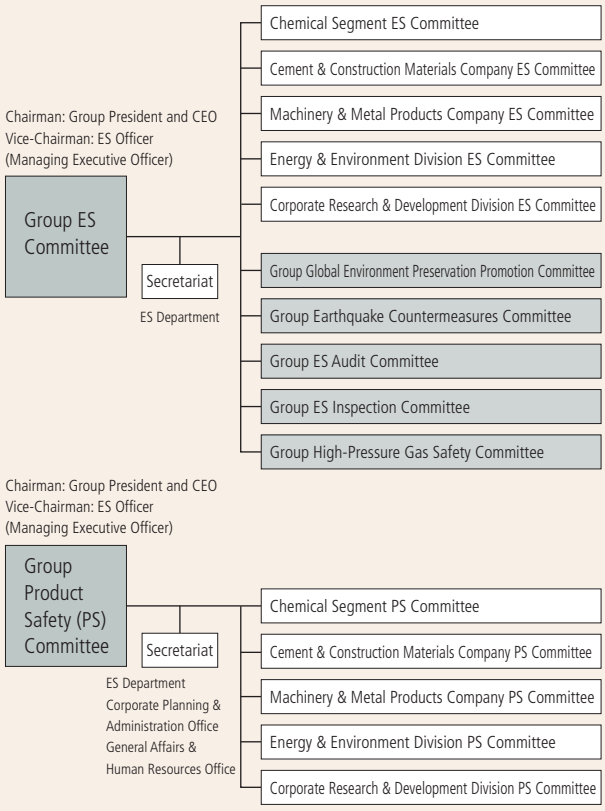
Both of these Group committees have established subcommittees for each segment. These subcommittees are involved in promoting measures for the environment, occupational safety and product safety that reflect the business activities of each segment. Besides such segment subcommittees, the Group Environment and Safety Committee has individual subcommittees with responsibility for five specific areas, and they discuss and review concrete action plans and prepare various related reports.

Responsible Care Management System

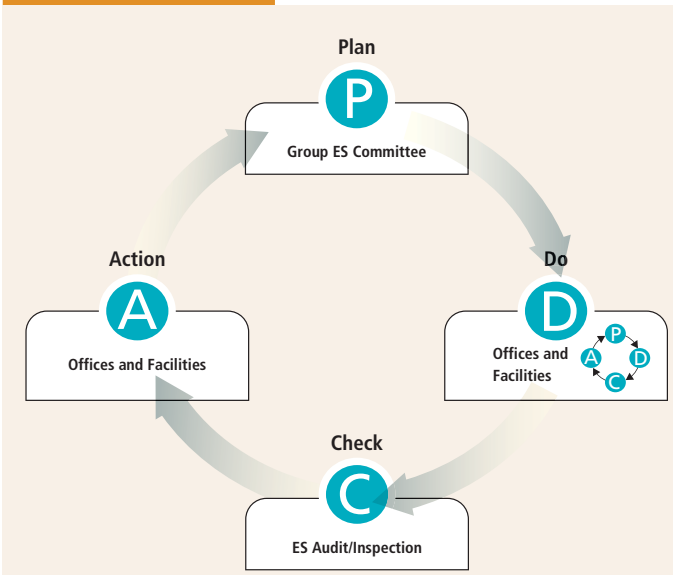
The UBE Group is expanding responsible care (RC)*1 not only in the Chemical Segment but also Cement & Construction Materials Company, Machinery & Metal Products Company and Energy & Environment Division. In addition, the Group is administering the Plan-Do-Check-Action (PDCA) management cycle to promote continuous improvements in the areas of the environment, safety and health.

Based on measures for the fiscal year established through deliberations and decisions made by the Group Environment and Safety Committee, each office and facility formulates action targets and schedules for its annual management plan, expanding them on a voluntary basis. The status of the plan's implementation is checked through an environment and safety audit, and each office and facility makes corrections as suggested. Audit and survey results are reported to the Environmental and Safety Department, the results of which are then reflected in the next fiscal year's measures. The same procedures are implemented with regard to quality and product safety.

Organization of Environment and Safety (ES) Committee



PDCA Management Cycle



Group Product Safety Committee

An environmental safety inspection at Ube Material Industries, Ltd. in Mine City

Glossary

*1. RC (responsible care): Under RC, corporations that manufacture and/or handle chemical substances work voluntarily to preserve "safety, health and the environment" throughout product life cycles, from the development of chemicals through their manufacture, distribution, use and final consumption to disposal. These commitments must be clearly reflected in the corporations' management policies. Activities are carried out in the areas of environmental protection (protect people's health and the natural environment worldwide); disaster prevention (work to prevent disasters at facilities and counter natural disasters); occupational safety and health (ensure the safety and health of workers); chemicals and product safety (clarify chemical products' properties and handling methods and thereby protect the safety and health of all handlers, including customers, while preserving the environment); and logistics safety (strive to prevent logistics-related accidents and disasters). Pursuant to these activities, communication in these areas is undertaken (announce activity details and results and promote social dialogue).

Outline of Environment and Safety Activities

The UBE Group improves PDCA cycle-related activities each fiscal year to promote its Medium-Term Environmental & Safety Policy in line with its Responsible Care Code.

Fiscal 2011 evaluation: Targets and plans were achieved/mostly achieved in all categories.

The UBE Group's Medium-Term Environmental & Safety Policy (Fiscal 2010–2012)

Continuously improving the quality of responsible care (RC) activities

Responsible Care Code	Medium- to Long-Term Targets and Plans/Measures for Fiscal 2011	
Management Systems	1. Deepen management systems Changed Head Office audits and inspections from once per year to once every two years. These activities are supplemented by division audits and inspections, which promote division autonomy and deepen management systems (streamline audits and inspections). 2. Strictly maintain compliance and promote proper understanding of laws and regulations among business facility managers 3. Share environmental and safety information	
Environmental Preservation	1. Promote measures to prevent global warming <Greenhouse gas reduction (fiscal 2015 target)> 1-1. [Energy-oriented] CO_2 emissions: Down 15% compared with the fiscal 1990 level 1-2. [Energy-oriented + Non-energy-oriented (excluding waste-oriented)] CO_2 emissions: Down 20% compared with the fiscal 1990 level <Greenhouse gas reduction (initiatives to be taken until fiscal 2012)> 1-3. [Energy-oriented] CO_2 emissions: Down approximately 270,000 tons (Initial target: Reduction of approximately 180,000 tons) 1-4. Monitoring of CO_2 emissions at offices and factories by the GHG*1 management system 1-5. Quantitative assessment of the UBE Group products' CO_2 reduction effects from the c-LCA*2 viewpoint 2. Reduce environmentally hazardous substances emissions 2-1. Voluntarily reduced emissions of 12 chemical substances (Fiscal 2012 target): Down 70% compared with the fiscal 2000 level 2-2. Reduce the amount of industrial waste for final disposal externally (Fiscal 2012 target): Down 80% compared with the fiscal 2000 level 3. Promote green purchasing*3 4. Undertake measures to preserve biodiversity	
Process Safety and Disaster Prevention	1. Reduce facility accidents 1-1. Develop and operate mechanisms that laterally disseminate information on facility-related accidents and prevention (examples) in an effective manner 1-2. Undertake measures reflecting deterioration and importance levels 1-3. Systematically implement infrastructure-related earthquake countermeasures	
Occupational Safety and Health	<Health management> 1. Curb non-occupational injuries and illnesses 2. Respond to regular health check results <Occupational safety> 1. Eliminate occupational accidents 1-1. Promote zero accident activities by forming small groups for safety and evaluate the result 1-2. Autonomous operations of Group companies and subcontractors 1-3. Strengthen on-site capabilities (knowledge and experience)	
Chemicals and Product Safety	1. Promotion of REACH*4 registration work 1-1. Establishment of cooperation organization encompassing Japan, the EU and Thailand, supply chain management, promotion of product registration 2. Compilation/revision of GHS*5 SDS*6 and labels in Japan and outside Japan 3. Compliance with chemical product control laws in Japan and outside Japan 4. Strengthening of quality loss cost management 5. Promotion of green procurement*7	
Transportation Safety	1. Secure transportation safety 1-1. Maintenance/revision of Yellow Card, Container Yellow Card*8 and Transportation Label	
Dialogue with Communities	1. Promote dialogue with communities 2. Improve information disclosure and transparency	

Glossary

*1. GHG: Greenhouse gas—CO_2, CH_4, N_2O, HFC, PFC and SF_6—specified in the Kyoto Protocol

*2. c-LCA: carbon life cycle analysis is a method for assessing the volume of CO_2 emissions over a product life cycle and includes the total amount of CO_2 emitted during raw material procurement, manufacturing, distribution, utilization and disposal

*3. Green purchasing: To purchase products and services that have minimal environmental impact from suppliers who are committed to reducing their environmental impact, considering not only the quality and price of the products, but also the environment.

*4. REACH: Regulation covering chemical substances enforced in the EU in June 2007 (REACH stands for Registration, Evaluation, Authorisation and Registration of Chemicals)

*5. GHS: Globally Harmonized System of Classification and Labeling of Chemicals, a universally standardized hazardous chemical classification system used in preparing SDS and container labels

*6. SDS: Safety Data Sheet, documentation containing the product name, physicochemical properties, hazard and toxicity information, usage, and related laws and regulations

*7. Green procurement: Procurement of materials conducted by companies based on their individual safety and environmental criteria established to meet the requirements of relevant legal regulations, including the EU RoHS Directive that restricts the use of certain hazardous substances in electrical and electronic equipment

*8. Yellow Card: A warning label that includes an emergency response guideline number and UN number, used in case of an accident under conditions where other information formats would be impractical because of mixed loading or small-order transportation

*9. BCP: Business Continuity Plan, an action plan for minimizing the suspension of business in the event of a disaster and recovering operations as early as possible to ensure business continuity

*10. OSHMS: Occupational Safety & Health Management System

	Fiscal 2011 Activity Report	Pages Included
	1-1. Head Office and divisions conducted environment and safety audits of 19 facilities and Group companies (21 facilities and Group companies in fiscal 2010) 1-2. Conducted quality/product safety audits of 11 facilities and Group companies 1-3. Conducted audits of industrial waste haulers and disposal contractors 2. Promoted understanding of regulations by disseminating external information and references 3. Revised and drafted new rules as needed in accordance with legal amendments	34
	1-1. Reduced 15% compared with the fiscal 1990 level 1-2. Reduced 20% compared with the fiscal 1990 level 1-3. Reduced CO_2 emissions approximately 200 thousand tons (reflecting the implementation of planned measures) in fiscal 2011, included within a 270 thousand-ton CO_2 emission reduction plan, which is underpinned by investment in energy-saving equipment 1-4. Ascertained the status of energy consumption and CO_2 emissions volume over the medium- to long-term through the GHG management system 1-5. Ascertained the volume of CO_2 emitted by supply chains in all business activities	39, 40
	2-1. Reduced 77% compared with the fiscal 2000 level	42
	2-2. Reduced 26% compared with the fiscal 2000 level	46
	3. The UBE Group's green purchasing rate: 70%	22
	4. Ascertained the impact of preserving biodiversity through business activities and participated in forest protection initiatives	41
	1-1. Investigated the development of mechanisms to obtain feedback on design and facility management 1-2. Conducted management status surveys on pipe corrosion and deterioration 1-3. Revised earthquake/tsunami damage projections, evacuation manuals and other related documents based on the impact of the Great East Japan Earthquake. Carried out BCP*9 earthquake response drills in Tokyo and Ube in anticipation of an earthquake occurring directly below the Tokyo metropolitan area.	48
	1. Undertook activities related to measures for mental health 2. Undertook activities related to the utilization health risk classifications, measures for lifestyle-related diseases, the elderly and overwork by making use of health check results	27
	1-1. Formed small groups at each factory for safety and continued undertaking initiatives to realize zero accidents 1-2. Acquired OSHMS*10 certification for Group companies and subcontractors 1-3. Strengthened workplace communication, improved work atmosphere and enhanced internal training facilities	48
	1. Established a cooperative organization between Japan, the EU and Thailand. Strengthen supply chain management. Promoted product registration 2. Expanded the GHS SDS compilation system for Japan and promoted appropriately GHS SDS and labels in the EU and Asia 3. Responded appropriately to domestic and overseas laws and regulations. Established a new system centered on the experts in order to strengthen compliance with Japanese laws 4. Continued promoting quality loss costs management based on business facilities initiative 5. Continued the management of environment related substances for raw materials. Began such management at certain research laboratories	22, 44
	1. Responded to revisions in international regulations of dangerous goods 1-1. Maintained and revised Yellow Cards and transportation labels	44
	1-1. Held the 9th RC Dialogue meeting in the Ube District 1-2. Held the 8th Community RC Regional Dialogue meetings in the Yamaguchi western and Sakai/Senboku districts 1-3. Held a symposium sponsored by NPO Yamaguchi Environmental Network	23
	2. Published *UBE Group CSR Report 2011* and received third-party verification related to RC	58

Environmental Accounting

Since fiscal 1999, the UBE Group has introduced environmental accounting as a tool for quantitatively understanding and evaluating the costs and effects of environmental preservation in Group business activities while promoting more efficient sustained environmental preservation.

The results for fiscal 2011 are as shown in the following tables.

● Environmental Preservation Costs

Capital investment amounted to ¥3,520 million. This was primarily attributable to the enhancement of the waste plastic pretreatment facility at the Kanda Cement Factory, a deodorizer furnace at the Ube Chemical Factory and fire extinguishing equipment for use by Ube Material Industries, Ltd.

Costs increased ¥390 million to ¥11,810 million compared with fiscal 2010 due to rises in raw material and personnel costs.

● Economic Effect

The income effect amounted to ¥1,210 million. This figure includes proceeds from the sale of marketable waste. The savings effect was ¥6,620 million due to promoting the reuse of raw materials and energy conservation.

Waste plastic treatment facility at the Ube Cement Factory

Environmental Preservation Costs

(Unit: ¥100 million)

Category		Main Activity	Capital Investment			Costs		
			FY2010	FY2011	Difference	FY2010	FY2011	Difference
Cost by business area	Pollution prevention	Costs of investing in and maintaining air and water pollution prevention facility	8.7	6.5	(2.2)	51.3	50.8	(0.5)
	Global environment preservation	Costs of investing in and maintaining energy-saving facility	9.2	4.3	(4.9)	5.5	5.9	0.4
	Resource recycling	Costs of recycling and reducing industrial waste	5.4	23.7	18.3	36.6	38.8	2.2
Upstream/downstream costs		Costs of container/packaging recycling, green purchasing	0.0	0.0	0.0	4.9	6.1	1.2
Costs of management activities		Costs of acquiring, running and maintaining environmental management systems	0.0	0.1	0.1	5.6	5.4	(0.2)
Research and development costs		R&D costs of environment-friendly products and technologies	0.1	0.6	0.5	4.7	6.1	1.4
Costs of social activities		Costs of greening and beautifying offices/facilities and their surroundings	0.2	0.0	(0.2)	2.7	2.3	(0.4)
Costs of cleaning up environment damage		Payment of environment-related levy	0.0	0.0	0.0	2.9	2.7	(0.2)
Total			23.6	35.2	11.6	114.2	118.1	3.9

Economic Effect

(Unit: ¥100 million)

Category	Income Effect	FY2010	FY2011	Difference
Income Effect	Proceeds from sales of marketable waste products	9.9	12.1	2.2
Saving Effect	Savings achieved through resource recycling and energy conservation	64.1	66.2	2.1

UBE Group Environmental Accounting Method

- Companies covered: UBE Group companies (Except for Ems-Ube, Ltd. and UBE-MC Hydrogen Peroxide, Ltd., only consolidated subsidiaries from "Companies covered" on page 59).
- Calculations are based on Environmental Accounting Guidelines (Ministry of the Environment 2005 edition).
- The economic effect is the effect obtained in fiscal 2011 as a result of environmental protection activities. This is limited to what can be calculated rationally and excludes hypothetical calculations, such as the avoidance of the cost of cleaning up environmental damage.
- Internal transactions within the UBE Group are set off and eliminated.

