



COVALENT GROUP CSR Report 2008
Corporate Social Responsibility Report



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Editor's Note

This is our sixth report since the publication of our first Environmental Report in 2003. The 2007 Report saw the expansion of our commitment to society in the Social and Environmental Report of the same year. In 2008, we increased that commitment even more, and have changed the title to CSR Report 2008 to reflect our efforts. In this report, we present the Covalent Group's business, social and environmental activities from the perspective of corporate social responsibility (CSR). Our intent is to present the Covalent Group's activities and explain our commitment to CSR in a manner that is easy to grasp to our stakeholders, which include our customers, shareholders, employees and people in the communities where we do business.

Scope of the Report

This report covers the following facilities and affiliated companies:

Covalent Materials Corporation's three facilities:

- Oguni Facility
378, Oaza Oguni-machi, Oguni-machi, Nishiokitama-gun, Yamagata
- Hadano Facility
30, Soya, Hadano, Kanagawa
- Kariya Facility
1, Minami-Fuji, Ogakie-cho, Kariya, Aichi

Consolidated subsidiaries:

- Covalent Materials Niigata Corporation
6-861-5, Higashiko, Seiro-machi, Kitakanbara-gun, Niigata
- Covalent Materials Tokuyama Corporation
2-1-32, Eguchi, Shunan, Yamaguchi
- Covalent Materials Nagasaki Corporation
296, Momozugo, Kawatana-cho, Higashisonogi-gun, Nagasaki
- Covalent Materials Sekikawa Corporation
278, Oaza Tatsutashin, Sekikawa-mura, Iwafune-gun, Niigata
- Tokai Ceramics Co., Ltd.
308-1, Yoshibora, Shidare-cho, Toyota, Aichi

The above three facilities and five consolidated subsidiaries are collectively referred to as "business sites."

Reporting Period

Fiscal 2007 (April 1, 2007 to March 31, 2008). This report presents the results of activities in fiscal 2007 and also refers to subsequent topics.

Publication

Previous issue: October 2007
Next issue: October 2009 (scheduled)

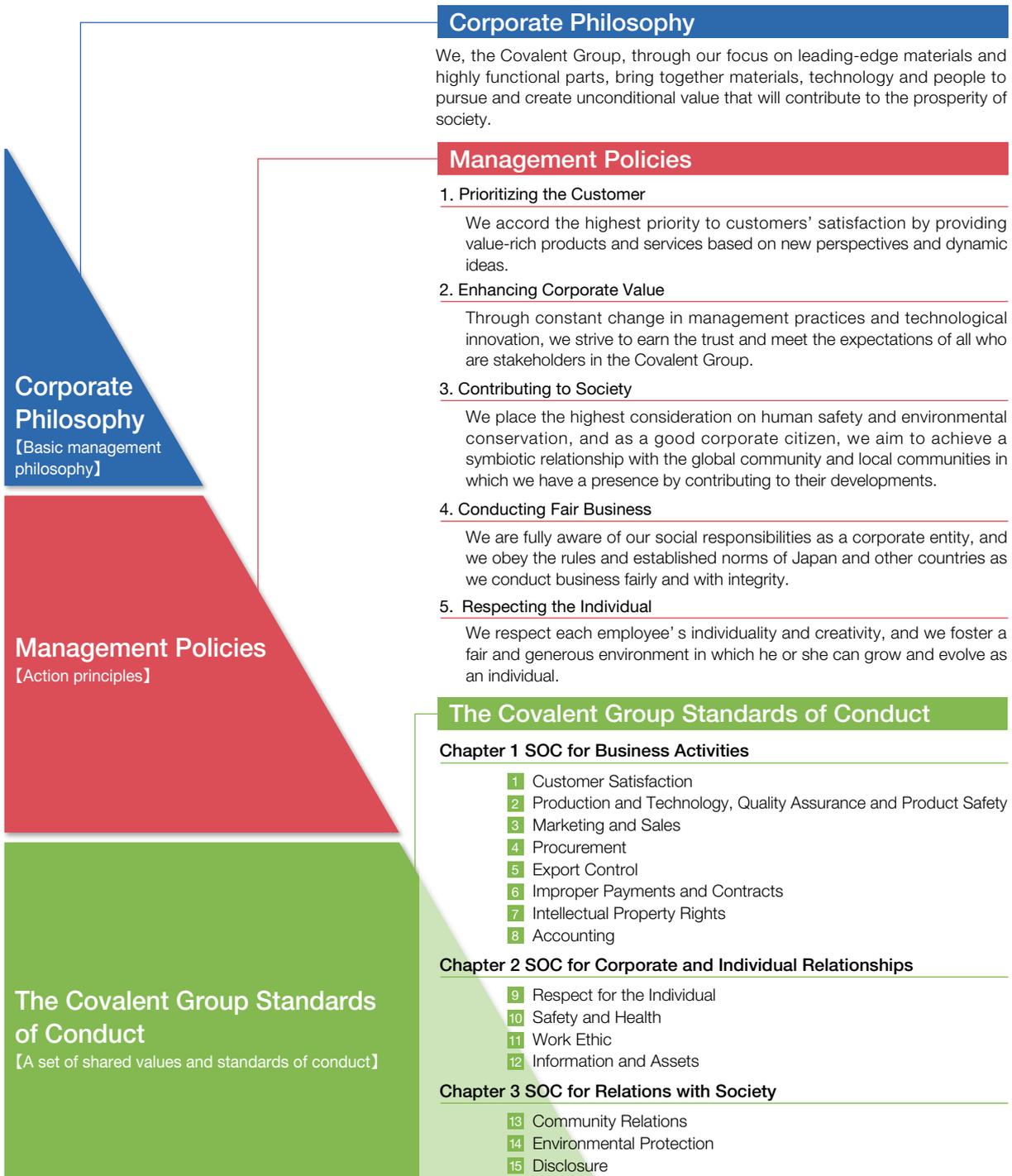
Reference Guidelines

- *Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (G3 Guidelines)*
- *Environmental Reporting Guidelines (Fiscal Year 2007 Version)*, Ministry of the Environment of Japan
- *Environmental Accounting Guidelines 2005*, Ministry of the Environment of Japan

Corporate Philosophy and Principles

The Covalent Group's Philosophy and Principles

The Covalent Group adheres to the concepts contained in the Corporate Philosophy, Management Policies and the Covalent Group Standards of Conduct. Our principles related to corporate social responsibility are shared throughout the Group and are at the foundation of our management practices and business activities.



President's Message

CSR Means Reassuring Our Stakeholders and Meeting Their Expectations



Dr. Susumu Kohyama
President and CEO Covalent Materials Corporation

A handwritten signature in black ink that reads "S. Kohyama".

Covalent Materials in Our First Year

Covalent Materials Corporation was launched in June 2007 following the separation of Toshiba Ceramics Co., Ltd. from the Toshiba Group in October 2006 in a management buyout. Although our name is new, we have an 80-year history in leading-edge materials and technologies, including silicon wafers, process materials for semiconductor and liquid crystal manufacture and advanced ceramics. We have produced many high-performance materials for the semiconductor industry and other high-growth markets.

Our new capital structure as an independent company has made it possible to make decisions flexibly for the medium and long terms without being constrained by short-term fluctuations in the marketplace. Along these lines, we are investing our management resources in fields where we are highly competitive and where high growth is expected. We aim to transform and grow in a manner that we were not able to under the previous capital structure.

The Covalent Group's Corporate Social Responsibility

During this period of transition, we understand that our management transformation must be accompanied by greater awareness of and commitment to corporate social responsibility.

At the foundation of the Covalent Group's corporate social responsibility is the belief that we must fulfill our responsibility to society as we carry out our business activities. As we create value, we put into practice our Corporate Philosophy. This is how we would like to reassure our stakeholders and meet their expectations.

The Covalent Group's Corporate Philosophy provides the framework for our business: we "bring together materials, technology and people to pursue and create unconditional value that will contribute to the prosperity of society." In order to put our philosophy into practice, we have established the Management Policies which outline the values we follow when conducting business. Finally, the Group Standards of Conduct list the guidelines which all employees are expected to observe as they fulfill their corporate social responsibility.

By offering products and services of value and increasing our

customers' trust, we work to achieve stable business growth, fair profits and the delivery of benefits to shareholders, employees and other stakeholders. As we do this, we respect people, contribute to the local community and take care to reduce environmental impacts. These activities generate economic, human and environmental value, which are equally important. By growing as an enterprise and increasing our economic value, we are able to broaden our contribution to society and the environment even more, and in turn our increased social value and reliability work to enhance our economic value. From this viewpoint, we strike a balance between these three values to fulfill our corporate social responsibility.

CSR Activities

The Covalent Group has long been involved in leading-edge materials and parts that support the public infrastructure, such as silicon wafers, process materials for semiconductor and liquid crystal manufacture and advanced ceramics. We have developed our business in silicon and ceramics, and as an enterprise that has skillfully combined our strong points in both of these domains, there is no other company in the world like ours. As such, we intend to expand by merging together the strong points of both domains to create unique, high value-added products that only the Covalent Group can create. At a time when technology continues to become more sophisticated and greater importance is attached to the environment and energy, we are planning further refinements in our semiconductor and liquid crystal businesses, and we intend to strengthen our involvement in newer domains such as compound semiconductors, solar battery components and bio.

We have expanded our quality assurance systems to provide safe, reliable products and services and we will continue to strengthen continuous quality improvement with the aim of being a company that customers can trust. We will continue to participate in community events and conduct traffic safety campaigns and cleanup drives to earn the community's trust as a good corporate citizen. We respect each worker's individuality and sense of values while promoting the development of human resources, and we raise safety awareness by implementing occupational safety and health management systems and establishing safety training facilities. We will continue to respect human rights and establish safe and secure workplaces.

The most urgent environmental problem we face today is global warming. The Covalent Group considers the reduction of greenhouse gas emissions an important management task, and we have implemented measures to help mitigate the problem. In fiscal 2007, our plants emitted 218,000 tons of CO₂, reflecting a reduction in emissions intensity compared to the previous year. Some of our energy conservation measures include using clean electricity generated by our own hydroelectric power plant, switching to fuels with a low CO₂ emission coefficient, and increased productivity. We will continue to actively reduce CO₂ emissions with the introduction of new technologies. Under the concept of green manufacturing, we will focus on continuous corporate development by improving our products and services as we contribute to a better global environment.

In fiscal 2007, we investigated a company-wide CSR policy, a CSR implementation structure and ways to disseminate information within and outside the Group. We established a corporate governance system to continually uphold our social responsibilities. We will implement the CSR structure within the framework of the Corporate Philosophy and strive to balance the three values of the Group's business activities – economic, human and environmental – to inspire the confidence of our stakeholders and meet their expectations.

Creating New Values and Contributing to Society

The word covalent means "sharing" and "bonding." The name expresses our desire to create new values with ceramics and silicon by combining materials, technology and other assets while placing importance on the relations we have with our customers, partners, local communities, employees and all stakeholders.

The Covalent Group will always seek new challenges through open-minded thinking and offer products that have new, high added value. Through our collective strength we hope to meet all our stakeholders' expectations as we undertake activities that contribute to society.

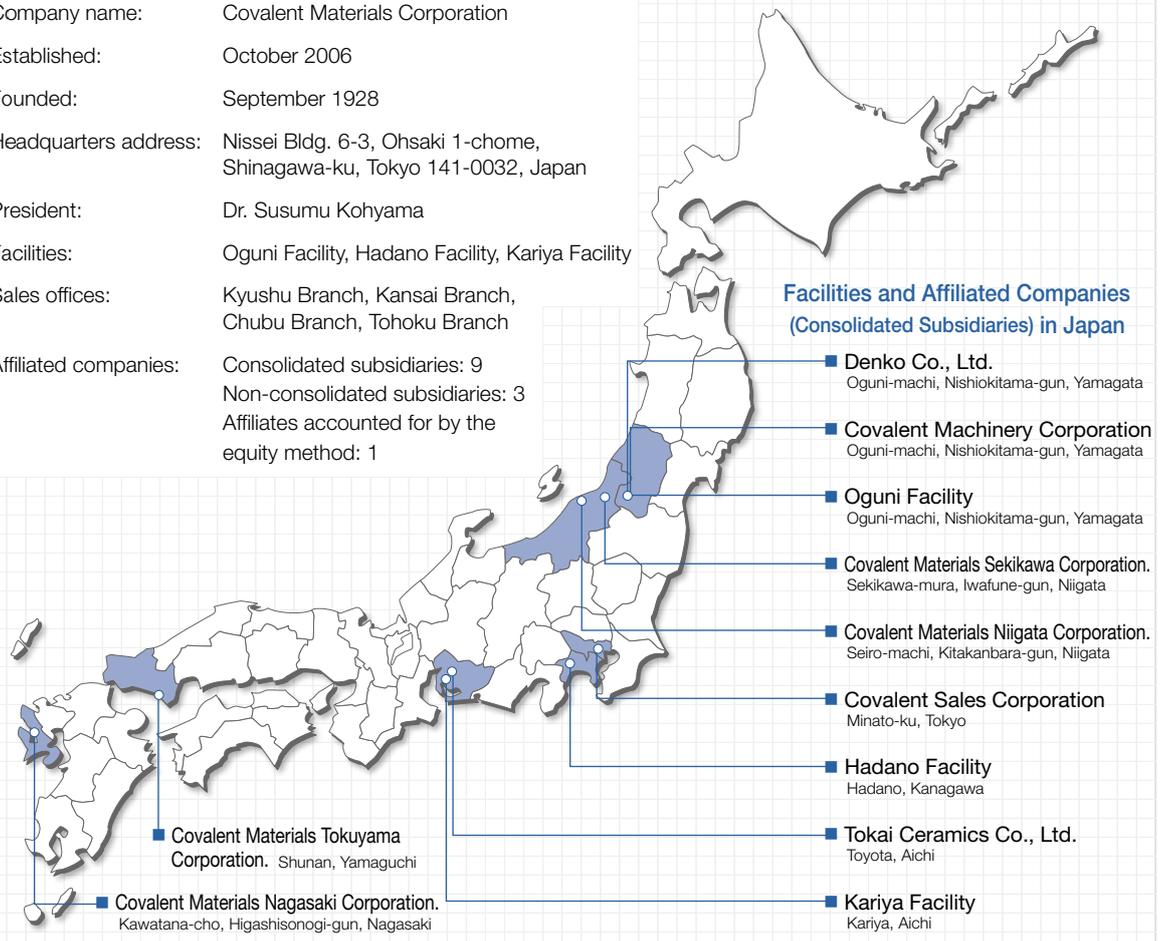
I hope that this report deepens your understanding of our CSR activities. I ask for your continued guidance and encouragement in the coming years.

Company Overview and Business Performance

Company Overview

Company name: Covalent Materials Corporation
Established: October 2006
Founded: September 1928
Headquarters address: Nissei Bldg. 6-3, Ohsaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan
President: Dr. Susumu Kohyama
Facilities: Oguni Facility, Hadano Facility, Kariya Facility
Sales offices: Kyushu Branch, Kansai Branch, Chubu Branch, Tohoku Branch
Affiliated companies: Consolidated subsidiaries: 9
 Non-consolidated subsidiaries: 3
 Affiliates accounted for by the equity method: 1

Facilities and Affiliated Companies (Consolidated Subsidiaries) in Japan



Origin of the Company's Name

COVALENT

Our company began a new chapter under the name Covalent Materials Corporation on June 1, 2007, and a new management structure took effect.

The word covalent is used in chemistry terms such as "covalent bond" and "covalent crystal" and it means "sharing" and "bonding." The company name expresses our determination to:

- Bring together our ceramics and silicon materials and technologies to create new values;
- Strengthen ties with all stakeholders, which include customers, business partners and the communities where we do business, and prosper with them; and
- Integrate the collective strength of the Group's employees to achieve shared high targets.