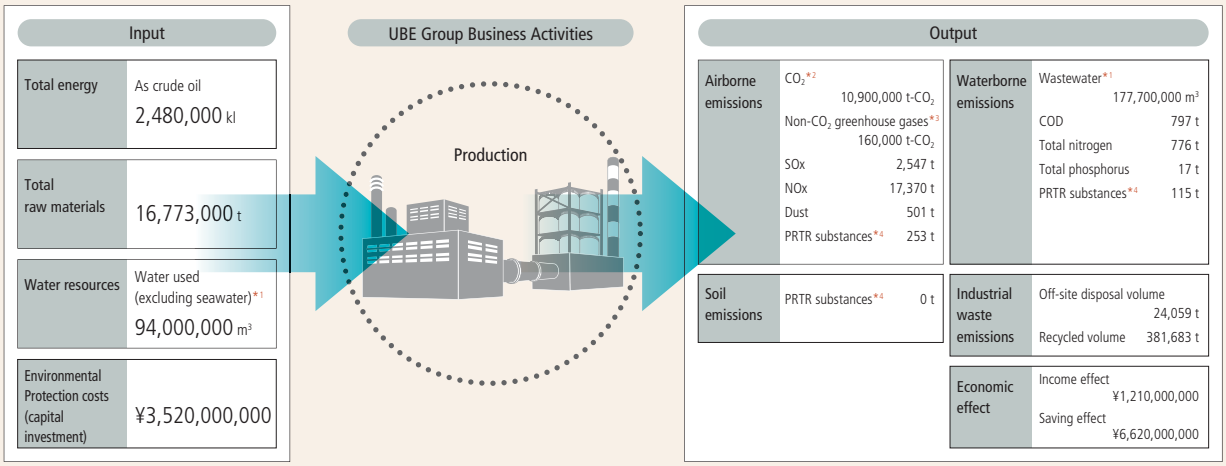
Environmental Performance

The UBE Group recognizes that environment-oriented business practices are vital to its ongoing growth. We will continue to promote measures to prevent global warming, reduce emissions of toxic chemical substances and industrial waste, and use waste and resources effectively in order to continuously foster business activities that contribute to the formation of a recycling-based society.

Glossary

*1. The difference between the "water used" and "wastewater" is because wastewater includes seawater.
*2. Indicates total CO_2 emissions (excluding emissions from waste)
*3. CH_4, N_2O, HFC, PFC, and SF_6
*4. PRTR Law designated 462 substances (See page 43 for reference).

Overview of UBE Group Environmental Impact in Fiscal 2011



*See "Companies covered" on page 59 for details on the scope of UBE Group performance data.

Fiscal 2010 and 2011 Environmental Impact Data by Factory

(Unit: tons/year)

	SOx Emissions		NOx Emissions		Dust Emissions		COD Emissions		Total Nitrogen Emissions		Total Phosphorus Emissions		Industrial Waste Off-Site Disposal Volume	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Chiba Petrochemical Factory	5	4	36	33	0.3	0.3	7	6	3	2	0.1	0.1	10	8
Sakai Factory	0	0	165	165	30	29	173	167	269	229	4	6	191	49
Ube Chemical Factory	1,695	1,471	3,615	3,797	127	119	487	421	497	467	8	7	333	323
Ube Cement Factory	46	47	1,638	1,469	66	45	9	8	—	—	—	—	0	0
Isa Cement Factory	358	343	6,971	7,663	176	187	0	0	—	—	—	—	0	0
Kanda Cement Factory	5	3	2,630	2,526	47	47	2	1	1	1	0	0	15	12
Okinoyama Coal Center	—	—	—	—	—	—	—	—	—	—	—	—	23	30
Ube Film, Ltd.	—	—	—	—	—	—	—	—	—	—	—	—	3	1
Ems-Ube, Ltd.	0	0	5	5	0	0	5	10	2	2	0	0	0	0
Ube Ammonia Industry, Ltd.	587	545	394	365	6	3	203	189	65	72	4	4	168	51
UBE-MC Hydrogen Peroxide, Ltd.	—	—	—	—	—	—	0.2	0.2	0	0	0	0	0	0
Ube-Nitto Kasei Co., Ltd.	2.8	1.7	3.9	1.8	0.3	0.2	1.1	0.5	0	0	0	0	24	26
Meiwa Plastic Industries, Ltd.	—	—	—	—	—	—	0.1	0.1	0	0	0	0	11	10
Ube Material Industries, Ltd.	124	116	1,537	1,263	49	51	—	—	—	—	—	—	6,866	19,609
Ube Board Co., Ltd.	0.5	0.6	7	7	3	3	0.2	0.2	0.1	0.2	0	0	250	144
Ube Machinery Corporation, Ltd.	0	0	—	—	—	—	0.9	0.9	1.4	1.1	0.2	0.1	102	98
Fukushima, Ltd.	BB	1	BB	29	BB	0.1	BB	0	BB	0	BB	0	35	35
Ube Steel Co., Ltd.	11	14	43	43	17	17	0.7	0.6	0	0	0	0	2,466	3,140
Ube Aluminum Wheels, Ltd.	0.3	0.3	7	4	0.8	0.5	0.3	0.2	0.3	0.3	0	0	74	155
Thailand	10	7	101	31	21	14	63	64	30	45	2	5	1,255	1,365
Spain	196	221	565	378	85	11	186	234	157	272	2	2	35,954	12,051

* BB: Data that has been omitted since it cannot be determined or quantified.

Measures to Prevent Global Warming

Medium-Term Management Plan ("Stage Up 2012—New Challenges")

Targets for Reducing Greenhouse Gases

1. CO_2 emissions from energy use: Reduce 15% compared with fiscal 1990 levels by fiscal 2015
2. Total CO_2 emissions from energy use and non-energy-use (excluding emissions from waste): Reduce 20% compared with fiscal 1990 levels by fiscal 2015

Initiatives until Fiscal 2012

- Reduce CO_2 emissions from energy use by approximately 270,000 tons per year by engaging in such efforts as introducing energy-saving equipment and expanding the use of waste materials (initial target: approximately 180,000 ton reduction).
- Oversee and administer CO_2 emission levels using a GHG*1 management system that enables the precise and swift monitoring of CO_2 emission levels for each place of business.
- Applying the concept of carbon Life Cycle Analysis (c-LCA)*2 to its main products, the UBE Group undertakes a qualitative assessment of the status of CO_2 emissions and their reduction at all stages, from raw material procurement through manufacture, distribution and consumption, and, finally, to recycling and disposal.

Scope 3 Initiatives

In fiscal 2010, the UBE Group investigated the use of c-LCA in relation to businesses that contribute to the environment. This initiative received favorable evaluations for contributing to CO_2 emissions reductions during the use of finished goods that incorporate the Group's main products.

Continuing these activities in fiscal 2011, the Group worked to determine the amount of CO_2 indirectly emitted along the entire supply chain during the course of its corporate activities. In accordance with the international Scope 3 Standard for calculating and reporting greenhouse gas emissions in line with the Greenhouse Gas Protocol*3 (which sets out the framework for environmental reporting criteria), greenhouse gases emitted by companies are classified into: Scope 1 (emissions directly from production and other activities), Scope 2 (indirect emissions from use of purchased electricity, etc.) and Scope 3 (indirect emissions during raw material procurement/transport and product use).

As a result of this initiative, the UBE Group verified that Scope 1 and 2 are relatively significant since it primarily manufactures and sells intermediate products, which differ from companies that make finished goods. Looking ahead, the Group will investigate how to help reduce CO_2 emissions throughout the entire supply chain in tandem with c-LCA results.

Measures to Reduce Greenhouse Gases

● CO_2 Emissions and CO_2 Emission Intensity Index

The Group's CO_2 emissions in fiscal 2011 increased 1% compared with fiscal 2010. On the other hand, the CO_2 emission intensity index showed a 23% improvement from the fiscal 1990 level.

● Energy Consumption and Energy Consumption Intensity Index

Energy consumption and the energy consumption intensity index in fiscal 2011 remained on par with fiscal 2010.

● Efforts in Factories

UBE Group factories are consistently strengthening energy-saving measures to reduce their energy consumption. During fiscal 2011, we reduced CO_2 emissions by approximately 90,000 tons through such measures as using waste plastic as a fuel, desulfurizing power generating plant boiler interiors and reducing steam consumption.

In addition, we began operating a heat-recovery facility in June 2010 that effectively uses exhaust heat from the Ube Cement Factory's clinker cooler in on-site power generating plants. Consequently, we reduced our energy use by the equivalent of 10,000 kl of crude oil per year (approximately 17,000 tons of CO_2) in fiscal 2011.

An example of these energy conservation activities can be seen in our efforts to connect power generating plants with adjacent cement factories through piping that extends up to 1,100 meters. These pipes carry the exhaust heat from cement factories to power generating plants, where it is used as an auxiliary heat source for feed-water pre-heater boilers.

UBE's dramatic reduction in energy use through its collaborative efforts with other industries has received high ratings. Accordingly, UBE received the Agency for Natural Resources and Energy Director-General's Award at the 2011 Energy Conservation Grand Awards hosted by the Energy Conservation Center, Japan (ECCJ).

The Agency for Natural Resources and Energy Director-General's Award

Glossary

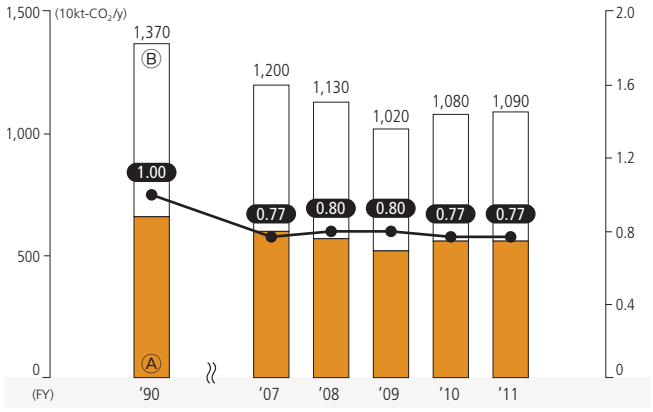
*1. GHG (Greenhouse Gas): CO_2, CH_4, N_2O, HFC, PFC and SF_6 are six greenhouse gases specified in the Kyoto Protocol.

*2. c-LCA: carbon Life Cycle Analysis is a method of assessing the volume of CO_2 emissions over a product life cycle, covering the total amount of CO_2 emitted during raw material procurement, manufacturing, distribution, utilization and disposal.

*3. Greenhouse Gas Protocol: An initiative to develop standards and related tools with regard to greenhouse gases and climate change based on the participation of companies, NPOs government agencies and other organizations worldwide, centered on World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI).

*4. Modal shift: A shift from truck transport to rail and domestic shipping-based transport that uses less energy per amount transported.

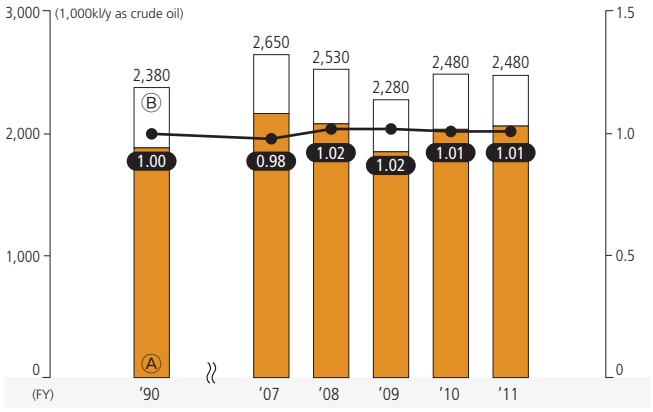
CO_2 Emissions and CO_2 Emission Intensity Index



Ⓐ Energy-based CO_2 emissions Ⓑ Non-energy-based CO_2 emissions (excluding emissions from waste)
CO_2 emission intensity index (fiscal 1990 basis)

The volume of CO_2 emissions is calculated based on the Act on Promotion Measures to Cope with Global Warming.

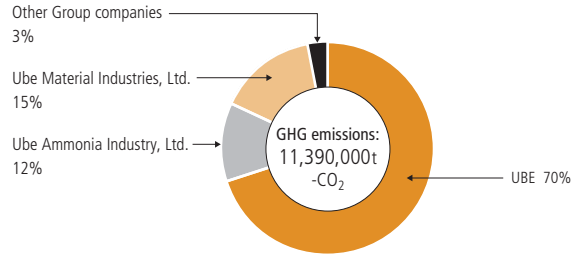
Energy Consumption and Energy Consumption Intensity Index



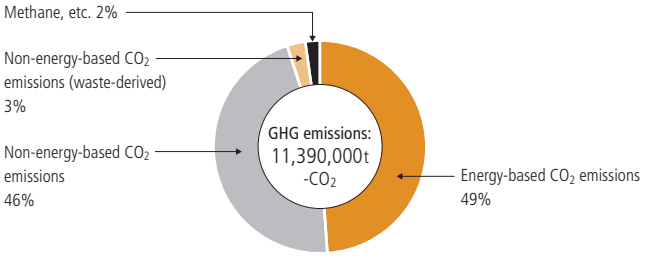
Ⓐ UBE Ⓑ Group companies Energy intensity index (fiscal 1990 basis)

The volume of energy consumption is calculated based on the Act on the Rational Use of Energy.

GHG Emissions for UBE Group by Company (Fiscal 2011 Results)



GHG Emissions for UBE Group by Type of Gas (Fiscal 2011 Results)



● Efforts in Logistics

As part of its efforts to improve the efficiency of sales and logistics, the UBE Group is making active use of ferries for long-distance transport. In fiscal 2011, UBE's synthetic rubber business and the logistics company, Kankokisen Co., Ltd., received accreditation as a leading company in the Eco-Ship Modal Shift*4 project in 2011 from the Ministry of Land, Infrastructure, Transport and Tourism.

Also, the UBE Group continued to promote the Logistics Re-engineering Project, which seeks to improve the efficiency of sales and logistics. Through this project, the Group is working to reduce energy costs by utilizing joint transport operations and expanding mixed loading to improve the overall load ratio and facilitate the use of large-scale transport equipment.

UBE received accreditation as a leading company in the Eco-Ship Modal Shift project

● Bilateral Offset Credit Mechanism Initiatives

The Japanese Government has established the Bilateral Offset Credit Mechanism (BOCM) with the aim of creating a post-Kyoto Protocol framework. UBE's Energy & Environment Division commissioned the Incorporated Administrative Agency New Energy and Industrial Technology Development Organization (NEDO), to conduct a preparatory business development survey regarding BOCM in fiscal 2011 (official business name: Global Warming Countermeasure Technology Promotion Business).

The survey examined the effectiveness of the Group's utilization of previously wasted exhaust heat from cement manufacturing through the introduction of its proprietary exhaust heat system at cement factories in Indonesia. The survey also examined the Group's plans to expand the use of low-grade coal through improvements in coal quality. In fiscal 2011, the effectiveness of these measures was investigated based mainly on calculations of construction and other business costs as well as the potential reduction of CO_2 emissions. In addition, the Group conducted on-site surveys of four major Indonesian cement companies, participated in meetings between the Japanese and Indonesian governments, and reported on its main business activities.

Working to spread the use of its technologies in developing countries, the UBE Group will continue promoting the effective use of coal resources as well as activities that contribute to energy conservation and global warming prevention.

Preserving Biodiversity

Preserving Biodiversity

Aware of the impact our business activities have on biodiversity from the perspective of raw materials procurement, production and product development, we work to systemically understand UBE Group's business activities from the perspective of biodiversity. Based on this, the Group has begun examining what types of measures should be taken to preserve biodiversity.

Partnership to Promote the Declaration of Biodiversity by Keidanren (Japan Business Federation)

Fully approving the Declaration of Biodiversity by the Japan Business Federation, UBE is a participating as a partner to promote this initiative with the aim of establishing more proactive measures to preserve biodiversity.

The UBE Group's Measures

● Afforestation Activities at Limestone Mines

Approximately eight million tons of limestone are extracted annually from the three mining sites (Isa, Maruyama and Amagoi) that currently serve the Isa Cement Factory. Limestone has a wide range of uses as an ingredient used to manufacture cement, calcined lime, lime hydrate and exhaust gas desulfurization materials.

We undertake afforestation activities that involve planting mountain cherry and Longstock Holly trees in barren areas after limestone mining ceases as well as sowing seeds to protect slopes, which are used as a dumping ground for top soil. While taking steps to coexist in harmony with the surrounding environment in the years ahead, we will work to preserve this region's abundant forest by minimizing the impact of our mining operations.

● Efforts to Maintain Forests in the Kotou River Basin

Ube district factories use water from the Kotou River (which serves as a water source for Mitou Town) for their industrial operations. The twelve companies (including six UBE Group companies) and two waterworks departments have established a council to undertake forest maintenance activities in the area surrounding this water source. Deforestation reduces the regenerative functions of water sources*1 and is a major cause of water shortages. To prevent this, the UBE Group has been involved in voluntary forest maintenance activities once year since 1999. In fiscal 2011, 81 Group employees (a total of 111 volunteers from all council members) volunteered to thin and prune approximately two hectares of forest. The Group will continue to participate in forest maintenance activities in the region surrounding the source of the Kotou River.

● Understanding the Impact of Business Operations on Biodiversity Using LIME2*2

Using the LIME2 evaluation method reduces risks associated with such actions as raw resource usage as well as the discharge of waste materials and chemical substances, enabling the Group to understand the impact of its business activities have on biodiversity.

UBE Acquires the Highest Development Bank of Japan (DBJ) Environmental Rating

UBE has developed new methods for producing environment-friendly perfumes that for the most part do not require plant-derived ingredients. This has contributed to solutions for such problems as escalating deforestation and the resulting flood damage in raw material harvesting regions. Evaluated on the basis of its proactive biodiversity preservation efforts, UBE once again enjoyed the DBJ's highest environmental rating, receiving the year's special award for the third time.

Establishing Environmental Study Meetings

As part of its Environmental and Safety Principles, the UBE Group acts positively to protect and improve both the regional and global environments. In March 2012, we worked to understand and evaluate the impact of our business activities on biodiversity and established environmental study meetings throughout the entire Group that primarily gather and share information while examining future activity themes.

UBE received a special award as part of the DBJ's highest environmental rating.

Trees planted in barren areas around mines

Afforestation activities that protect watersheds

Glossary

*1. Regenerative functions of water sources: The existence of healthy forest ecosystems reduces the rise in water volume in rivers (direct runoff) due to heavy downpours while ensuring that the water supply is maintained at a stable minimum volume (base discharge) during droughts.

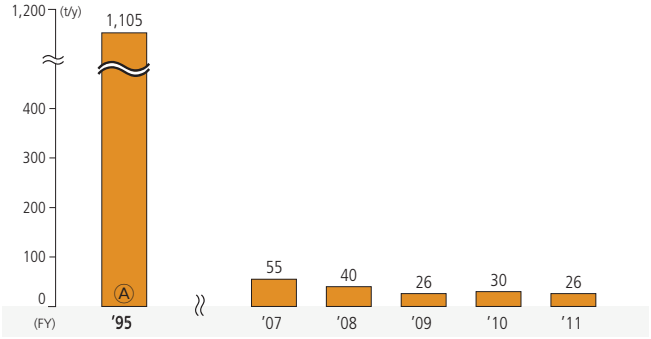
*2. LIME2 (Life cycle Impact assessment Method based on Endpoint modeling): This second version of a method developed by the National Institute of Advanced Industrial Science and Technology (AIST) allows the assessment of the impact of a material's life cycle processes on the environment. The results of this assessment quantify the damage caused by product life cycles, which is not limited solely to factors that cause environmental problems.

Management of Chemical Substances

Initiatives to Reduce the Emission of Harmful Air Pollutants

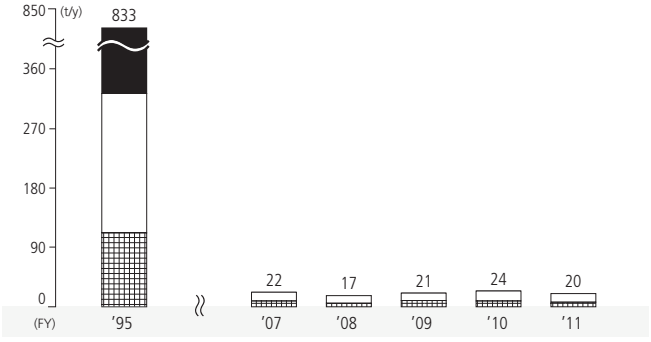
The chemical industry designated 12 harmful air pollutants among a number of harmful air pollutants as subject to voluntary management and has implemented measures to reduce emissions of these pollutants. Among the 12 substances listed, the UBE Group uses benzene, 1,3-butadiene and acrylonitrile in its synthetic raw materials and benzene, 1,2-dichloroethane, chloroform and dichloromethane as solvent. Regarding benzene and 1,3-butadiene, which are suspected to be particularly harmful, the Group promoted a drastic reduction of their emissions and achieved decreases of 98% and 98%, respectively, compared with fiscal 1995. In addition, the Group attained a 98% reduction in total emissions for six of these substances.

Total Emissions Volume of Six Harmful Air Pollutants



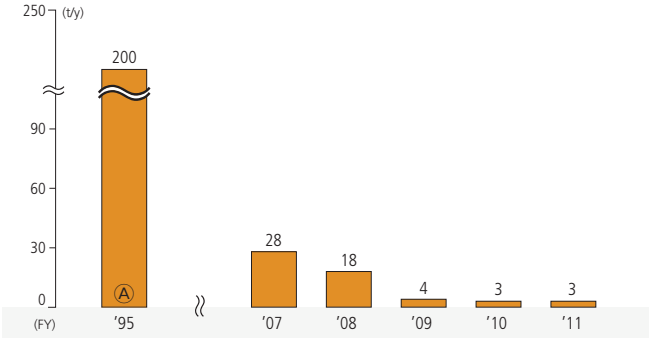
Ⓐ UBE Group

Benzene Emissions Volume



Ube Chemical Factory Sakai Factory Chiba Petrochemical Factory

1,3-Butadiene Emissions Volume



Ⓐ Chiba Petrochemical Factory

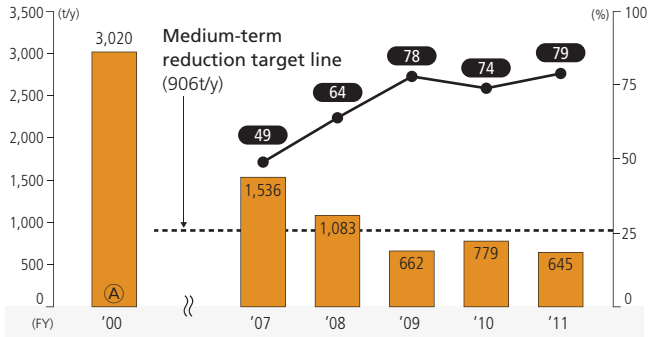
Medium-Term Emission Reduction Plan (Fiscal 2010—Fiscal 2012)

Reduce emissions of 12 voluntarily selected chemical substances by 70% compared with fiscal 2000 by fiscal 2012

Voluntary Medium-Term Plan for Reducing Chemical Substance Emissions

The UBE Group reduced total emissions of 12 voluntarily selected chemical substances by 79%, compared with the fiscal 2000 level. The targeted chemical substances are: ammonia, caprolactam, xylene, vinyl acetate, cyclohexane, dichloromethane, toluene, 1,3-butadiene, butyl alcohol, n-hexane, benzene, methyl alcohol.

Emissions and Reduction Rate of 12 Voluntarily Selected Toxic Substances



Ⓐ Total emissions Reduction rate (%)

Direct burning type deodorizer at the Ube Chemical Factory

Deodorizing equipment at the Chiba Petrochemical Factory

Pollutant Release and Transfer Register*1 (PRTR)

The UBE Group is working to reduce emissions of each designated substance by installing exhaust gas treatment systems in factories, maintaining closed handling areas and making improvements in production processes that include changing solvents.

Among the substances designated under the PRTR Law, the UBE Group handles 62 and UBE handles 49. The total emissions volume of such substances handled by the UBE Group and UBE decreased 25% and 20%, respectively, compared with fiscal 2010.

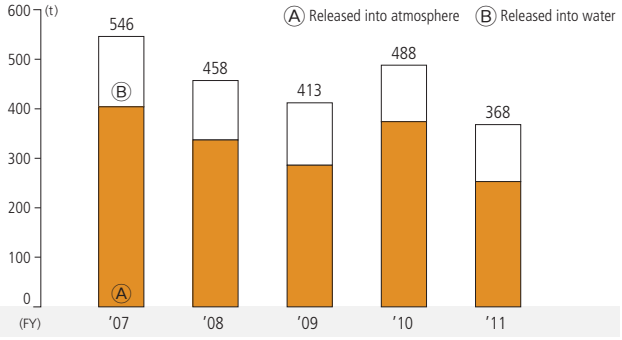
● PCB (Polychlorinated Biphenyl)

Regardless of whether they are currently in use or no longer in use, the UBE Group appropriately stores and manages PCB-containing transformers, condensers and fluorescent lighting stabilizers in its factories in accordance with the Law Concerning Special Measures against PCB Waste. The Group plans to treat PCB-containing items in an appropriate and safe manner until July 2018. As part of this plan, the Group is promoting the treatment of these PCB-containing items through the Japan Environmental Safety Corporation (JESCO).

● Countermeasures for Soil and Ground Water Pollution

The UBE Group conducts surveys and initiates measures in accordance with the Soil Contamination Countermeasures Law and ordinances established by local governments.

Emissions Volume of PRTR Substances



UBE Group PRTR Substances in Fiscal 2011

(Unit: t)

	Total Handling Volume (Volume used/produced)	Emissions Volume				Increase/Decrease Rate Compared with Fiscal 2010 (Total emissions)	Transfer Volume
		Atmosphere	Public Water	Soil	Total		
PRTR Law designated substances	443,337	253.1	114.7	0.0	367.8	(25%)	2,706.8
JCIA designated substances	1,987,287	606.4	159.0	0.0	765.4	(23%)	3,587.1

PRTR Law designated substances: Designated substances in fiscal 2010 were revised from 354 to 462 in line with a revision of the PRTR Law.
JCIA designated substances: Designated substances decreased from 480 to 433 and the survey used for VOC*2 substances changed in fiscal 2010.
Transfer volume: Volume externally treated as waste

Individual Emissions Volumes in Fiscal 2011 (UBE Group PRTR Substances)

(Unit: t)

Ordinance Designation Number	Chemical Substance	CAS No.	Handling Volume	Emissions Volume				Increase/Decrease rate Compared with Fiscal 2010 (Total emissions)	Transfer Volume
				Atmosphere	Public Water	Soil	Total		
300	Toluene	108-88-3	992	78.3	19.2	0.0	97.5	(14%)	401.2
76	ε-caprolactam	105-60-2	229,710	0.0	77.1	0.0	77.1	(6%)	430.5
80	Xylene	—	188	48.6	0.0	0.0	48.6	(35%)	23.4
213	N,N-dimethylacetamide	127-19-5	394	28.9	0.0	0.0	28.9	(50%)	146.9
134	Vinyl acetate	108-05-4	5,183	20.7	0.0	0.0	20.7	(30%)	0.0
400	Benzene	71-43-2	93,814	20.3	0.2	0.0	20.5	(16%)	0.0
392	n-hexane	110-54-3	332	17.9	0.0	0.0	17.9	(25%)	65.3
53	Ethylbenzene	100-41-4	37	17.8	0.0	0.0	17.8	(54%)	18.6
389	Hexadecyl-trimethyl-ammonium chloride	112-02-7	9	0.0	8.6	0.0	8.6	25%	0.0
104	Chlorodifluoromethane	75-45-6	8	7.8	0.0	0.0	7.8	16%	0.0
60	Ethylenediaminetetraacetatic acid	60-00-4	6	0.0	4.6	0.0	4.6	—	0.6
351	1,3-butadiene	106-99-0	95,767	3.4	0.0	0.0	3.4	6%	0.0
243	Dioxins	*	—	248	0	0	248	100%	0.1

Notes: 1. CAS No.: Chemical Abstract Service registry number. 2. *: Contains various compounds 3. Unit for dioxins: mg-TEQ/year

Glossary

*1. PRTR (Pollutant Release and Transfer Register): Involves conducting voluntary surveys to assess the volume of chemical substances that are emitted into the environment (atmosphere, water, soil) and transferred outside in the form of waste from company facilities during business activities and reporting survey findings to national and other governments while undertaking full public disclosure. The aim of PRTR is to take steps to control and reduce environmental burdens through the appropriate use and management of chemical substances.

*2. VOCs (Volatile Organic Compounds): Collective term referring to organic chemical compounds that vaporize easily and enter the atmosphere. VOCs are arguably one of the sources of suspended particle matter and photochemical oxidants.

Measures for Product Safety and Quality Assurance

Safety Data Sheet (SDS*1)

To ensure the safe use of our chemical products, we have prepared SDSs for all of our products, and we disclose them on our website. In addition, employees can access SDSs recorded in our product SDS database. This database provides employees with information that includes data on product hazards, safe handling methods, relevant laws and regulations, and storage and disposal procedures. We continually update SDSs based on the REACH Regulation,*2 CLP*3 and other relevant regulations of individual countries.

Product Labels

To each product we attach container labels listing their hazard information and precautionary measures to be taken during the handling of such products. Moreover, we are promoting the full introduction of GHS*4 labels and the Container Yellow Card labeling system.*5

Transportation Safety

Based on the annual plans of the Group Product Safety Committee, we undertake measures to prevent transportation accidents and improve the quality of transportation operations. Such measures include maintaining Yellow Card*6 and other transportation labeling systems, and conducting disaster drills.

Application of Green Procurement*7

Particularly in the electrical, electronic and automotive industries, UBE helps realize green procurement for suppliers of both raw and processed materials. To this end, we proactively promote the management of environmentally significant substances contained in raw materials, parts procured and products.

Complying with International Chemical Substance Management

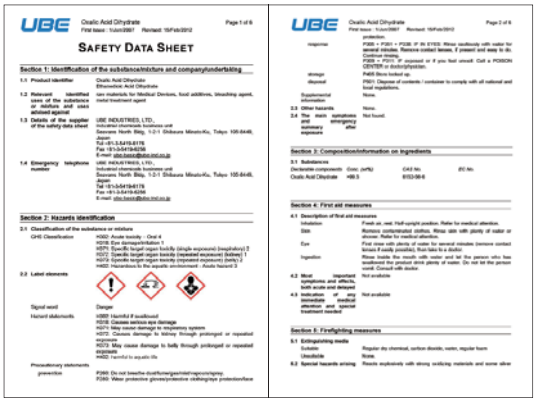
UBE is a participant in the Japan Challenge Program*8 as well as the LRI*9 and JIPS,*10 both of which are supports by the JCIA, and promotes risk assessment that emphasizes on the gathering and communication of hazard information.

Staff Message

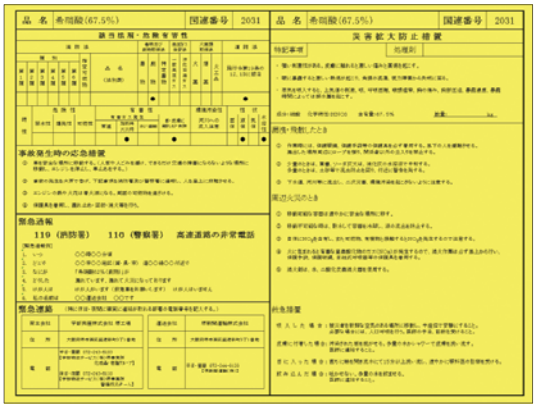
Koji Hatano, Manager, Environment & Safety Dept.