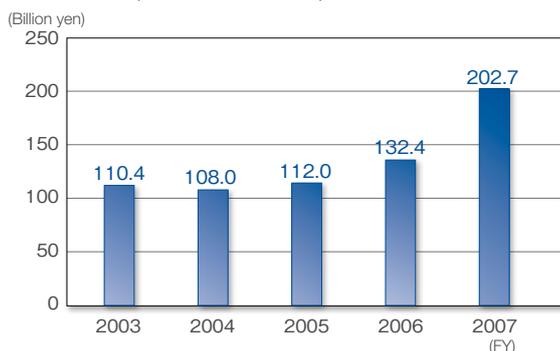
Business Performance

Innovation and high growth through decisive and focused investment of resources

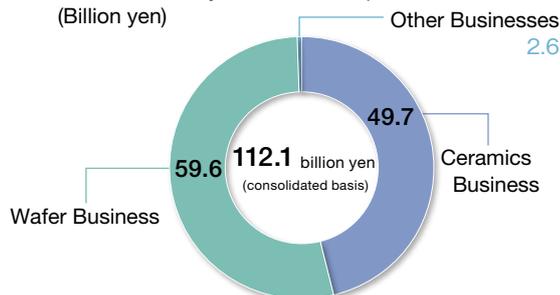
Paid-in capital: 34.9 billion yen
 Total assets: 202.7 billion yen (consolidated basis)
 Net sales: 112.1 billion yen (consolidated basis)
 Number of employees: 2,899 (consolidated basis)

Paid-in capital, total assets, net sales and number of employees are as of March 31, 2008.
 Figures for fiscal 2003 to 2006 correspond to Toshiba Ceramics Co., Ltd., the predecessor of Covalent Materials Corporation.
 Figures correspond to Covalent Materials Corporation and its nine consolidated subsidiaries.

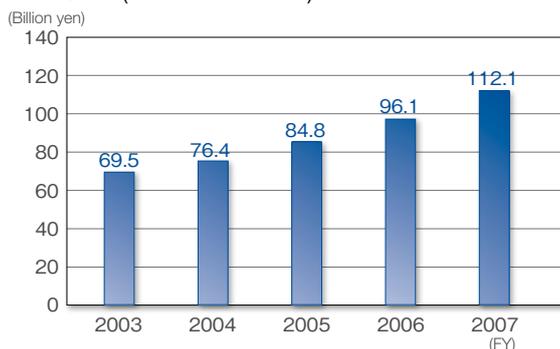
■ Total Assets (consolidated basis)



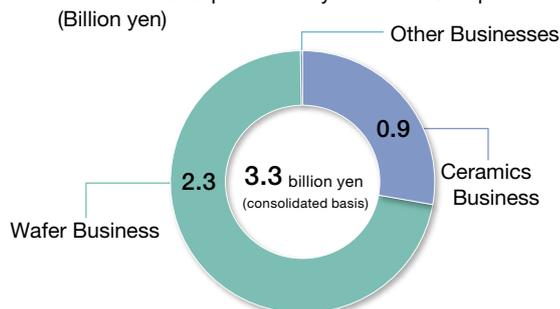
■ FY2007 Sales by Business Group



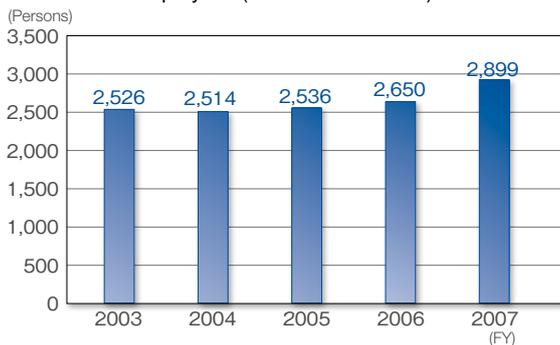
■ Net Sales (consolidated basis)



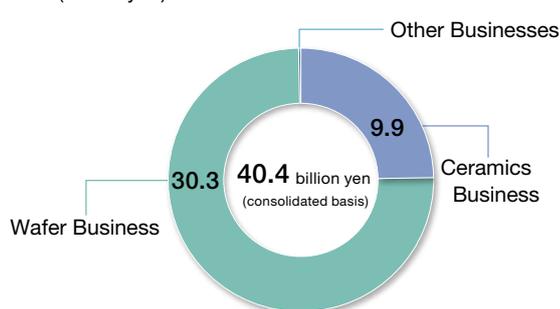
■ FY2007 R&D Expenditure by Business Group



■ Number of employees (consolidated basis)



■ FY2007 Capital Expenditure by Business Group



Principal Products

Creating New Value through Collective Strength

Products that Support Leading-edge Industries

At production facilities that manufacture high-performance products that lead the age such as semiconductors, flat panel displays (FPDs), optics and devices for information transmittal, the environment, energy and biotechnology, the turnaround of products in short time cycles is critical. A necessity for this is the development of extremely high-precision and loss-free manufacturing processes.

The Covalent Group has accumulated a wealth of expertise and developed a high level of technical capabilities in ceramics and silicon, which are indispensable materials in the products and manufacturing processes of leading-edge fields. Our mission is to take advantage of our unique position as a comprehensive, leading-edge materials manufacturer and discover unknown potential in raw materials as we provide solutions for leading-edge industries. After completely understanding the special characteristics of a material, we consider new ways to apply it, and aim to create groundbreaking materials and parts that have functions and structures that have not been seen before.

Semiconductor Field

High value-added wafers increase the performance of semiconductors

At a time when greater semiconductor performance is required and devices become more miniaturized, the need for defect-free, ultra-flat, wide diameter silicon wafers is increasing. The Covalent Group has focused on the development of high value-added products using precision heat treatment and processing technologies, and has established a start-to-finish production and quality control system from single crystal pulling to surface processing, cleaning and packaging. We mass produce 300mm wafers and deliver highly reliable wafers to users around the world.



Annealed wafers

Product line-up

- Polished wafers • Annealed wafers (Hi wafers, Hyper Hi-wafers, AT wafers)
- Epitaxial wafers • Diffused wafers • SOI wafers

Semiconductor Field

Components and materials that contribute to innovation in semiconductor density and productivity

We develop and supply fine ceramic products, synthetic quartz products and other products that have highly advanced functions such as quartz glass, carbon and silicon carbide products, which are necessary for semiconductor manufacturing. We use original purification techniques as well as scaling, precision, modularization and other techniques to produce special shapes and structures to solve manufacturing process issues. Our products have earned the confidence of users as components and materials that contribute to increases in semiconductor density and productivity improvement. For this reason we have captured a high market share for many products.



High-purity, durable quartz glass crucibles

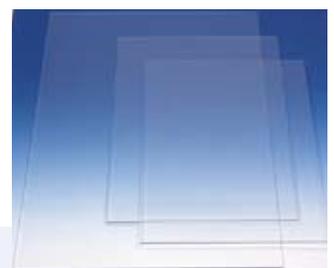
Product line-up

- High purity quartz glass products • TPSS silicon carbide ceramics • Special carbon, high-purity graphite products • CEPURE® In-line gas filter • BREAK FILTER™ vacuum-break filters • EXERIA® high-purity yttria ceramics • SAPPHAL® high-purity alumina ceramics • ADS high-purity alumina ceramics • High-purity single crystal silicon parts • CERASIC® atmospheric pressure sintered SiC