Promoting product safety activities in line with the keywords, improving on-site capabilities

The UBE Group undertakes a variety of product safety activities in its wide array of business fields, including chemicals, machinery, construction materials, energy and the environment. Amid major changes taking place in international chemical management regulations, I believe that product safety activities centered on chemical substance management will become increasingly important. In fiscal 2011, we reaffirmed the importance of product safety activities at the R&D stage that ensure full compliance with the law. We are actively undertaking product safety activities in 2012 that are in line with the keywords, improving on-site capabilities.



SDS



Yellow Card

Glossary

*1. SDS: Safety Data Sheet (documentation containing the product name, physicochemical properties, hazard and toxicity information, usage, and related laws and regulations)
*2. REACH regulation: Regulation on chemical substances enforced in the EU in June 2007 (REACH stands for Registration, Evaluation, Authorisation and Registration of Chemicals)
*3. CLP Regulation: A new EU regulation pertaining to classification, labeling and packaging that facilitates the introduction of GHS within the EU. (CLP stands for Classification and Labelling and Packaging)
*4. GHS: Globally Harmonized System of Classification and Labeling of Chemicals, a universally standardized hazardous chemical classification system used in preparing SDS and container labels
*5. Yellow Card (labeling system): A warning label that includes an emergency response guideline number and UN number, used in case of an accident under conditions where other information formats would be impractical because of mixed loading or small-order transportation
*6. Yellow Card: Emergency card on which the product name, properties, handling methods, emergency measures and emergency contact numbers are entered in case of transportation accidents
*7. Green procurement: Procurement of materials conducted by companies based on their individual safety and environmental criteria established to meet the requirements of relevant legal regulations, including the EU RoHS Directive that restricts the use of certain hazardous substances in electrical and electronic equipment
*8. Japan Challenge Program: The Japanese version of the High Production Volume Chemicals (HPV) Program that gathers and communicates information on the hazards and toxicity of chemical substances. In Japan, the Japan Challenge Program covers chemical substances produced in quantities of 1,000t/y or more.
*9. Long-range Research Initiative (LRI): A long-term voluntary research undertaking being promoted by the ICCA and JCIA
*10. Japan Initiative of Product Stewardship (JIPS): Voluntary risk management of chemical substances promoted by the JCIA

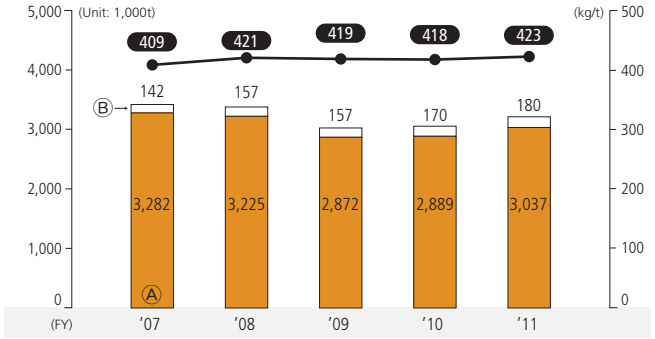
Effective Use of Waste

Waste Recycling at Cement Factories

Waste can be reused as a raw material (material recycle) and an alternative fuel (thermal recycle) in the cement-making process. For this reason, a wide variety of waste is treated at cement factories. The high calcining temperature of the cement kilns (1,450°C) burns and degrades substances that cannot be disposed of by ordinary incinerators. The kilns also offer a large waste-processing capacity. Ash produced by incineration can also be used as an alternative to clay, a component of cement, eliminating the need for final disposal sites for incineration ash.

The UBE three cement factories actively accept and reuse various waste materials from both inside and outside the UBE Group. In fiscal 2011, the UBE cement factories made effective use of around 3.22 million tons of waste and byproducts. Of this, about 3.15 million tons was sourced from outside of the UBE Group. This is one way the UBE is significantly contributing to the formation of a recycling-based society. In addition, we are currently planning to install sludge drying equipment at the Isa Factory as well as ash pretreatment and closed fuel sludge injection facilities at the Ube Factory with the aim of commencing operations in 2012. The UBE will strengthen and expand its systems for dealing with a variety of waste and expand its recycling business.

Waste and Byproduct Consumption Volume



Ⓐ Waste and byproducts for raw materials Ⓑ Waste for alternative thermal energy
Usage volume per ton of cement (kg/ton)

Guest Message

Motoyoshi Kondo, Executive Director,
Fujieisangyo Company Incorporated

Recycling Soil Produced from Construction

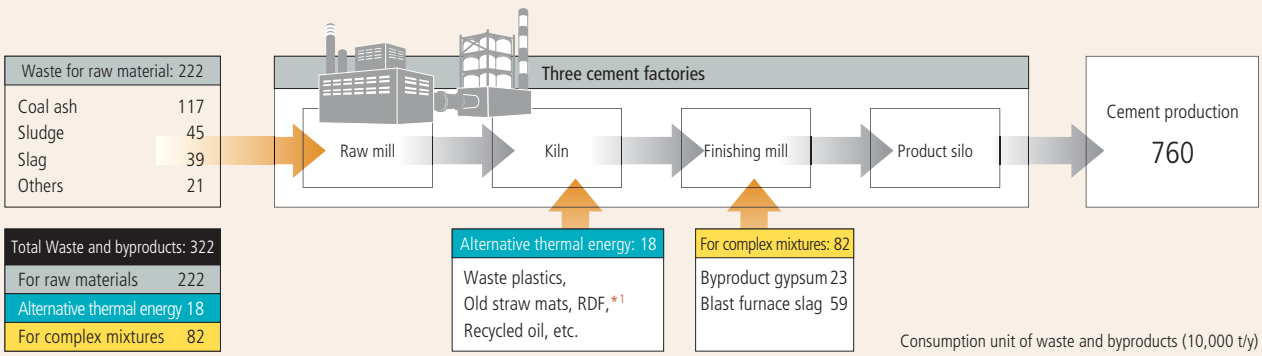
We engage in the treatment of soil and sand produced by construction. A massive amount of soil and sand is discharged from the various construction sites located in urban areas. We treat these materials so that Ube Industries, Ltd. can reuse them as raw materials for cement.

Recycling construction byproducts is indispensible for enabling soil and sand to be reused as cement raw materials. Looking ahead, we will continue cooperating with Ube Industries, Ltd. by treating soil and sand produced by construction sites for use in cement manufacturing.

Cement Factory History of Waste Treatment Facility Installations

	Alternative Thermal Energy	For Raw Material
1998	Kanda Factory: Waste oil treatment facility	Isa Factory: Chlorine bypass system
1999		Ube/Kanda Factories: Waste water receiving treatment facility
2000	Ube Factory: Waste plastic treatment facility (1st train)	
2001		Ube Factory: Sewage sludge treatment facility
2002	Kanda Factory: Waste plastic treatment facility (1st train)	Isa Factory: Sewage sludge waste treatment facility (1st train)
		Ube Factory: Chlorine bypass system
		Ube/Isa/Kanda Factories: Meat and bone meal treatment facility
2003	Isa Factory: Waste plastic treatment facility (1st train)	
2004	Isa Factory: Wood chip combustion facility for in-house power generation	
	Isa Factory: Waste plastic treatment facility (2nd train)	
2005		Kanda Factory: High-chlorine bypass system
2006	Kanda Factory: Waste plastic treatment facility (2nd train)	
2007	Ube Factory: Waste plastic treatment facility (2nd train)	Isa Factory: Sewage sludge waste treatment facility (2nd train)
2008	Isa Factory: Waste plastic treatment facility (3rd train)	Kanda Factory: Waste for raw material loading facility
2009	Kanda Factory: Waste plastic treatment facility (3rd train)	Kanda Factory: Ash pretreatment facility
2011	Kanda Factory: Waste plastic pretreatment facility	
2012	Isa Factory sludge drying equipment	Ube Factory: Ash pretreatment facility
	Ube Factory: Closed fuel sludge injection facility	

Flow of Waste and Byproduct Usage at Cement Factories (Fiscal 2011)



Consumption unit of waste and byproducts (10,000 t/y)

Glossary

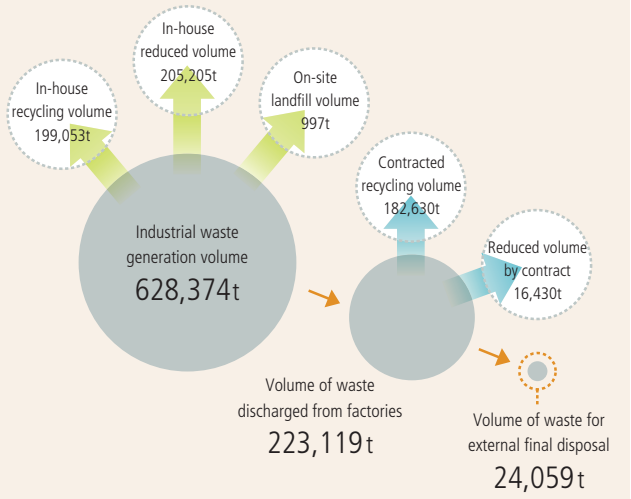
*1. Refuse Derived Fuel (RDF): Solid fuel made by compressing waste plastic, scrap wood and general garbage

Reduction of Industrial Waste

Medium-Term Waste Reduction Plan

By fiscal 2012, the UBE Group plans to have reduced the volume of industrial waste for external final disposal by 80% compared with the fiscal 2000 level.

Overall Flow of Industrial Waste in Fiscal 2011



Industrial Waste Reduction Volume

The entire UBE Group recycles industrial waste while striving to reduce its final disposal volume.

● Industrial Waste Generation Volume

Industrial waste is generated by many sources. Chemical factories primarily generate sludge, waste oil and waste plastic; on-site power plants generate coal ash; and machinery factories mainly generate waste oil and inorganic waste.

● Industrial Waste Recycling Volume

Most of the internal industrial waste produced by each Group factory is recycled in-house.

● Volume of Industrial Waste Discharged from Factories

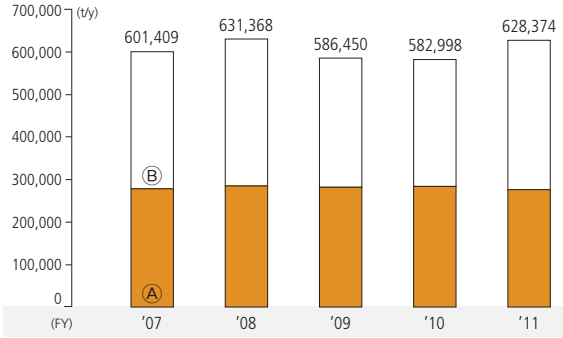
When contracting waste treatment or disposal to outside companies, the UBE Group utilizes industrial waste management forms (waste manifest system) in compliance with the waste treatment and clean-up laws and carefully manages the entire process.

● Volume of Industrial Waste for External Final Disposal

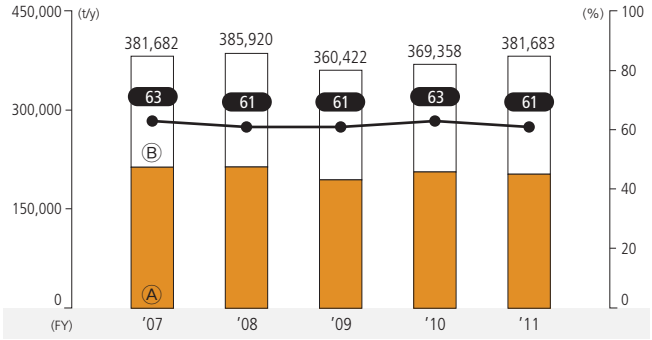
As of fiscal 2011, we recorded an only 26% reduction in industrial waste for final disposal, compared with the medium-term target of 80%. This was due to an increase in external final disposal volume by Group companies. In addition, 15 business facilities achieved zero emissions (an emission volume of 1% or less).

Ⓐ UBE Ⓑ Group companies Group waste recycling ratio (%)

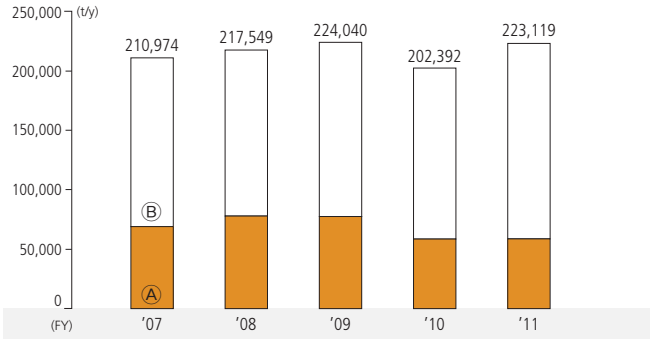
Industrial Waste Generation Volume



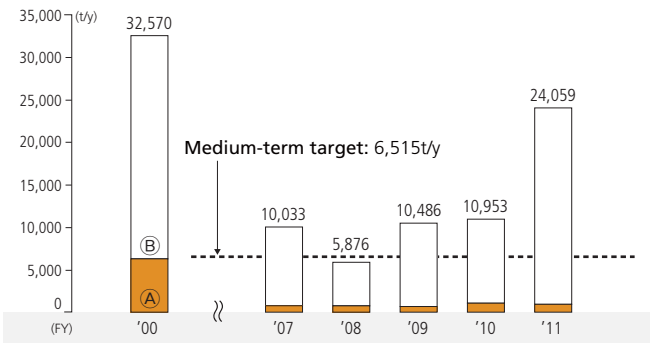
Industrial Waste Recycling Volume and Ratio



Volume of Industrial Waste Discharged from Factories



Volume of Industrial Waste for External Final Disposal



Measures to Prevent Air and Water Pollution

Measures to Prevent Air and Water Pollution

● Measures to Prevent Air Pollution

The UBE Group monitors contaminants emitted into the atmosphere at the source, and pollution control is undertaken according to levels established in agreement with governments and our own voluntary air pollution prevention management standards. All of these measures are reflected in our factory operations.

● Measures to Prevent Water Pollution

The UBE Group has installed systems to monitor discharges of pollutants in water environments. In addition, UBE Group chemical plants, which can have an impact on public water quality, purify wastewater through the use of wastewater treatment facilities.

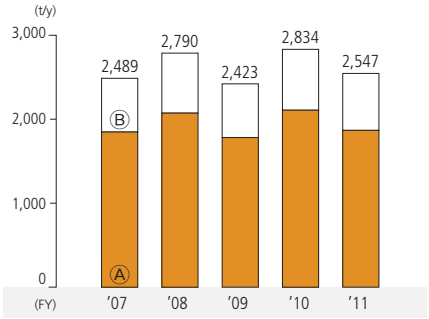
● Measures to Prevent Odors

In the Ube district, the Group is taking steps to establish an odor monitoring system and decrease the number of odor-related complaints it receives.