Flat Panel Display Field

Higher resolution in large-screen displays and productivity improvement

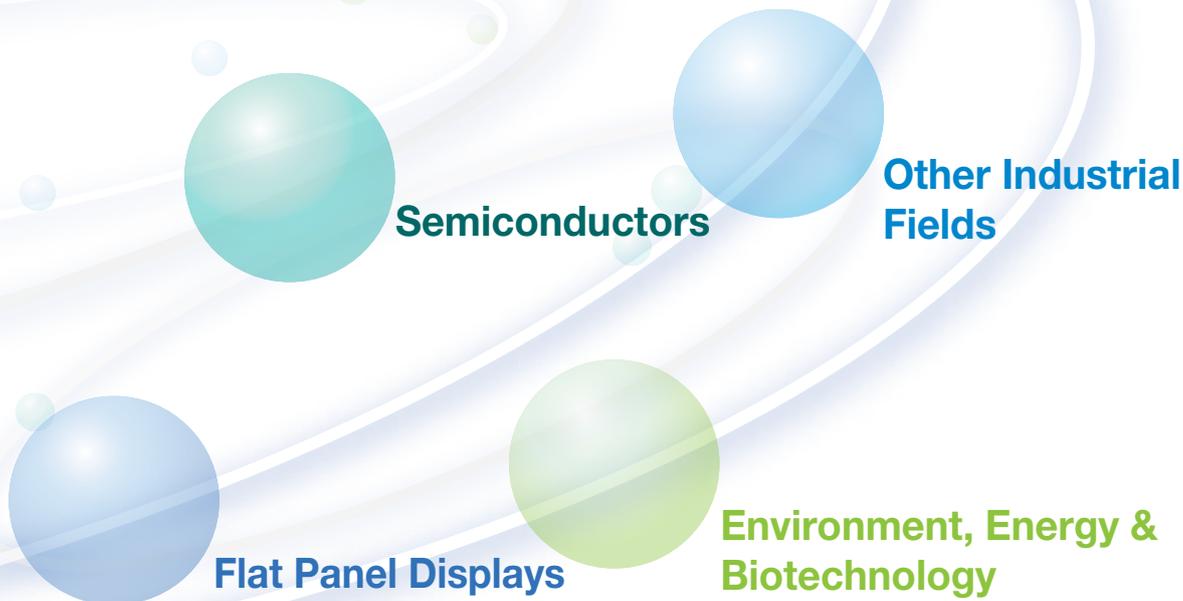
Glass substrates used for FPD screens continue to increase in size as display sizes increase, and greater precision is required of the components and materials used in their manufacture. The Covalent Group has won high marks from users for providing synthetic quartz photomask substrates, BREAK FILTER™ vacuum-break filters, vacuum atmospheric pressure sintered SiC components and a wide variety of other components and materials that support streamlining and efficiency in FPD production.



Large photomask substrates for LCD display production

Product line-up

- BREAK FILTER™ vacuum-break filters • CERASIC® atmospheric pressure sintered SiC • Large photomask substrates for LCD display production • Large quartz chambers • GLASSUN® roll



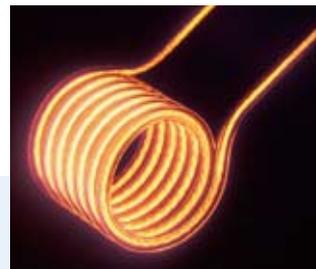
Other Industrial Fields

■ Products and services that contribute to many industrial field

The Covalent Group develops trend-setting, innovative products based on inorganic materials. We apply our sophisticated knowledge and a vast store of materials expertise to offer a diverse range of products and services that contribute to many different industrial fields.

Product line-up

- QCH-HEATER® • CERASIC® atmospheric pressure sintered SiC • GLASSUN® fused silica refractories • Carbon brushes • TECORUNDUM silicon carbide heating elements • Kiln furniture for sintering electronic parts • Monolithic refractories • Refractories for the glass industry



QCH-HEATER®

Environment, Energy & Biotechnology Fields

■ Support for leading-edge environmental engineering and medical fields

The 21st century has been called the century of the environment. Technological development in environment-related fields has become a common theme in the global community, and markets for environmental products expand year by year. As an upstream components maker in the manufacturing process, the Covalent Group has had an early involvement in environmental protection and environmental load reduction and has developed new products that contribute to solving environmental and energy problems. Furthermore, as societies age and interest in biotechnology increases, we have begun to take full advantage of our world-class materials and processing technologies to develop bio-related products.

Product line-up

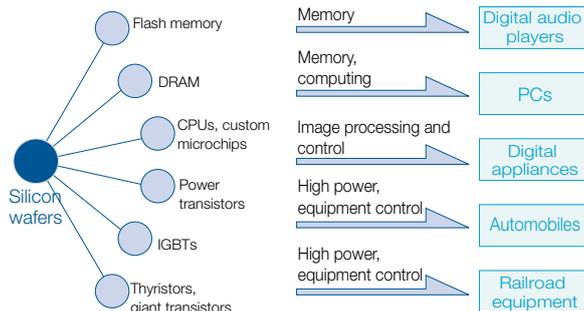
- CERASIC® atmospheric pressure sintered SiC • Silicon crucibles for solar battery manufacturing • NEOBONE artificial ceramic bone material • Ceramic products for regenerative medicine



Silicon crucibles for solar battery manufacturing

Silicon wafers support public infrastructure

Silicon wafers are processed into electronic components at semiconductor device manufacturers, then they are incorporated into digital audio players, PCs, digital home appliances, automobiles, railroad equipment and numerous other products. The Covalent Group's products provide fundamental support for today's convenient, affluent way of life.



Management

Corporate Governance

Transparent, sound corporate management enhances management quality and efficiency

The Company considers the purpose of corporate governance to be the assurance of a highly transparent, sound corporate management and the enhancement of management quality and efficiency.

The enhancement of corporate and stakeholder value and the maintenance of appropriate relations with our customers, business partners, employees, the communities where we have a presence and other stakeholders, through the fulfillment of corporate governance, are important management policies.

■ Corporate Governance Structure





Board of Directors

The Company has eight directors, including four external directors without executive power. The Board of Directors deliberates and decides statutory matters and other important matters concerning management, referring to the outside directors' objective opinions. The Board of Directors also holds supervisory authority over each director's execution of duties. The term of office of directors is set at one year in the Articles of Incorporation to ensure flexible adaptation to changes in the business environment and clear-cut management responsibility.

Board of Auditors

The Board of Auditors consists of two internal corporate auditors and two external corporate auditors. As an independent body with a mandate from shareholders, the Board of Auditors audits directors' execution of duties in cooperation with the accounting auditor and the Corporate Audit Office, an internal audit unit, in order to strengthen management transparency and supervision.

Executive Officer System

The Company has an executive officer system to separate management supervision from business execution by executive officers. Executive officers responsible for operating each business organization make decisions and execute business within the scope of their authority.

Internal Audit System

The Corporate Audit Office reports to the president and is responsible for internal auditing. The Corporate Audit Office conducts internal audits of the Company and Group companies, follows up on the progress of management issues and makes proposals concerning internal control. The Corporate Audit Office regularly exchanges opinions with corporate auditors and the accounting auditor to strengthen cooperation and enhance the quality and efficiency of auditing.

Compensation for Directors, Corporate Auditors and Executive Officers

Compensation for directors, corporate auditors and executive officers is determined based on certain standards and via a fair and transparent process. Amounts of compensation for directors and corporate auditors are within the maximum amounts approved by the resolution of the general meeting of shareholders. Amounts of compensation for other executive officers are determined based on the Company's compensation system and reflect the Company's business results and individual executive officers' contributions and also the objective opinions of outside directors etc.

Compliance and Risk Management

Integrated risk management for sustainable development

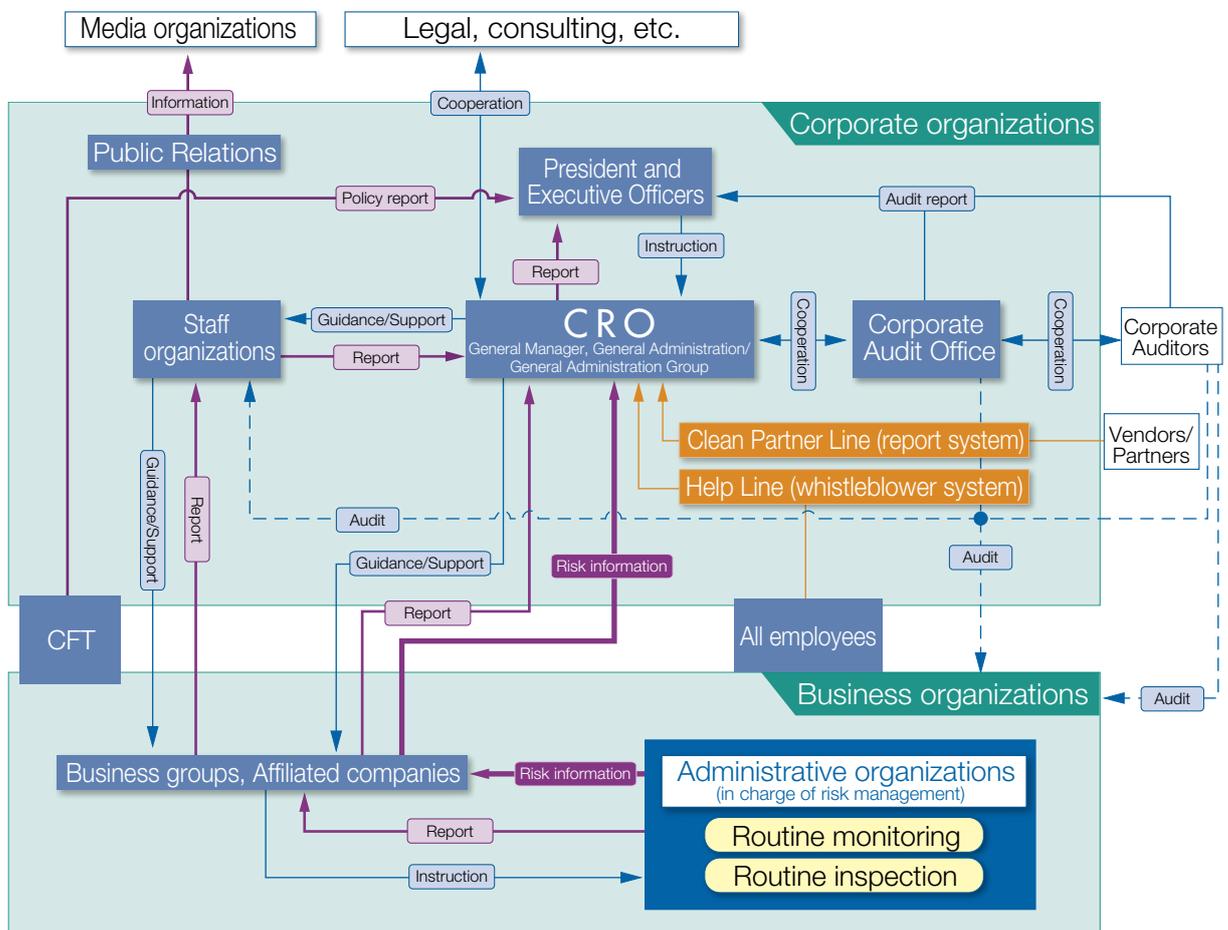
Integrated Risk Management System

Legal compliance and responses to risks and crises are essential for the sustainable development of an enterprise. In order to be able to cope with the diverse risks the Company faces, a cross-functional team (CFT) has been organized to lead a group-wide initiative to strengthen risk management.

Under the Company's integrated risk management system, information concerning risks is communicated through each organization and consolidated under the Chief Risk Management Officer (CRO), and in accordance with instructions and necessary support, measures are implemented.

The Company has whistleblower systems in place, which are the Covalent Group Help Line and the Clean Partner Line, for the purpose of assessing compliance, discovering information concerning risks and promptly responding to them. With the Covalent Group Help Line, employees can directly report their concerns to or seek advice from the General Administration Group (legal affairs and risk management) instead of their superiors. The Clean Partner Line enables vendors and other business partners to report concerns about the violation of laws, ordinances or contracts in transactions with the Covalent Group.

■ Integrated Risk Management System



Raising Awareness of the Importance of Compliance

The Company's management policy states, "We are fully aware of our social responsibilities as a corporate entity, and we obey the rules and established norms of Japan and other countries as we conduct business fairly and with integrity." With the aim of instilling a corporate culture that values fairness and integrity, the Covalent Group provides compliance education as a part of employees' job-specific training, which coincides with the employees' advancement or promotion.

Compliance education includes a briefing on the management policies and the Covalent Group Standards of Conduct, explanation of the risks of non-compliance and changes in the values and attitudes of employees and society. The Covalent Group provides compliance education five times a year.

The Covalent Group has published the Compliance Guidelines, a handbook of the Covalent Group Standards of Conduct and relevant laws and regulations. This handbook is distributed to all the Group's employees to raise their awareness.



The Compliance Guidelines

Information Security and Intellectual Property Management

The Covalent Group Standards of Conduct addresses the protection of information and intellectual property that belong to the Company and third parties. The Covalent Group continually seeks ways to strengthen and improve its rules governing information security and intellectual property management. We also seek to raise the awareness of employees regarding these issues as well as risk management methods in order to prevent information disclosure and inappropriate use of intellectual property.



Excerpts from the Covalent Group Standards of Conduct

Respect for Intellectual Property Rights

We fully put into practice the protection of the Company's intellectual property, and at the same time, we respect the intellectual property rights of third parties.

Respect for Information and Assets

We treat information and assets of the Company and of third parties appropriately and strive to prevent their inappropriate disclosure, leakage or use.

Society and Human Report

Responsibility to Customers

The Covalent Group provides safe, reliable products and services to customers

Quality Management Systems

The Covalent Group performs quality assurance activities based on the Quality Policy, whose aim is to achieve world-class quality. To ensure the highest product safety and quality, our Quality Assurance Committee has developed a quality management system. Group-wide objectives and measures related to quality that are based on the Quality Policy are assigned to quality assurance committees, which have been established at the business group, division and facility levels and reflect the quality objectives of each worksite.

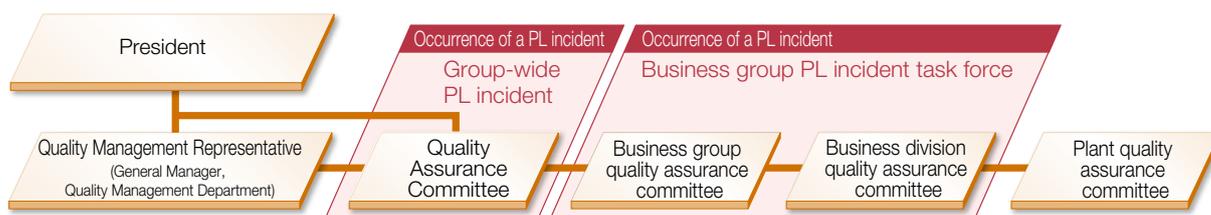
In the event of a product safety incident, the Quality Assurance Committee functions as a product liability (PL) accident task force and rapidly decides the necessary course of action. The Committee puts into place a framework for appropriately responding to the customer.

We have acquired ISO 9001 quality management system certification at seven manufacturing sites. We have also acquired ISO 13485 certification for bio and medical device-related products and ISO/TS 16949 certification for automotive-related products, which are two categories of products that demand very high quality.

The Covalent Group Quality Policy

“We provide safe, reliable products for our customers.”

Quality Management Structure



Quality Management System Certificate

Manufacturing Site		Standard	Certification Date
Hadano Facility	Process Materials Division	ISO9001	Dec. 2007
	Bio-Ceramics Business Division	ISO13485	Mar. 2005
Kariya Facility		ISO9001	Dec. 1996
Oguni Facility		ISO9001	Feb. 1995
Covalent Materials Niigata Corporation		ISO9001	Apr. 1996
		ISO/TS16949	Jan. 2007
Covalent Materials Tokuyama Corporation		ISO9001	Mar. 1996
		ISO/TS16949	Mar. 2007
Covalent Materials Nagasaki Corporation		ISO9001	Mar. 1997
Covalent Materials Sekikawa Corporation		ISO9001	Jun. 1996



KAIZEN Presentation meeting



Continuous Quality Improvement

Ongoing activities are necessary to achieve quality improvement. The Covalent Group identifies areas critical to quality control reinforcement on the basis of group-wide evaluations and actively conducts improvements in design quality and workplaces. Quality starts with people, and we believe that education and training form the basis of quality. We provide thorough quality education for employees from young entrants to workplace veterans to instill a quality mindset and promote the utilization of FMEA (Failure Mode and Effects Analysis), a management method for predicting the causes of potential quality problems and preventing them from occurring, and QC (quality control) tools. We have also established quality improvement activities throughout the entire workforce with small group activities and KAIZEN (“Improvement”) presentation meetings, which show excellent examples of improvement activities within the Covalent Group and are held annually to promote the importance of continuous improvement.

As a result of these activities, quality complaints from customers have decreased by about 60% during the period from fiscal years 2004–2007. We engage in green procurement and other product and environmental assurance activities and have obtained certification under our customer’s Green Partner System, a system whereby a company evaluates a supplier’s environmental management system and certifies that the supplier is meeting the company’s environmental management criteria, such as those concerning chemical substances with respect to procured parts and materials.

■ Continuous Product Quality Improvement Activities



Covalent Materials Technology Exhibition

The Covalent Group held a Technology Exhibition at the Izumi Garden Gallery in Roppongi, Tokyo on November 15–16, 2007 to publicize the Group’s inauguration. We displayed our product lines and unique technologies at a single location for customers and visitors from universities, government organizations, the media and financial institutions.