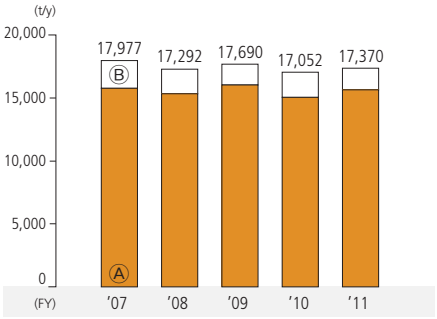
Wastewater treatment facility at the Ube Chemical Factory

Ⓐ UBE Ⓑ Group companies

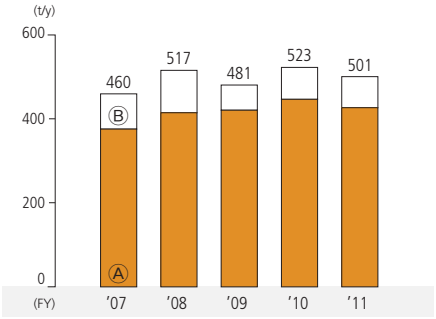
SOx Emissions*1



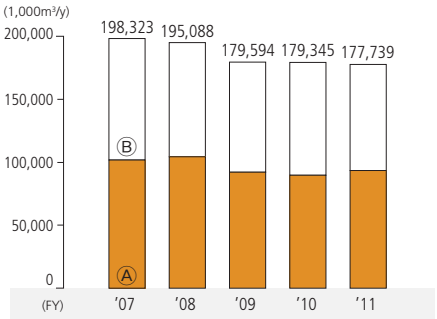
NOx Emissions*2



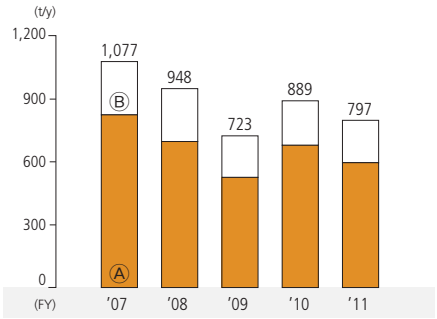
Dust Emissions



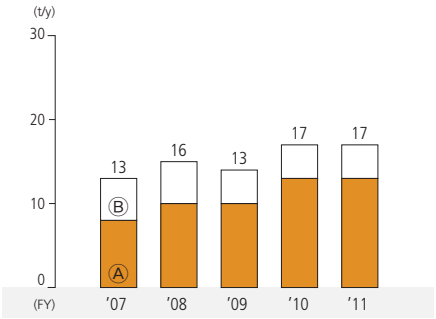
Wastewater Emissions



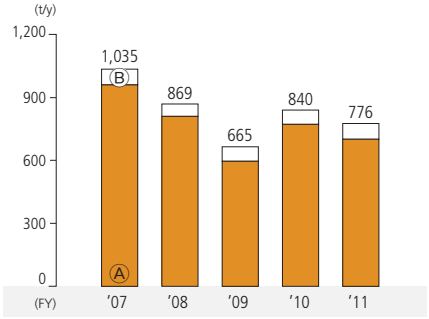
COD Emissions*3



Total Phosphorus Emissions



Total Nitrogen Emissions



Reference: Please refer to page 38 for environmental impact data by factory

Glossary

*1. SOx: Sulfur oxides originate in the sulfur (S) component of fuels. Boilers are the main source of SOx.

*2. NOx: Nitrogen oxides originate in the nitrogen (N) components of fuel and air when a fuel is combusted in the air. Boilers and cement kilns are the main sources of NOx.

*3. COD (Chemical Oxygen Demand): This is an indicator of water pollution by organic substances and represents the amount of oxygen consumed in the chemical oxidation of organic matter.

Occupational Safety/Health, Process Safety and Disaster Prevention

Measures to Prevent Occupational Accidents

To eradicate occupational accidents, the UBE Group promotes risk-assessments of facilities and operations. In addition, we implement measures in a lateral manner in this area by storing occupational accident-related information on a database that is displayed on the Company's intranet. Aiming to achieve zero accidents, we undertake initiatives to eliminate occupational accidents through small groups established at every factory. The Group also holds annual safety and health rallies in order to raise awareness of these issues among Group employees and partner companies.

● Measures against Asbestos

Employees who have handled asbestos-related products, including those who are now retired, undergo regular health examinations. As a result of health hazard-related surveys that determine whether or not employees have been exposed to asbestos, the Group cooperates in the submission of industrial accident reports by individuals whose examination results warrant medical attention.

The Group also appropriately treated problems at locations where a high rate of asbestos diffusion was found. In addition, the Group is promoting systematic measures for the disposal and replacement of asbestos materials. Moreover, insulation and gasket packing are replaced regularly with substitute products when piping is opened.

● Prior Safety Assessment of Chemical Substances

Based on procedures designated in the safety assessment standards, we also perform in advance safety assessments of new chemical substances and chemical substances that we plan to start handling at factories. In fiscal 2011, the UBE Group performed 43 chemical substance safety assessments.

Taking Steps to Maintain Process Safety and Safe Operations

● Plant Safety Assessment

The methods stipulated in the plant safety assessment standards are followed when carrying out pre- and post-plant safety assessments of newly installed, additional, or modified facilities. Such assessments are also carried out when relevant laws and ordinances are either established or revised. In fiscal 2011, the UBE Group carried out 83 safety assessments.

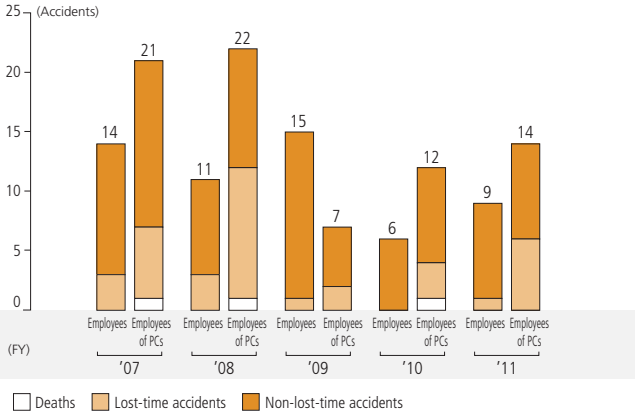
● Security and Disaster Prevention Measures

The Group systematically implements emergency drills at its facilities. The status of training is posted on the Company intranet so that it is informative to an even greater number of people. In addition to mutual workplace checks conducted by safety supervisors, we undertake mutual safety patrols with partner companies.

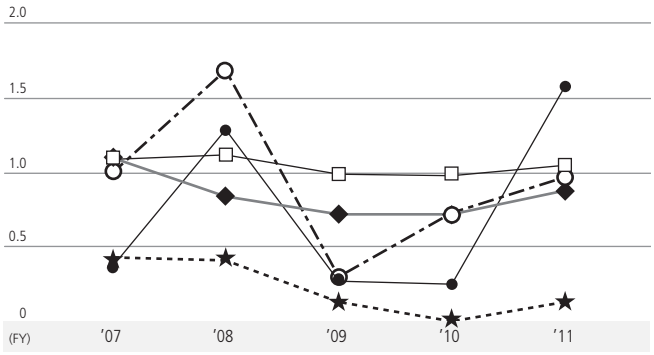
● Environment & Safety Qualification

We encourage employees to obtain legally recognized qualifications (including pollution control supervisor and hazardous material handler) for the safe operation and management of various workplaces.

Number of Occupational Accidents (Involving Employees of UBE and Those from Partner Companies (PCs))



UBE Lost-Time Injury Frequency Rate*1



*1. Frequency rate = (Number of lost-time injuries)/(total work hours) x 1,000,000 hours

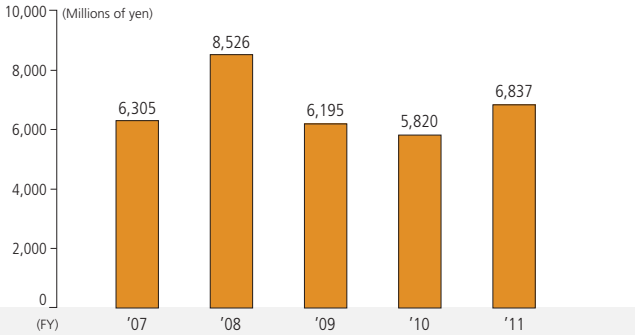
*2. Data on lost-time industry frequency rates for the manufacturing, chemical, and cement industries is based on statistics supplied by the Ministry of Health, Labor and Welfare

UBE Group Facility-Related Accidents (including environmental accidents)

(Unit: Accidents)

FY	2007	2008	2009	2010	2011
UBE	0	0	4	2	3
Group companies	1	4	3	3	1

Occupational Safety, Health and Disaster Prevention Expenditure of the UBE Group



Socially Valuable Products and Technologies of UBE Group

The UBE Group provides a large variety of products and technologies, ranging from those related to the automobile and information industries to those in use throughout the underlying infrastructure and daily life of modern society. The Group actively promotes projects that enable reductions in CO_2 emissions and the creation of a recycling-based society in all of its business fields and works hard to provide "products and technologies that are friendly to both humans and the environment." Introduced here are some of the UBE Group's products, which total more than 500, and their environment-friendly attributes.

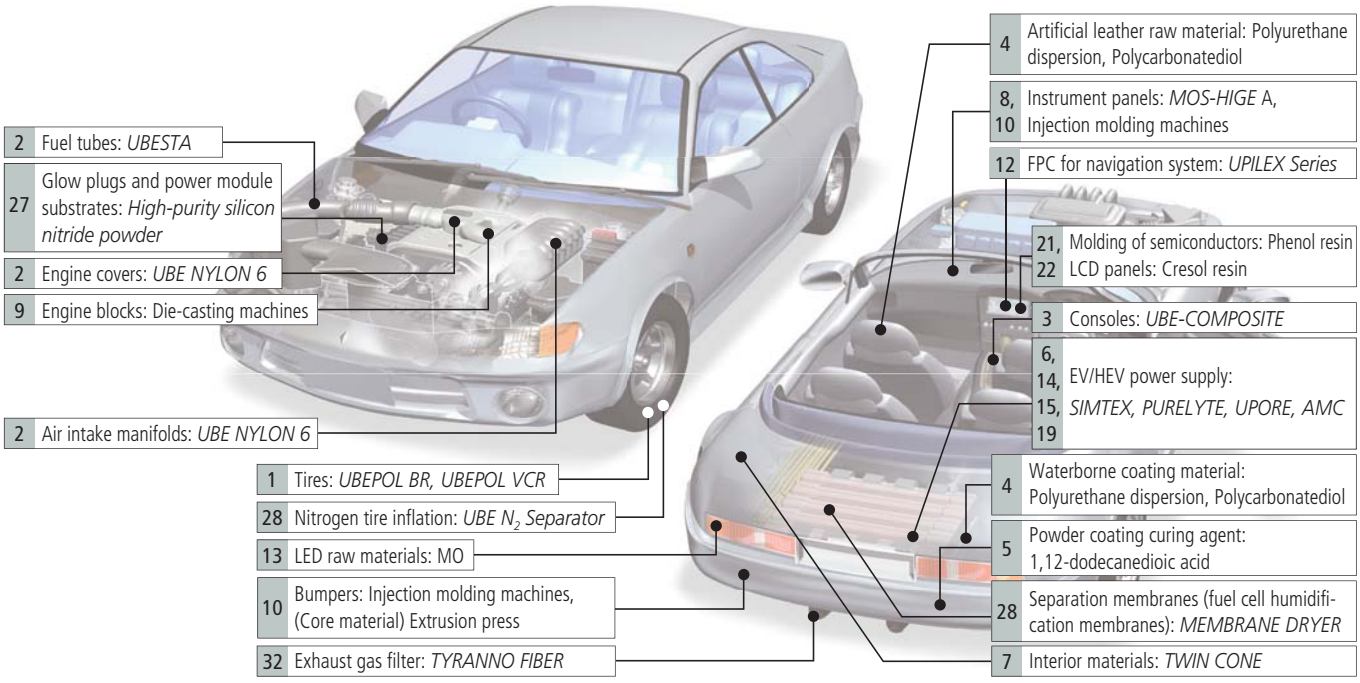
Legend: Product benefits

- Reducing CO_2 emissions: Reducing emissions of greenhouse gases known to contribute to global warming
- Recycling: Reusing waste or improving the quality of waste for effective recycling and utilization of resources
- Purification of water: Improving the quality of water and sterilizing water to preserve a clean environment
- Providing environment-friendly products: Producing and using alternative products that have a positive effect on the environment
- Contribution to health: Supporting the health of people
- Advanced technology: New technologies that contribute to people's abundant lifestyles

★ Indicates an example of application

Automotive-Related Fields

UBE supports auto manufacturing with environment-friendly materials and components.



Chemicals

★ 1

Polybutadiene rubber
UBEPOL BR, UBEPOL VCR
Synthetic Rubber Business Unit

Applications: Automotive tires, footwear, polystyrene quality improvement agent, etc.
Features: More elastic and abrasion resistant than natural rubber. Among the wide variety of UBE's specialty products, *UBEPOL VCR* is a groundbreaking product, enabling reduced weight in rubber products.

★ 2

Polyamide resin
A. Nylon 6: *UBE NYLON 6, TERPALEX*
B. Nylon 12: *UBESTA, UBESTA* XPA
Engineering Plastics Business Unit

A. Applications: Automotive components, including air intake manifolds, food packaging film, etc.
Features: Often used for automotive components due to its toughness, good thermal and chemical resistance and better processing, helping to reduce weight and lower fuel consumption. Suitable for food packaging because of its superior oxygen gas barrier properties
B. Applications: Tubes, coating, automotive components, etc.
Features: *UBESTA* XPA features the same basic properties as nylon, making it lightweight, with high dimensional stability and flexibility at low temperatures. The product's flexibility and transparency effectively realize characteristics that cannot be achieved by plastic or rubber alone.

★ 3

Recycle compound *UBE-COMPOSITE*
RCP Project Promotion Group

Applications: Home appliances, automotive components, chairs, etc.
Features: Color-adjusting recycle compound that can change the color tint of waste plastics.

★ 4

Raw material for waterborne coating and artificial leather
A. Polyurethane dispersion (*ETERNACOLL UW* series)
B. Polycarbonatediol (*ETERNACOLL UH* series)
Fine Chemicals Business Unit

Applications: Automotive waterborne coating, artificial leathers for luxury cars
A. Features: As waterborne polyurethane, contributes to the reduction of VOCs (volatile organic compounds)
B. Features: Used as the primary material for high-grade polyurethane applications (waterborne coating, highly durable PU resins, and artificial leathers) that have low environmental impact.

5

Powder coating curing agent 1,12-dodecanedioic acid
Fine Chemicals Business Unit

Applications: Curing agent for powder coating material used for automotive wheels
Features: As a resin curing agent for powder coating material, helps reduce VOC emissions.

6

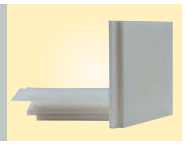
High-strength polypropylene fiber *SIMTEX*

Ube-Nitto Kasei Co., Ltd.

Applications: Nickel-hydrogen battery separator equipped on hybrid cars

Features: Polypropylene fibers that have undergone highly oriented crystallization through a newly adopted stretching process

7



Four-level, hollow honeycomb-structure substrate: *TWIN CONE*

Ube-Nitto Kasei Co., Ltd.

Applications: Interior materials for automobile luggage racks, etc.

Features: Optimal for use as an interior material in hybrid and electric vehicles thanks to its uniquely configured hollow honeycomb structure, which results in a superior lightweight, strong and noise absorbent design

Cement & Construction Materials

8

Basic magnesium sulfate *MOS-HIGE* A

Ube Material Industries, Ltd.

Applications: Resin filler

Features: Helps reduce the weight of automotive PP resin components

Machinery & Metal Products

9

Die-Casting Machines

Ube Machinery Corporation, Ltd.

Applications: Automotive aluminum components, including engine blocks and transmission cases

Features: Achieves higher energy and space efficiencies and greater functionality. Machines are the world's smallest of their kind.

10

A

B

A. Extrusion presses

B. Injection molding machines (All-electric IM)

Ube Machinery Corporation, Ltd.