At our first-ever private exhibition, we set up areas according to each business field and showcased our technological capabilities with product samples, data and videos. More than 1,300 people visited over two days, and there were high expectations and a strong interest in the newly independent Covalent Group.



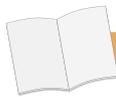
Responsibility to Suppliers

The Covalent Group engages in fair and equitable trading with suppliers

Procurement Activities

The Covalent Group's basic purchasing policy is to engage in trading based on fair and equitable competition with suppliers that offer the best quality, price and delivery terms regardless of location. We work to develop sound partnerships with suppliers and to ensure transparency in procurement activities, and we publish our basic purchasing policy and procurement procedures on our website.

The Covalent Group Standards of Conduct states our policy for observing laws and honoring contracts and agreements and engaging in fair trading. We strive to instill this policy in our employees.



Excerpt from the Covalent Group Standards of Conduct

Procurement Activities

We observe the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, the Antitrust Act, and other laws, honor contracts and agreements, and procure necessary goods and services having appropriate quality, price, and delivery terms on the basis of fair trading relationships.

The Covalent Group Basic Purchasing Policy

Best Procurement Worldwide

We engage in trading based on the principle of fair and equitable competition with suppliers that offer the best quality, price and delivery terms, regardless of location.

Relationships Built on Trust

We create mutual benefits based on relationships of trust. We refrain from disclosing to external parties confidential matters that come to our knowledge in the course of business.

Legal Compliance

We obey all relevant laws as the basis of our behavior in all business transactions.

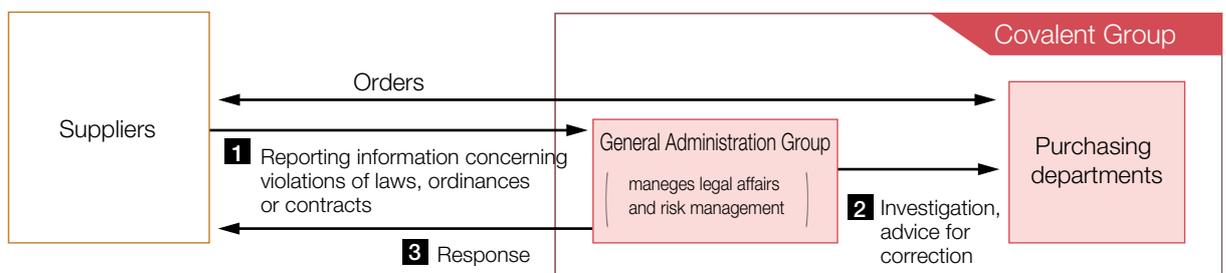
Green Procurement

In procurement, we accord priority to suppliers whose environmental performance is excellent.

Supplier Reporting System

We have established a Clean Partner Line on our website, which is a reporting system that suppliers can use to directly contact the General Administration Group (which is in charge of legal affairs and risk management) in the event of actions that violate laws, ordinances or contracts in transactions with external parties.

■ Clean Partner Line



Green Procurement

The Covalent Group has established the Green Procurement Guidelines and practices green procurement to create eco-friendly products. We give priority to raw materials, components and supplies that reflect a consideration for health, safety and the environment. These considerations include the elimination of hazardous substances and conversion to substances that are safe and have minimal environmental impact.

Responsibility to Employees

Respecting human rights and employees' values and creating safe workplaces

Respect for People

The Covalent Group expresses respect for people as a basic policy in the Standards of Conduct, and instills an awareness of human rights through systems, education and actions. We respect the human rights and diverse values of individuals and seek to create open-minded, highly creative working environments.



Excerpts from the Covalent Group Standards of Conduct

Respect for People

We respect basic human rights and each person's character and individuality, and we recognize and accept the diverse values of individuals and do not engage in human rights violations or discriminatory treatment.

■ Employment of People with Disabilities

In keeping with the concept of normalization, we employ people with disabilities and meet or exceed government quotas related to such employment, and we endeavor to develop areas of work that are appropriate to individual characteristics and capabilities and create work-friendly environments. As a result of activities implemented over many years, the Group's employment ratio of people with disabilities was 1.94% as of June 2008.

■ Rehiring of Seniors

To enable employees who wish to continue to work after the mandatory retirement age, we have established the Senior Course Selection System, a rehiring system, and we work to provide employment opportunities for employees with ample experience and skills.

■ Promotion of Diversity

The Covalent Group respects individuality and endeavors to develop systems to realize an open-minded, orderly working environment in which employees with diverse values can fully demonstrate their capabilities. In particular, to ensure an environment in which women can enjoy greater success, we are enhancing our maternity leave system as well as implementing a parental and family care leave system.

■ Education and Enlightenment

To promote awareness of human rights and respect for diversity among employees, we provide human rights enlightenment training to employees in all positions. For new employees, we conduct training in behavior expected of individuals with an emphasis on basic concepts concerning human rights. For managerial personnel, we conduct practical training that focuses on human rights awareness in workplace management and effective utilization of diverse human resources.

Fair Evaluation and Treatment

To maximize employee motivation and capabilities, we assess work capabilities and performance and place importance on fair and appropriate personnel assignment and treatment. We implement various initiatives to ensure impartial employee evaluation and fair and appropriate treatment.

■ Systems for Fair Evaluation of Job Skills and Performance

The Covalent Group clearly defines objectives and roles for each employee. There is a management by objectives system to effect employee treatment based on individual performance, and a pay increase evaluation system to motivate employees and promote enhancement of job skills and add new vitality. We have also introduced a self-assessment system to provide a forum for employees to communicate their thoughts about future career development.

■ Grievance Committee

The Covalent Group has a system that enables employees to lodge complaints through a grievance committee for problems related to employee treatment or other labor matters. The workplace where the complaint has been lodged forms a grievance committee consisting of members from both the company and the labor union and engages in fair deliberations aimed at an appropriate solution.

Development and Effective Utilization of Human Resources

The Covalent Group enacts various education programs to develop strong, independent people who willingly tackle difficult problems. We link education programs and personnel evaluation systems to promote career development and the effective utilization of people.

■ Job-Specific Training

To enable employees to acquire the knowledge and skills required for new career opportunities, we conduct job-specific training timed to coincide with qualification advancement or promotion.

■ Job-Specific Training



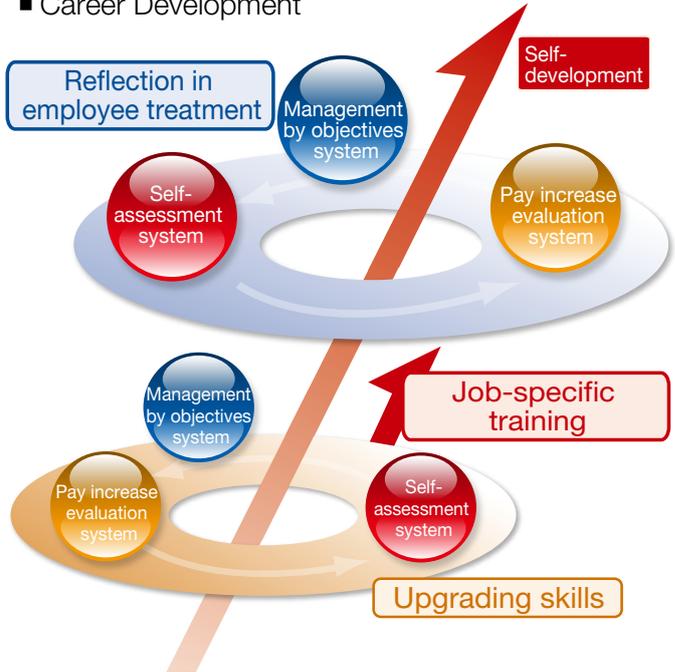
■ Upgrading Skills

We conduct training for all employees so they can acquire the skills necessary for their jobs. There are language and professional education courses suited to each job classification and they are conducted through group training, distance learning and e-learning. We enable employees to select their preferred programs under the basic concept that people undertake skills development through their own self-motivation.

■ Internal Recruiting System

With the aim of inspiring and promoting motivated employees so they can realize their full potential, we have established an Open Challenge System, which is a system for extensive recruiting within the Group when the need for job-specific personnel arises in areas related to new businesses or growth businesses.