A. Applications: Aggregate materials for car bumpers and aluminum sash for window frames

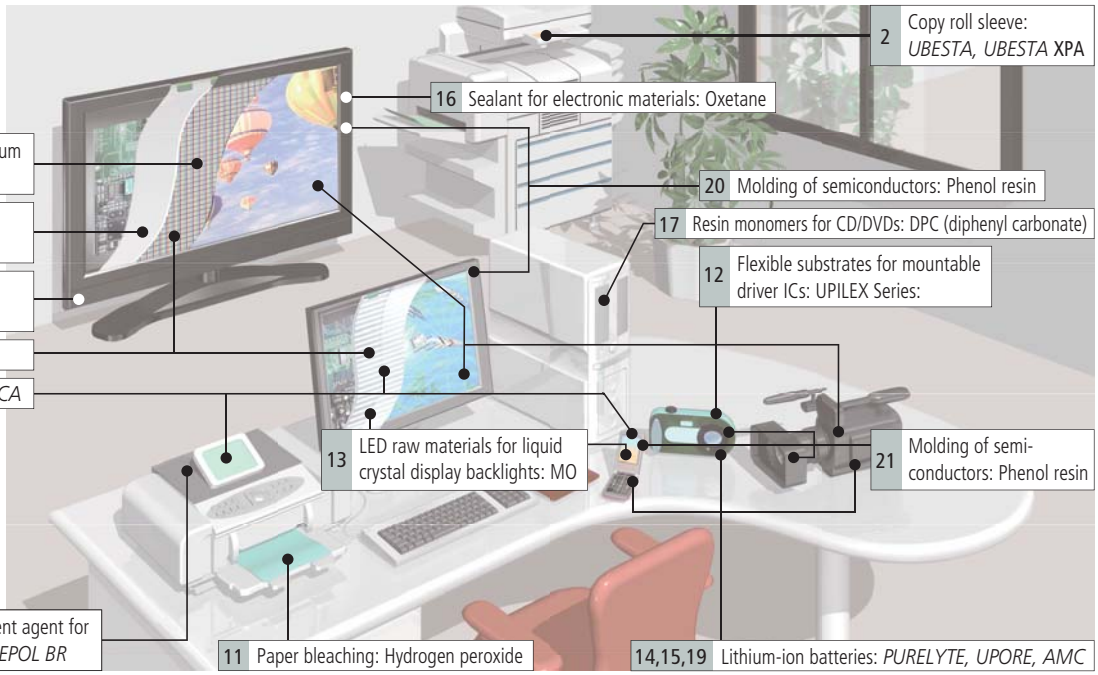
Features: Capabilities for complex and intricate extrusion molding

B. Applications: Molding machines for automotive and home appliance plastics, including large-screen TVs and washing machine frames

Features: These all-electric machines can achieve substantial reduction in energy consumption compared to general hydraulic injection molding machines.

Information, Electronics and Communications-Related Fields

Sophisticated environmental technologies are the cornerstone of materials that contribute to the foundation of society.



Chemicals

11

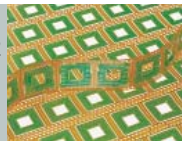
Hydrogen peroxide

UBE-MC Hydrogen Peroxide, Ltd.

Applications: Bleaching and sterilizing of pulp and paper

Features: Reduced environmental impact of related processes. Generates non-hazardous water and oxygen when decomposed. Replacement for chlorine

12



Polyimide film *UPILEX Series*

Electronic Components & Materials Business Unit

Applications: Base material for ICs used in digital equipment, such as LCD/plasma TVs, cellular phones, and digital cameras

Features: Well-suited for use as base material for high-resolution circuits due to its high dimensional stability with high heat resistance and rigidity

★13

Metal organic compounds (MO)

High Purity Chemicals Business Unit

Applications: Raw material for Light-Emitting Diodes (LED)

Features: LEDs require less electricity and last longer than conventional lightbulbs.

★14

Functional electrolytes for lithium-ion batteries *PURELYTE*

Specialty Battery Materials Business Unit

Applications: Electrolytes used in lithium-ion batteries installed in items that include mobile phones and personal computers

Features: Functional electrolytes are designed to customer requirements with the combination of highly purified electrolyte and additives for controlling battery performance.

15 

Microporous Polyolefin Film *UPORE*

Separator Group

Specialty Battery Materials Business Unit

Applications: Lithium-ion battery separators

Features: Films manufactured using a dry process that uses neither solvents nor inorganic fillers.

16 

Raw material for use in UV-curing coating/adhesive material *Oxetane* (*ETERNACOLL EHO, OXBP, OXMA, HBOX*)

Fine Chemicals Business Unit

Applications: Sealant and adhesive for electronic materials

Features: Used as raw material for UV-curing coating/adhesive material, helping reduce VOC emissions

★17 

A. DMC (dimethyl carbonate)

B. DPC (diphenyl carbonate)

Fine Chemicals Business Unit

A. Applications: Solvent for ink, coatings, adhesives and others

Features: A solvent of low-toxicity that improves the work environment and the eco-friendly quality of printed materials

B. Applications: CDs, DVDs and other optical uses, frames for home appliances and other products, polycarbonate resin monomer used in carport roofs, expressway sound insulating boards and other products.

Features: Contributing to a safer and cleaner production process by not using the poisonous gas, phosgene, during the manufacture of polycarbonate resin

★18 

1,6-Hexanediol

Fine Chemicals Business Unit

Applications: As a raw material for dry laminate adhesive for food packaging and also for UV-curing coating used in items including mobile phones.

Features: Use of 1,6-Hexanediol requires no solvents, which therefore contributes to VOC reduction.

19 

Multi-walled carbon nanotubes *AMC*

Fine Chemicals Business Unit

Applications: Additive to enhance the conductivity of anode and cathode electrodes in lithium-ion batteries, a conductive composite (semiconductor wafer carriers, printer developing rollers, etc.), melt-spun conductive yarn, etc.

Features: Optimized dispersion and electro conductivity due to temple bell structure, and featuring easy handling

20 

Silica particles *HIPRESICA*

Ube-Nitto Kasei Co., Ltd.

Applications: Spacer for liquid crystal displays

Features: Providing single dispersal with a spherical shape, this is ideal as a spacer (a gap material used to maintain the liquid crystal at an even thickness), essential to high-performance liquid-crystal displays.

21 

Phenol resin *MEH-7851*

Meiwa Plastic Industries, Ltd.

Applications: Molding of semiconductors used in hybrid and electric vehicles, computers and cellular phones
Laminates

Features: Used to harden epoxy resins. Incombustible due to its special resin structure, eliminating the need to use halogenated flame retardant. Environment-friendly, halogen-free material

22 

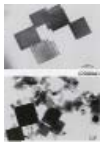
Cresol resin *MER-7959*

Meiwa Plastic Industries, Ltd.

Applications: A raw materials of the photoresist used for circuit formation in the LCD panels of LCD TVs, cellular phones and other products

Features: Proprietary technology is used to realize high-photoresist performance, while contributing to the increasing precision of LCD panels and low energy consumption

Cement & Construction Materials

23 

Oxidized magnesium, a vapor-deposited, high-purity fine powder magnesia

High purity & ultrafine single crystal magnesia powder

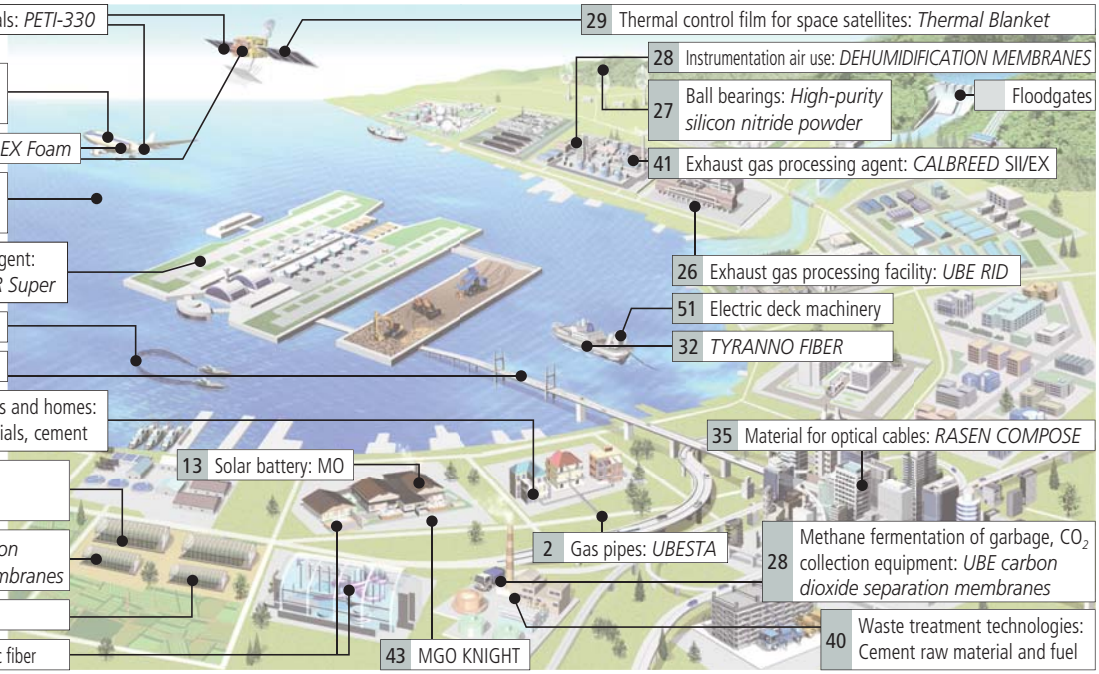
Ube Material Industries, Ltd.

Applications: Base material for PDP protective layers and phosphors

Features: Produced through a vapor oxide reaction that occurs when high-purity magnesium vapor combines with oxygen

Industrial and Social Infrastructure-Related Fields

Helping to build social infrastructure based on advanced environmental technologies



Research & Development

24 

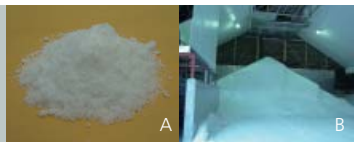
Photocatalytic fiber

Photocatalytic Products Team, Administration & Planning Department

Applications: Water and air purifiers

Features: Uses a photocatalytic reaction to break down organic materials and enables the development of people- and eco-friendly purifying systems since no chemical agents are used

Chemicals

25 

A. Caprolactam
B. Ammonium sulfate

Caprolactam Business Unit

A. Applications: Nylon 6 raw material
Features: Production bases in Japan, Thailand and Spain. One of the world's top three producers

B. Applications: Raw material for nitrogen fertilizer
Features: Caprolactam byproduct material

26 

Exhaust gas processing facility *UBE RID*

High-Purity Chemicals Business Unit

Applications: Capture exhaust emissions from semiconductor/LCD factories

Features: Complete capture of toxic hazardous gases/powders emitted from operations of semiconductor/liquid crystal factories

★27 

High-purity silicon nitride powder

Ceramics Group

Specialty Products Business Unit

Applications: Ball bearings for wind power generators, glow plugs for diesel engines, power module substrates for automobiles

Features: Wide range of applications because of its excellent durability and ability to prevent electrolytic corrosion

28 

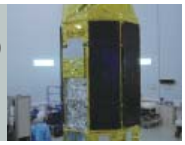
Separation membranes
A. *UBE organic solvent (alcohol) dehydration membranes*
B. *UBE carbon dioxide gas separation membranes*
C. *Nitrogen separation membranes (UBE N_2 Separator)*
Others: *Hydrogen separation membranes;*
DEHUMIDIFICATION MEMBRANES

Separation Membranes Group, Specialty Products Business Unit

A. Applications: Bioethanol dehydration
Features: Effectively dehydrates azeotropic compositions. Membrane separation can increase solvent concentration to more than 99%.

B. Applications: Removes CO_2 from bio-gases (methane)
Features: Removes CO_2 from gases generated by sludge and refuse, increasing the methane concentration

C. Applications: Nitrogen generators for filling tires and explosion protection for mines, oil tankers, etc.
Features: Tire pressure is less likely to drop, increasing fuel efficiency. Explosion protection for oil fields, tankers, etc.

★29 

Thermal control film *Thermal Blanket*

Aerospace Materials Business Group

Picture provided by JAXA

Applications: Thermal control material for aerospace applications

Features: Thermal control film made from *UPILEX* film with vapor-deposited aluminum and other materials. Offers superior environmental resistance in outer space and is widely used in Japanese satellites, including the HAYABUSA Asteroid Explorer

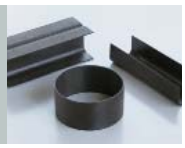
30 

Polyimide foam *UPILEX Foam*

Aerospace Materials Business Group

Applications: Thermal insulation and sound and vibration absorption in satellites, airplanes, etc.

Features: Provides thermal, fire and environmental resistance not available in conventional foams.

★31 

***PETI-330, PETI-365 Prepeg* polyimide resin for heat-resistant composite materials**

Aerospace Materials Business Group

Applications: Composite material primarily used in the aerospace field

Features: Incorporates carbon fibers, has superior heat resistant and mechanical properties, and contributes to weight reduction when substituted for metal alloy parts

32 

SiC Fiber: *TYRANNO FIBER*

Aerospace Materials Business Group

Applications: Components for aircraft, automobiles and ships, etc.

Features: Continuous ceramic fibers incorporating silicon, titanium, zirconium, carbon and oxygen and that have superior heat resistant, mechanical and electrical properties

33 

Plastic cardboard *DANPLATE*

Ube-Nitto Kasei Co., Ltd.

Applications: Returnable boxes, delivery containers, etc.

Features: Heavier-duty than paper-based cardboard, plastic cardboard *DANPLATE* can be used repeatedly and is recyclable after use.

34 

Hollow-structured films for agricultural use *SUNNYCOAT*

Ube-Nitto Kasei Co., Ltd.

Applications: Agricultural greenhouse double curtains

Features: Exhibits heat-retention effects with superior middle air layer. Curbs energy consumption for greenhouse heating

35 

Material for optical cables *RASEN COMPOSE*

Ube-Nitto Kasei Co., Ltd.

Applications: *RASEN COMPOSE* spacers for optical cables

Features: Ideal for protecting optical fiber and high-density packages. Used in Japan's nationwide optical communications network

Cement & Construction Materials

★36 

Modified bitumen-based roofing *RAM SHEET*

Construction Materials Div.

Applications: Waterproof sheet for roofing

Features: Self-adhesive application at normal temperatures means use of flames or solvents is generally not required.

★37 

Gardening material *GREENTHUMB*

Construction Materials Div.

Applications: Light artificial gardening soil

Features: Non-toxic, germ-free artificial soil made from perlite. Facilitates plants' growth by enhancing the airflow and water retention of the soil

★38 

Sulfate-resistant mortar *U-ACITECHT* N

Construction Materials Div.

Applications: Cross-section restoration material (maintenance of aging sewage treatment facilities and cisterns)

Features: Renovates and enhances service life for existing social infrastructure

★39 

Earthquake-resistant *DESIGN FIT Process*

Construction Materials Div.

Applications: Earthquake proofing reinforcement process

Features: Reinforces and upgrades schools and other existing ferroconcrete structures with steel structure earthquake-resistant bracing reinforcement process that shortens construction lead times and reduces costs.

40

Waste treatment technologies
A. *High-chlorine bypass system*
B. *Sewage sludge treatment facilities*
C. *Sewage sludge transport system using JR's containers*
D. *Facility to treat incineration ash from household waste*
E. *Waste oil/liquid treatment facility*
F. *Facility to produce fuel from waste plastic*
G. *Biomass wood chip manufacturing facility*
H. *Waste plastic pretreatment facility*
I. *Sludge drying equipment*

Material Recycle Div.

A. Features: Capable of treating high-chlorine content waste, such as incineration ash from household waste and RDF.
B. Features: Facility that uses sewage sludge as cement material
C. Features: Reduces CO_2 emissions through modal shift. Uses deodorizer-equipped containers to reduce odor levels
D. Features: Facility to treat incineration ash resulting from disposal of household waste and digging out old ash at waste disposal sites when renovating the sites for long-term use
E. Features: Facility to detoxify waste oil and waste liquid
F. Features: Facility to process waste plastics by crushing and using as alternative fuel
G. Features: Facility to produce wood chips from waste and thinned woods, which are used as fuel for electric power generation. Contributes to optimization of biomass resources
H. Features: Facility that preprocesses waste plastic through desalination and solidification using exhaust heat.
I. Features: Facility that processes sludge into thermal energy through drying with exhaust gas

41

Exhaust gas processing agent
CALBREED SII/EX
Sorbalit

Ube Material Industries, Ltd.

Applications: Removal of toxic materials contained in exhaust gas
Features: Exhaust gas treatment agent to improve ability to absorb toxic acid gases emitted during incineration of industrial waste. Ultrahigh exhaust gas agent that features quality improvements that surpass conventional products

★ 42

Sediment improvement agents *CLEAR WATER*

Ube Material Industries, Ltd.

Applications: Purification of seawater, sediment improvement agent for farms
Features: Improves water and sediment quality in fish farms, enclosed water areas, etc.

43

Herbicide *MGO KNIGHT*

Ube Material Industries, Ltd.

Applications: Herbicide, mud prevention
Features: An environment-friendly herbicide that combines magnesium removed from fresh ocean water and decomposed granite soil

★ 44

Portland cement
Fly ash cement
Blast furnace slag cement

Ube-Mitsubishi Cement Corporation

Applications: Civil engineering and construction processes
Features: Uses industrial waste, including sewage sludge, blast furnace slag (generated by steel manufacturers) and fly ash (generated by coal-fired power plants), as a part of raw materials and fuels

★ 45

Cement-based solidification agent
A. *USTABILIER 50*
B. *USTABILIER Super*

Ube-Mitsubishi Cement Corporation

Applications: Soil stabilizing work
A. Features: Controls the release of hexavalent chromium from stabilized soil during construction.
B. Features: Controls dust generation during soil stabilization work.

Machinery & Metal Products

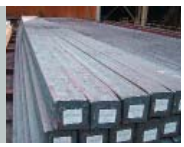
46

Air Floating Conveyor

Ube Machinery Corporation, Ltd.

Applications: Carries materials on a belt supported by continuous air flow
Features: Since the conveyor belt is fully sealed, neither dust nor fumes leak outside. Maintenance costs are low.

47



Billets (steel ingots for rolling)

Ube Steel Co., Ltd.

Applications: Steel material for rolling to produce shaped steel, bar steel, wire rods, etc.
Features: Manufactured in an electric furnace under a process that recycles steel resources. Environment-friendly, recycled product that uses scrap (main material), as well as industrial waste (e.g., waste plastics), as raw materials and fuels

48

Biomass-fueled water and steam boiler
UMF (Ube Multi Fuel) Boiler biomass fuel boiler

Ube Techno Eng. Co., Ltd.

Applications: Water and steam boiler using various types of biomass as fuel
Features: Boiler that can operate with a wide variety of biomass fuels, e.g. wood-type fuels (wood pellets, wood chips) and waste-type fuels (RPF, PKS and animal excrement)

49

Facility to improve water quality with micro-bubble ozone
MBO3

Ube Techno Eng. Co., Ltd.

Applications: Decolorization, sterilization of wastewater and reduction of sewage sludge volume
Features: With micro-bubble ozone, decolorizes and sterilizes wastewater and reduces the volume of sewage sludge effectively.

50

Kiln exhaust heat recovery equipment

Ube Techno Eng. Co., Ltd.

Applications: Recovers heat that is produced from the body of kilns
Features: Conventional kilns can be converted at low cost allowing for the recovery of exhaust heat as hot water.

51

Electric deck machinery

Fukushima Ltd.

Applications: Ship deck-mounted machinery
Features: Electric drive contributes to energy conservation

52

Energy-saving grab bucket

Fukushima, Ltd.

Applications: Grab bucket used at waste disposal facilities
Features: Reduces CO_2 emissions by about 28% compared to the conventional fixed-pump type

Energy & Environment

53

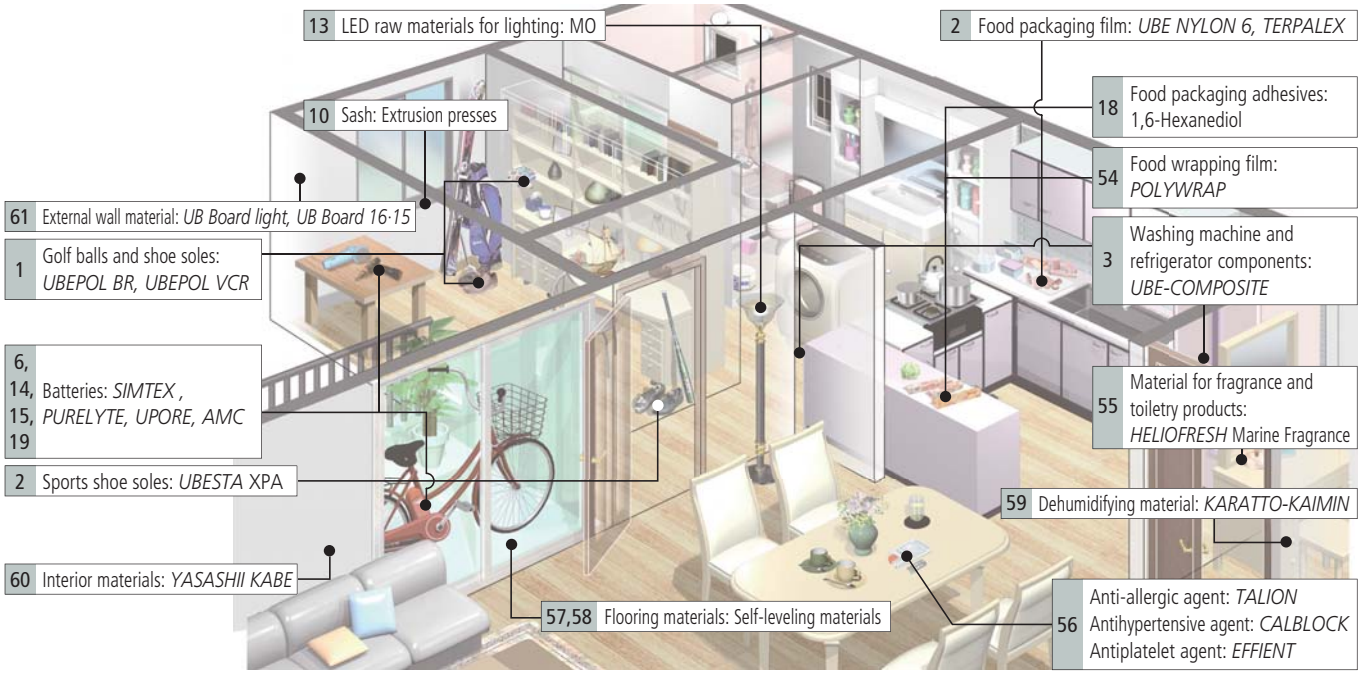
Facility to produce biomass fuel for power plants

Power Business Unit

Applications: Dry and grind wood biomass (e.g., waste construction materials) at a dedicated grinding mill so as to use it in co-firing with coal in a pulverized coal boiler
Features: With a high co-firing ratio (9%, caloric base), achieves a 100,000-ton annual reduction of CO_2 emissions at UBE's IPP power generation plant

Pharmaceuticals and Lifestyle-Related Fields

UBE Group Products and Technologies are used in all aspects of modern life.



Chemicals

54

A. *POLYWRAP*
B. Shrink film *ECO SOFT*

Ube Film, Ltd.

Applications: Food wrapping film and additive-free polyethylene wrapping film
Features: No emission of dioxin or other toxic gases when combusted because it contains no chlorine.

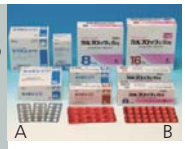
55

Material for fragrance and toiletry products:
HELIOFRESH, HELIOTROPINE

Fine Chemicals Business Unit

Applications: Synthetic fragrance for use in perfumes and toiletries
Features: As an alternative to scents made with natural ingredients, this product prevents deforestation of the Sassafras tree (a member of the Laurel family)

56



C

A. Anti-allergic agent *TALION*
B. Antihypertensive agent *CALBLOCK*
C. Antiplatelet agent *EFFIENT*

Pharmaceutical Div.

A. Applications: Medicine to alleviate allergic reactions such as hay fever
Sales: Mitsubishi Tanabe Pharma Corporation
B. Applications: Medicine to lower blood pressure
Sales: Daiichi Sankyo Co., Ltd.
C. Applications: Medicine that controls the buildup of platelets within blood vessels (coagulation of blood)
Sales: Daiichi Sankyo Co., Ltd. and Eli Lilly and Co.

Cement & Construction Materials

57

Self-leveling materials
SL FLOW G
Tough Leveler G
Quick Ceramic Flow

Construction Materials Div.

Applications: Flooring material
Features: Its rapid-hardening property allows smooth and flat flooring to be completed within a short period, helping to accelerate the entire construction period.

58

F ☆☆☆☆ Mark-certified (formaldehyde-free) construction materials
Tenba Leveler
U-Grout
U-MIX

Construction Materials Div.

Applications: Plastering, flooring, and walling materials for living areas
Features: Obtained the F ☆☆☆☆ Mark certification, the most rigorous formaldehyde release standard under a voluntary labeling system in Japan Building Coating Materials Association. Being formaldehyde-free, it has no harmful effects.

59

Dehumidifying material *KARATTO-KAIMIN*

Ube Material Industries, Ltd.

Applications: Dehumidifying material for clothes and mattresses
Features: The main component is Type-B silica gel, capable of being used repetitively after drying in the sun.

60

Healthy, humidity-conditioning building material
YASASHII KABE

Ube Board Co., Ltd.

Applications: Interior materials for rooms with high humidity
Features: Primarily made from natural diatomite. Capable of humidity conditioning and absorption and decomposition of VOCs that cause sick building syndrome, helping to maintain a pleasant living environment

61

External wall material
UB Board Light
UB Board 16·15

Ube Board Co., Ltd.

Applications: External wall materials
Features: A product that reuses fly ash and other industrial waste in raw materials

Site Reports (UBE Group's Principal Manufacturing Bases)

Chiba Petrochemical Factory

Location: 8-1 Goi Minami Kaigan, Ichihara City, Chiba Prefecture
Start of operations: 1964
No. of employees: 260
Main products: Polyethylene, butadiene rubber, waterproofing materials

The Chiba Petrochemical Factory is located in Ichihara City, Chiba Prefecture, within the Keiyo Industrial Zone. We produce petrochemical products that support people's lives, including the synthetic rubber used as a raw material for tires and polyethylene for making electrical cable coatings and various types of packaging materials. To fulfill our promise to ensure the safety and security of local communities and customers, we anticipate every possible risk and promote related prevention measures. Regarding our environmental initiatives, we are significantly reducing the factory's environmental impact by ceasing the use of highly harmful solvents and putting in place countermeasures in such areas as exhaust gas and the incineration of waste solvents in boilers. In addition, we regularly monitor the water and gas discharged from the factory in order to identify irregularities early on. With the aim of encouraging interaction between the local community and UBE, we participate in the Goi-Rinkai Festival and hold factory tours as well as other events for local elementary school students. Through these activities, we are promoting active exchanges with the local community.

Sakai Factory

Location: 3-1 Chikko Shinmachi, Nishi-ku, Sakai City, Osaka
Start of operations: 1967
No. of employees: 288
Main products: Caprolactam, ammonia, liquefied carbon dioxide, electrolytes, separation membranes, polyimide products, recycled compounds

Our factory is located in Sakai City, which as an environment-friendly model city, has announced the Cool City Proclamation. The factory manufactures chemical products and specialty materials and is taking proactive steps to conserve energy and resources. In 2011, we invited members of the local community to visit the factory in order to exchange opinions and promote interaction with residents. Our goal is to create a facility that contributes to the local community through dialogue with local residents and cooperation with the government, while maintaining safe and secure operations.

Ube Chemical Factory

Location: 1978-10 Kogushi, Ube City, Yamaguchi Prefecture
Start of operations: 1933
No. of employees: 1,260
Main products: Caprolactam, nylon resins, industrial chemicals, fine chemicals, high-purity chemicals, polyimide products, separation membranes, new materials, active pharmaceutical ingredients, intermediates

As the mother factory for the Company's chemical business, the Ube Chemical Factory produces superior quality products in such areas as chemicals, resins, specialty and fine chemicals, and pharmaceuticals. At the same time, we maintain safe and stable operations. In fiscal 2011, we promoted energy conservation, environmental preservation and disaster prevention measures by streamlining and consolidating existing facilities. The space freed by these actions allowed us to install new facilities to manufacture environment-friendly coating, battery and other materials. We continued to hold regional dialogue meetings with members of the local community. In particular, we deepened public understanding of our earthquake and tsunami countermeasures. In fiscal 2012, the final year of the current medium-term management plan, we will, in addition to the above-mentioned initiatives, focus on reducing the use of PRTR substances.

Ube Cement Factory

Location: 1978-2 Kogushi, Ube City, Yamaguchi Prefecture
Start of operations: 1923
No. of employees: 175
Main products: Cement, limestone, perlite

The Ube Cement Factory functions as a manufacturing and shipping base for cement and limestone products produced in the Ube and Isa regions. At the same time, we are striving to make this factory a production base for specialty cement to meet various customer needs. With the collaboration of our employees, we are using waste plastic chips and biomass-based energy in our manufacturing processes while reducing energy consumption. In addition, we constantly work to maintain a safe, reliable, open and clean cement factory for both employees and the local community.

Isa Cement Factory

Location: 4768 Isa, Isa-cho, Mine City, Yamaguchi Prefecture
Start of operations: 1948
No. of employees: 153
Main products: Cement, limestone

Located in Mine City, home of Akiyoshidai Quasi- National Park—famous for its karstic (limestone) topography—Isa Cement Factory has one of the largest cement manufacturing and limestone mining operations in Japan. With our factory and mine situated close to the local community, we have established and operate within voluntary managerial targets that are stricter than existing laws and regulations in such areas as noise, vibrations and water discharge. We also recognize the importance of maintaining smooth communications with the local community. We seek to become an "eco factory trusted by the community" by paying the utmost attention to environmental protection, while participating in various local events and operating factory tours. In recent years, we have received favorable reviews for tours of our industrial facilities, which highlight roads used exclusively by UBE.

Reference: Please refer to p. 38 for environmental impact data by factory

Kanda Cement Factory

Location: 7 Nagahama-machi, Kanda-cho, Miyako-gun, Fukuoka Prefecture
Start of operations: 1964
No. of employees: 70
Main products: Cement

Located in Kanda Town in an industrial zone home to companies in such sectors as cement, automobiles, machinery and metal, the Kanda Cement Factory has enjoyed booming business in recent years. We completed the installation of and began operating a waste plastic pretreatment facility in the factory in March 2012. Looking ahead, we will increase our presence as an authority on waste material treatment. Rooted in a mutually supportive coexistence with the local community, we will also promote safe and clean factory operations by continuing to maintain our zero accident record together with employees and partner companies.

Okinoyama Coal Center

Location: 1980-29 Okinoyama, Kogushi, Ube City, Yamaguchi Prefecture
Start of operations: 1980
No. of employees: 34
Main products: Storage and distribution of coal and petroleum coke

Although it started out in the coal mining business, the Okinoyama Coal Center withdrew from these operations in 1967. However, the center commenced activities in 1980 that focus on such other coal-related businesses as operating Japan's largest fuel coal import transshipment station (annual amount handled: 6 million tons), which provides a stable supply of coal, an important energy source for Japan. In particular, the importance of coal has recently been reevaluated, reflecting uneasiness over nuclear power generation in the aftermath of the Great East Japan Earthquake. Aiming to maintain the trust of the local community, we are working in unison with employees and partner companies in the areas of health and safety, environmental preservation, and process safety and disaster prevention.

Ube Machinery Corporation, Ltd.

Location: 1980 Okinoyama, Kogushi, Ube City, Yamaguchi Prefecture
Start of operations: 1914
No. of employees: 667
Main products: Die-casting machines, injection molding machines, extrusion presses, crushing machine, ceramic machine, transportation equipment, water screen equipment, bridge members, floodgates, steel structures

We are further advancing product manufacturing capabilities that have been passed down over the years. Under the concept of saving energy and space while increasing functionality, we are undertaking technological innovations for such products as die-casting, electric injection molding and crushing machines. At the same time, we are earning the trust and meeting the expectations of customers by working to harmoniously coexist with the local community while providing environmentally friendly products and services that satisfy customers worldwide. In line with our fundamental policy of creating a safe and secure workplace by fostering a culture that places the highest priority on safety, we are promoting activities that increase employee health. In addition, we are striving to create areas that are safe and healthy for all employees to work in by augmenting safety-related activities together with partner companies.