■ Career Development





Occupational Safety and Health Policy

The Covalent Group maintains safe and clean work environments and aims to prevent occupational accidents. We adhere to the Basic Policy on Safety and Health Management in order to provide creative, efficient, safe and comfortable workplaces. We also encourage employees to take initiatives in their own health management.

The Covalent Group's Basic Policy on Safety and Health Management

The Covalent Group recognizes that ensuring the safety and health of all people engaged in the Group's businesses is one of the most important tasks for management. Accordingly, this recognition is embodied in the slogan "Survival in the 21st century: establish a culture of safety and enhance physical and mental well-being." We reflect this slogan in the items below:

I. Priority items

- 1 Prevent occupational accidents
- 2 Enhance mental and physical health and eliminate occupational illnesses
- 3 Obey laws related to safety and health and the Group's rules
- 4 Promote comfortable work environments
- 5 Secure the safety and health of subcontractors
- 6 Put into effect occupational safety and health management systems

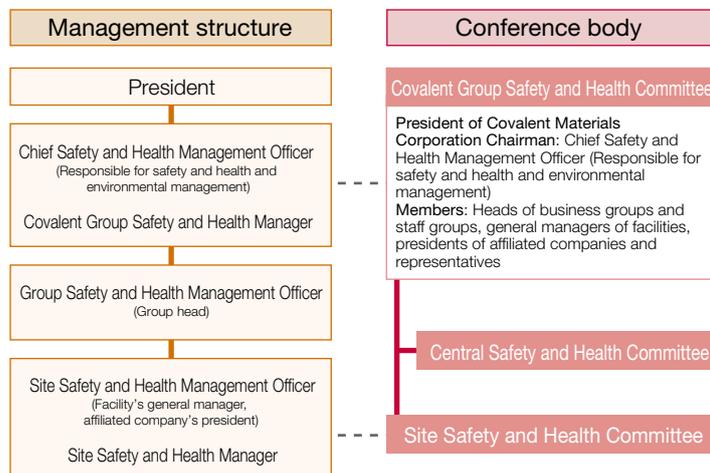
II. Action items

- 1 **Prevent occupational accidents**
 - 1) Supervisors perform thorough work checks
 - 2) Communicate work risks involved to employees and make sure employees understand risks
 - 3) Assess risks related to equipment, facilities and jobs and formulate improvement plans
 - 4) Investigate causes of frequent accidents (pinching, getting caught, cuts and scratches) and prevent recurrence
 - 5) Use the safety and health activity check sheet to raise safety levels
Achievement of 90%+ in fiscal 2007 and 95%+ in fiscal 2008 for the following six items: organization and structure, compliance, safety activities, health activities, systems and rules, and education
 - Sites covered
Hadano Facility, Oguni Facility, Kariya Facility, Covalent Materials Niigata Corporation, Covalent Materials Tokuyama Corporation, Covalent Materials Nagasaki Nagasaki Corporation, Covalent Materials Sekikawa Corporation, and Tokai Ceramics Co., Ltd.
 - 6) Thorough safety and health education
Educate and train new workers, workers with less than 10 years of experience and newly assigned chief foremen and deputy managers of production lines for skill upgrades
- 2 **Mental and physical health management activities**
Support and provide guidance for health and health checks by occupational physicians and nurses
- 3 **Obey laws related to safety and health**
 - 1) Systematically improve work environments
 - 2) Systematically improve insufficient wind speeds of local ventilators
- 4 **Furnish comfortable work environments**
 - 1) Conduct survey of work environments by Womens' Patrol and improve them
 - 2) Support the Law to Promote Measures Supporting the Development of the Next Generation
- 5 **Secure the safety and health of subcontractors**
 - 1) Establish an environment for information exchange with on-site partner companies
 - 2) Establish a system to communicate requirements related to health and safety to construction companies and confirm that they understand the requirements
- 6 **Operate JISHA-qualified OSHMS**

Occupational Safety and Health Management Structure

The Covalent Group has established an integrated management structure for safety and health, and the Covalent Group Safety and Health Committee makes the final decisions regarding this structure. We are in the process of establishing occupational safety and health management systems (OSHMS). Oguni Facility, Hadano Facility, Kariya Facility, Covalent Materials Niigata Corporation, and Covalent Materials Tokuyama Corporation, and Covalent Materials Nagasaki Corporation have acquired OSHMS certification from the Japan Industrial Safety and Health Association (JISHA).

Occupational Safety and Health Management Structure



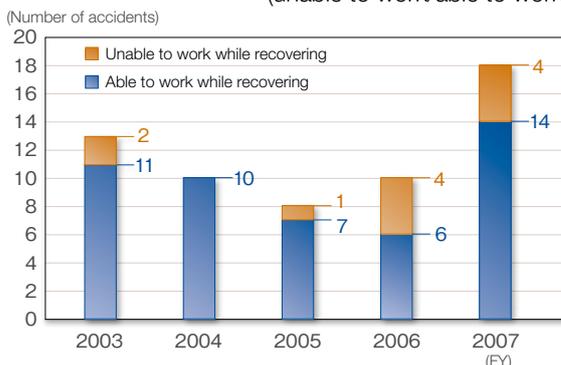
JISHA qualified OSHMS Certification

Site name	Certified date
Oguni Facility	Aug. 2004
Hadano Facility	Oct. 2006
Kariya Facility	Aug. 2004
Covalent Materials Niigata Corporation	Mar. 2007
Covalent Materials Tokuyama Corporation	Jan. 2007
Covalent Materials Nagasaki Corporation	Mar. 2005

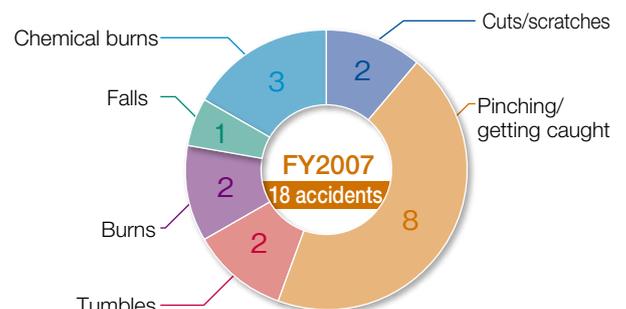
Occupational Accidents

The number of occupational accidents in fiscal 2007 was higher than in fiscal 2006. Based on this, we have introduced hands-on safety training and KYT (kiken yochi training) hazard prediction training to provide thorough training concerning occupational risks. We are enacting workplace improvements based on risk assessment to build safety into facilities and improve the level of occupational safety and health.

Number of Occupational Accidents (unable to work/able to work)



Breakdown of Occupational Accidents



Scope of data: Total of 4,162 employees at headquarters, 3 facilities and consolidated subsidiaries in Japan (including temporary workers)

Occupational Safety and Health Management Activities

Internal Occupational Safety and Health Audits

The officer responsible for safety and health management and the Environment, Safety and Health Department conduct internal audits of all sites of the Covalent Group at least one a year, assess the sites' safety and health activities and compliance with relevant laws and make recommendations. The Environment, Safety and Health Department follows up with the audit results so that safety and health activities will be improved.

Occupational Safety and Health Education and Training

Job-specific training, such as training for newly assigned managers, includes topics such as mental health and case studies of occupational accidents. Employees receive training according to their responsibilities.

Each site provides safety and health education and training programs based on the annual plan according to the site's needs. The objective is to ensure the safety of employees and raise their awareness of safety and health.

The Covalent Group holds an annual safety and health conference to enhance awareness of safety and health issues and share information among Group companies. The conference includes presentations by sites and a lecture by an outside speaker.

Occupational Safety and Health Education Programs (Examples)

Program name	Site	Number of participants
Veterans education	Hadano Facility	25
Metabolic syndrome workshop	Covalent Materials Niigata Corporation	71
Industrial physician workshop	Covalent Materials Sekikawa Corporation	70
Mental health education	Oguni Facility	91
	Kariya Facility	75
	Covalent Materials Niigata Corporation	133
	Covalent Materials Tokuyama Corporation	389
Local ventilator training	Oguni Facility	17
Safety and health upgrade education	Hadano Facility	54
KYT training	Covalent Materials Niigata Corporation	81
AED training	Covalent Materials Tokuyama Corporation	22

Women's Patrol

Under the banner of "understanding the concerns of female employees and providing a female-friendly work environment," groups consisting of female health managers visit workplaces and conduct surveys of female employees to identify problems and make improvements. Meetings of these groups are held to share information among sites.