Thailand

UBE Chemicals (Asia) Public Co., Ltd.
Location: Rayong, Thailand
Start of operations: 1997
No. of employees: 516
Main products: Nylon 6 resin, nylon compound, caprolactam, ammonium sulfate

Thai Synthetic Rubbers Co., Ltd.
Location: Rayong, Thailand
Start of operations: 1998
No. of employees: 81
Main products: Butadiene rubber

UBE Fine Chemical (Asia) Co., Ltd.
Location: Rayong, Thailand
Start of operations: 2011
No. of employees: 19
Main products: 1,6-hexanediol, 1,5-pentanediol

We began operating in the fine chemicals field in fiscal 2011. Having expanded its annual construction capacity to 130,000 tons, our caprolactam plant produces oxidized byproducts used as raw materials in the manufacture of 1,6-hexanediol and 1,5-pentanediol. Through these operations, we are meeting demand in Asian markets, which are experiencing noticeable growth. We aim to maintain clean, efficient and effective production while focusing on harmoniously coexisting with the local community and the environment. During the flooding in Thailand, we rapidly executed a BCP that prevented the suspension of operations and enabled us to assist disaster victims. Moreover, we participated in joint committees established by government agencies, NGOs, the local community and industry to search for ways to solve environmental and social problems. As a member of the Federation of Thai Industries and the Petrochemical Industry Club, we are working to improve our image in society through such measures as making proposals on petrochemical strategies to the Thai government.

Spain

Ube Corporation Europe, S.A./Ube Chemical Europe, S.A.
Location: Castellón, Spain
Start of operations: 1967
No. of employees: 296
Main products: Caprolactam, ammonium sulfate and liquid fertilizers, polycarbonatediols, 1,5-pentanediol, 1,6-hexanediol

Ube Engineering Plastics, S.A.
Location: Castellón, Spain (adjoining UCE)
Start of operations: 2004
No. of employees: 42
Main products: Nylon 6 resin, copolymerized nylon

Facing the Mediterranean Sea, our factory engages in sales activities on four continents. With operations that span the nearby Mediterranean coast and Europe to Latin America and Asia, we play an important role in global markets. In addition, we have devoted much effort over the past several years to enhancing such areas as product quality, packaging, shipping and labeling in order to deliver high-value-added products and services that meet customer needs. Our factory is equipped with an R&D center that focuses on nylon, fine chemicals and electrolytes. As a result, we can concentrate on developing new product applications for each of these items. We have recently been engaged in such major projects as increasing the production of polycarbonatediol and large-grain ammonium sulfate as well as constructing a raw material cargo-discharge facility at a new port located in Castellón. Amid these activities, we are without a doubt maintaining safe operations as we continue implementing further improvements that include minimizing latent risks, engaging in the comprehensive safety management of chemical substances and being more environment-friendly.

Third-Party Expert Comments

The UBE Group welcomes expert comments on its CSR report to enhance objectivity and identify new CSR challenges. We intend to reflect these opinions in future reports and take them into consideration when promoting UBE Group CSR activities.

Katsuhiko Kokubu
Professor of Social and Environmental Accounting
Graduate School of Business Administration, Kobe University

Contributing to Society through Main Businesses

The *UBE Group CSR Report 2012* features a combined special features section on the Aerospace Materials Business Group and Material Recycle Division. The Aerospace Materials Business Group's efforts to contribute to the global environment through such advanced materials as polyimide products and *TYRANNO FIBER®* are clearly illustrated in this section. In addition, I gained an understanding of the Material Recycle Division's major success in developing technological innovations in resource recycling, an area that is closely linked to the UBE Group's core business operations. These businesses and activities are extremely important in terms of CSR. Accordingly, I would like to see such initiatives systemically integrated into UBE's CSR activities and related information continuously disclosed in the future.

CSR That Emphasizes Local Communities

A characteristic of the UBE Group's CSR is the emphasis placed on local communities in its corporate management. This symbolized by the Group's corporate philosophy, "living and prospering together." Valuing the community in which it originated, UBE has for many years continued to engage in business pursuits that reflect its corporate philosophy of developing in tandem with Ube City. I give UBE high marks for its efforts to make this approach part of its CSR activities. Creating shared value with local communities is a CSR strategy that is currently being emphasized worldwide. I believe that the UBE Group places the highest priority on creating such shared value. Looking ahead, I believe that UBE will develop further by strengthening initiatives that utilize feedback from members of the local community concerning CSR activities.

Proactive Environmental Activities

The UBE Group actively engages in environmental protection activities. The Group has introduced a new perspective on measures that prevent global warming with the incorporation of such concepts as Scope 3. Reducing environmental burdens along the entire supply chain, as represented in Scope 3, will become a very important aspect of environmental protection activities from here on. As such, I believe that it is necessary to systematize the positioning of individual environmental protection activities based on the establishment of major targets for increasing production efficiency using natural resources.

Investigating Key Performance Indicators (KPI)

Throughout the *UBE Group CSR Report 2012*, UBE uses an innovative approach that makes it very easy to read while the interview format used in the Message from the President conveys the ideas presented in an understandable manner. The individual activities featured in this report are carefully explained, making a positive impression on the reader. I would like to see future UBE Group CSR reports include a highlight page that provides an overview of each CSR activity undertaken. For this reason, indicators that display the Group's successful CSR activities are required. Using both CSR and financial indicators to create integrated reports is a trend that is gaining traction worldwide. Because of this, I encourage the UBE Group to look into moving in this direction. I very much look forward to seeing the future development of the UBE Group.

Katsuhiko Kokubu

Graduating with a PhD from Osaka City University's Graduate School of Business, Dr. Kokubu assumed his current post in 2001 after serving as an associate professor at Osaka City University and Kobe University. Dr. Kokubu also serves as the chairman of Material Flow Cost Accounting (MFCA) ISO/TC207/WG8 Committee established by the Japanese Ministry of Economy, Trade and Industry (METI). Dr. Kokubu has also served many times a member and chairman of various committees overseen by METI and Japanese Ministry of the Environment. In addition, Dr. Kokubu's major publications include *Material Flow Cost Accounting* (Nikkei Publishing Inc.) and *Accounting System Supporting Corporate Descison-Making for Environmental Management* (Chuokeizai-Sha, Inc.).
Official website: www.b.kobe-u.ac.jp/~kokubu (Japanese language only)

Response to the Third-Party Comments

We very much appreciate Dr. Kokubu's valuable insights with regard to the *UBE Group CSR Report 2012*. At the beginning of the Third-Party Comments section, Dr. Kokubu praised the UBE Group's contributions to the global environment through the activities of the Aerospace Materials Business Group and Material Recycle Division. Reflecting the idea that CSR and operations are inextricably linked, the Group will continue to make contributing to society through its business endeavors a cornerstone of its CSR activities in the years ahead.

We also received high marks for engaging in corporate management that emphasizes local communities. This reflects the ongoing legacy that is the UBE corporate philosophy, "living and prospering together." This philosophy is based on the conviction of our founder, Sukesaku Watanabe, who emphasized the parallel development of business and local communities. In addition to the RC Regional Dialogue Conference and other initiatives undertaken to date to foster communication with local communities, the UBE Group plans to begin publishing a community magazine in the Ube district this autumn. Through this magazine, we will communicate a broad range of information that includes factory announcements and feedback from residents in order to forge closer bonds between Group and the local community.

Looking at Dr. Kokubu's evaluation of our proactive global environmental protection activities, we will continue to undertake forward-looking initiatives with the belief that fulfilling our CSR is extremely important.

Regarding measures to prevent global warming, we will work to further decrease CO_2 emissions by continuing to quantitatively determine the volume of CO_2 emissions and reductions in all UBE businesses using the Scope 3 method as well as throughout the entire supply chain of UBE's mainstay environment-friendly products using the c-LCA method.

Finally, Dr. Kokubu proposed the adoption of KPI. Although the *UBE Group CSR* reports currently include a CSR Matrix section that focuses on the formulation of action items, we will review this section based on his suggestion. In particular, we will examine ways to create reports that provide an overview of every Group CSR activity and presents related successes in an easy-to-understand manner.

CSR reports are a mirror that reflects a company's image. With this in mind, we will work to improve future CSR reports in order to reveal the UBE Group's true image to all stakeholders and, in turn, increase their confidence in us.

Akinori Furukawa
Director in Charge of Group CSR, Vice-President and Executive Officer

Third-Party Verification and Opinion

In June and July 2012, UBE received third-party verification of the environment and safety activities outlined in the *UBE Group CSR Report 2012* from the Responsible Care Verification Center. UBE annually receives verification of the trustworthiness of its CSR reports, and it aims to further improve the quality and content of future CSR reports by reflecting the feedback the Center provides in its verification questionnaire and written opinion regarding the verification results.

UBE Group CSR Report 2012

Third-Party Verification—Written Opinion

July 10, 2012

Michio Takeshita
President & Representative Director
Ube Industries, Ltd.

Junji Takase
Chief Director
Responsible Care Verification Center
Japan Chemical Industry Association

Objectives of CSR Report Verification

The Responsible Care Verification Center verified the *UBE Group CSR Report 2012* (hereinafter, "the CSR Report"), created by Ube Industries, Ltd., by providing its opinion regarding the following items, which focus on responsible care-related activities listed in the CSR Report, in its capacity as an expert in the chemical industry:

1) Rationality and accuracy of the method used to calculate and tabulate the performance indicators (numerical data)
2) Accuracy of the information (other than numerical data) provided in the CSR Report
3) Performance of Responsible Care (RC) activities
4) Characteristics of the CSR Report

Verification Procedures

- The Center staff visited the head office of Ube Industries, Ltd. and asked questions to verify the rationale of the method the Company used to compile numerical data reported by each of its sites (offices and plants) and to check the accuracy of information provided in the CSR Report. Employees in charge of relevant business operations and those in charge of creating the CSR Report answered the questions of the Center staff and made presentations and explanations covering the documentation used.
- The Center staff also visited the Chiba Petrochemical Factory and asked questions to verify the rationale of the method the sites employed to calculate the numerical data reported to the head office and the accuracy of the numerical data and other information provided in the CSR Report. Factory employees in charge of relevant business operations and those in charge of creating the CSR Report answered the questions of the Center staff and presented and made presentations and explanations covering the documentation used. The Center staff also checked the consistency of the items used to verify the material evidence submitted.
- The Center used its sampling method to verify the numerical data and other information contained in the CSR Report.

Opinions

1) Rationale of the method used to calculate and tabulate the performance indicators and accuracy of the numerical data
   - Both the head office and the Chiba Petrochemical Factory calculated and tabulated the performance indicators in a rational manner.
   - The gathering information on environmental performance and other areas was undertaken using standardized table calculation software to demonstrably prevent information leakage.
   - Performance-related numerical data within the scope of the survey was precisely calculated and tabulated.
2) Accuracy of information contained in the CSR Report, Excluding Numerical Data
   - The information published in the CSR Report was accurate. The Center pointed out that some of the expressions used in the draft CSR Report were not appropriate or easy to understand, and corrections were subsequently made. As a result, with respect to the CSR Report, there were no such serious problems.
3) Performance of the Responsible Care (RC) activities
   - The Center commends the UBE Group for already achieving fiscal 2011 targets by demonstrably reducing greenhouse gas emissions and the volume of the 12 voluntarily selected chemical substances it uses. Conversely, the Center urges the entire Group to make an effort to significantly decrease the volume of waste for external final disposal in light of a major increase in industrial waste off-site disposal volume.
   - Although the number of occupational accidents remains unchanged, the Center expects UBE to take further actions that involve partner companies to eradicate such accidents.
   - The Center recognizes the effectiveness of expanding initiatives at the Chiba Petrochemical Factory that aim to prevent the deterioration of personnel and facilities. The Center expects greater success in this area through ongoing spiral-up activities.
4) Characteristics of the CSR Report
   - The Center recognizes the Group's formulation of an editorial policy that seeks to make the CSR Report more interesting and easier to read.
   - The Center commends the new section in the CSR Report that reports on the UBE Group's individual activities.

Editorial Policy

We began publishing an annual RC report in 1997 to introduce our environmental initiatives. We subsequently changed the name of the report to the *CSR Report*. This year, 15 years after the very first publication of the report, we have created the *UBE Group CSR Report 2012* as our eighth CSR report. In our editing of this CSR report, we have maintained a commitment to producing a readable document that is of interest to readers. The main features of the 2012 edition are as follows:

1. Message from the President: Dialogue with an expert:
   Aiming to "coexist" with all stakeholders, in what areas must the UBE Group fulfill its role as a member of society? In March 2012, we invited Junko Nagata, Associate Professor of Osaka City University's Graduate School for Creative Cities, to participate in a discussion exploring the UBE Group's CSR activities with Michio Takeshita, President and Group CEO, Representative Director of Ube Industries, Ltd. Ms. Nagata has provided an expert third-party opinion on the UBE Group's CSR reports for four consecutive years since 2008. We showcase this discussion in the Message from the President.
2. Special feature: The UBE Group's leading technologies:
   The UBE Group promotes the development of a wide array of products and technologies that lead to inspiring advances and foster environmental friendliness. An example of this can be seen in this report's special feature on the initiatives that UBE is undertaking in the areas of spacecraft materials and resource recycling.
3. Enhance interactive communication:
   To clearly show how the public views the UBE Group and to identify new CSR-related issues for the Group, we included more opinions from third parties in this report in sections such as "Guest Message." By doing this, we aim to realize interactive communication.
4. Create an easy-to-read page format:
   We structured this report to feature concise content and an easy-to-read design in order to make it satisfactory for all of our stakeholders. We received certification from Color Universal Design Organization for the fourth consecutive year and have used universal font in this report.

Scope of This Report

Period covered:

Fiscal 2011 (from April 1, 2011 to March 31, 2012)
(The report, however, does at times refer to activities conducted in fiscal 2012 and future plans.)

Companies covered:

- The UBE Group (146 companies)
  - o Of which the following companies are covered in the reporting of major financial data (page 12):
    Ube Industries, Ltd. and its consolidated companies (92)
    Consolidated subsidiaries: 67
    Equity-method affiliates: 25
  - o Of which the following companies are covered in the reporting of environmental performance data:
    Ube Industries, Ltd.
    Three chemical factories (Chiba, Sakai and Ube)
    Three cement factories (Ube, Isa, Kanda)
    Okinoyama Coal Center
    Other Group companies (11)
    Ube Film, Ltd., Meiwa Plastic Industries, Ltd., Ube Ammonia Industry, Ltd., Ems-Ube, Ltd., UBE-MC Hydrogen Peroxide, Ltd., Ube-Nitto Kasei Co., Ltd., Ube Materials Industries, Ltd., Ube Board Co., Ltd., Ube Machinery Corporation, Ltd., Ube Steel Co., Ltd., Fukushima Ltd.

Definitions:

UBE: refers to Ube Industries, Ltd. (unconsolidated)
The UBE Group: refers to the UBE Group companies, including Ube Industries, Ltd.

Areas covered:

Japan and some locations overseas (including Thailand, Spain and Others)

Statistical data published in this report:

- All statistical data and relevant descriptions published in this report, excluding the environmental performance data, cover all Group companies.
- In principle, data is for the last five years (fiscal 2007 to 2011)
- The scope of data, however, does vary in places. In such cases, the specific scope is noted on the relevant page.

Reference guidelines:

This report was created with reference to the Japanese Ministry of the Environment's Environmental Reporting Guidelines (2007 edition). We also referred to the Ministry's Environmental Performance Indicators Guidelines for Organizations (2002 edition) for environmental performance data and to the Ministry's Environmental Accounting Guidelines (2005 edition) for environmental accounting standards.

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Special Features

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Information

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Wings of technology
Spirit of innovation
UBE

The UBE DOG was created in March 1997 as a character for the UBE Group's TV commercials.

'12 CUD COLOR UNIVERSAL DESIGN

From left:
A certification acquired from the Color Universal Design Organization for the Company's development of a user-oriented design system that considers people with various types of color vision to allow information to be accurately conveyed to as many individuals as possible

The "Heartfelt Mark" logo affects that this report was published by a company that proactively promotes the employment of persons with disabilities

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