Hands-on Safety Training

At the Covalent Group, we think it is important to increase each employee's sensitivity about risks in order to eliminate occupational accidents. Based on this understanding, we have introduced hands-on safety training at Oguni Facility and Hadano Facility. This training allows trainees to recognize risks involving their work through experience.

Oguni Facility has introduced 18 risk simulators including those for getting caught by a roller and being suspended by a safety harness. The Covalent Group intends to introduce risk simulators at other sites step by step.



Risk of getting caught by a roller



Risk of pinching by sling equipment



Being suspended from a safety harness

Responsibility to Local Communities

Aiming for the community's trust by promoting good corporate citizenship

Partnership with Local Communities

We conduct corporate citizenship activities to cooperate with local communities and form partnerships with them. We fulfill our responsibility as a member of the community and strive to expand opportunities for communication with local communities.

Covalent Materials has established the Wide Plan Leave System to support employees' volunteer activities. Under this system, employees can accumulate annual paid holidays that would otherwise expire and use them as paid holidays for when they participate in activities that make a social contribution.



Excerpt from the Covalent Group Standards of Conduct

Community Relations

We maintain good relations with local communities through cooperation and partnerships and fulfill our responsibility as a member of the community.

Corporate Citizenship Activities

■ Volunteer Activities

As a corporate citizen, each site of the Covalent Group cooperates with the local community where it is based and contributes to the quality of the local environment.

In an event organized by the forestry office of Shunan City, Yamaguchi prefecture, Covalent Materials Tokuyama Corporation cleared underbrush and pruned trees to maintain the forest owned by the city.

The Covalent Group's sites hold regular clean-up drives in the surrounding area as well as blood donation campaigns. Other activities include providing voluntary school crossing wardens to ensure the safety of children as they cross streets.



Taking care of the forest (Covalent Materials Tokuyama Corporation)



Cleaning up the area around the site (Covalent Materials Niigata Corporation)



School crossing warden (Tokai Ceramics Co., Ltd.)

■ **Factory Visits to Learn through Hands-on Experience**

The Covalent Group eagerly offers young people opportunities to visit its factories and find out for themselves what the world of work is all about through hands-on experience.



Junior high school students learn about work (Oguni Facility)



High school students learn about work (Covalent Materials Sekikawa Corporation)

■ **Disaster Prevention Activities**

We conduct regular maintenance and inspection of facilities and implement thorough safety management in order to prevent fires and other accidents. We also conduct emergency drills in cooperation with relevant authorities to ensure preparedness in the event of an earthquake, fire or other disaster.



Emergency drill (rescue operation) (Covalent Materials Tokuyama Corporation)



Emergency drill (earthquake simulation) (Covalent Materials Sekikawa Corporation)

■ **Events Rooted in the Local Community**

Oguni Facility made its facilities available for the Azumazeki sumo stable for a training camp in mid-August. Sumo wrestlers held training sessions at the sumo ring at the site. Numerous spectators from the local community cheered the sumo wrestlers. At the Oguni Summer Festival organized by the municipality, Oguni Facility donated fireworks for a display. In early spring, Kariya Facility invited local residents to enjoy refreshments beneath the blossoming cherry trees.



Sumo wrestlers of the Azumazeki stable in training (Oguni Facility)



Fireworks display at the Oguni Summer Festival (Oguni Facility)



Local residents were invited to the cherry blossom viewing (Kariya Facility)

■ **Other Activities**

Covalent Materials Niigata Corporation is a banner sponsor of Albirex Niigata, a local soccer club in J League Division 1. The Covalent Group sponsors events in local communities and makes donations to universities.

Environmental Report

Environmental Management

Symbiosis with the environment

Basic Environmental Policy

The Covalent Group regards environmental protection as a key management issue. We are engaged in environmental protection activities on a continual and voluntary basis, and these are guided by the Environmental Policy we established in 1989.

The Covalent Group Basic Environmental Policy

As a specialist in materials, the Covalent Group works to bring together materials, technologies and people to create new values. In carrying out our activities, we promote environmental protection in the belief that the Earth's resources are invaluable. Accordingly, the Covalent Group promotes the following management concepts:

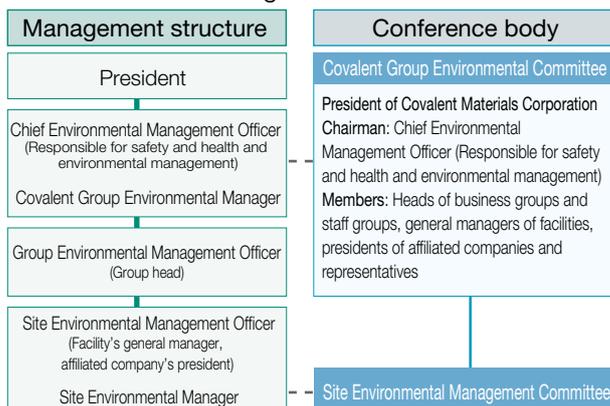
- 1 Position environmental protection as a critical issue at the heart of our business.
- 2 Adhere to environmental laws, environmental guidelines embraced by the Covalent Group, and other voluntary environmental protection standards.
- 3 Reduce the environmental impacts of our business activities and prevent pollution.
- 4 Based on a voluntary action plan, decrease CO₂ emissions to reduce global warming, promote zero emissions through the effective use of resources, and reduce the use of chemical substances.
- 5 Promote green procurement, including the according of priority to the selection of raw materials with minimal environmental impacts.
- 6 Contribute to society by developing and providing superior environmental technology and products, cooperating with communities, and undertaking environmental protection activities in general.

Environmental Management Structure

The Covalent Group has established an integrated environmental management structure, and the Covalent Group Environmental Committee makes all final decisions regarding this structure.

The Covalent Group's eight manufacturing sites, including consolidated subsidiaries in Japan, have been ISO 14001 certified.

■ Environmental Management Structure



■ ISO 14001 Certification

Site name	Certified date	Renewal date for certification in accordance with 2004 version
Oguni Facility	Feb. 1998	Mar. 2006
Hadano Facility	Mar. 1998	Apr. 2006
Kariya Facility	Apr. 2000	Apr. 2006
Covalent Materials Niigata Corporation	Dec. 1997	Mar. 2006
Covalent Materials Tokuyama Corporation	Mar. 1998	Apr. 2006
Covalent Materials Nagasaki Corporation	Dec. 2000	Jan. 2006
Covalent Materials Sekikawa Corporation	Apr. 1999	Mar. 2006
Tokai Ceramics Co., Ltd.	Oct. 2003	Dec. 2005

* Certification body: Japan Quality Assurance Organization (JQA)



Internal Environmental Audits

The officer responsible for environmental management and the Environment, Safety and Health Department conduct internal audits of all sites of the Covalent Group at least once a year, assess their environmental protection activities and compliance with environment-related laws, and make recommendations. The Environment, Safety and Health Department follows up the audit results to improve environmental activities.



Emergency drill audit (Covalent Materials Tokuyama Corporation)



Internal audit (Covalent Materials Nagasaki Corporation)

Environmental Education

In order to deepen understanding, heighten awareness and enhance environmental protection skills, all Covalent Group employees receive environmental education on a regular basis. The content of the education varies according to positions and responsibilities. To ensure compliance and enhance the skills of individual employees, the Covalent Group supports and encourages employees to acquire qualifications and attend lectures.

Contractors working at the Group's sites are informed of environmental and safety requirements.



Introductory education on environmentally conscious design (Hadano Facility)

Over 50 engineers participated in the introductory education program on environmentally conscious design, which was held at Hadano Facility on February 14. Considering the importance of environmental consciousness at the product design stage, from fiscal 2008 onward the Covalent Group has made it mandatory for engineers in their second year at the Covalent Group to receive education on environmentally conscious design.

■ Employees with Qualifications

Qualification	Number of employees
Pollution control manager (air, water, noise, vibration)	68
Industrial waste intermediary treatment facility engineering manager	8
Designated industrial waste supervisor	19
Energy management (heat, electricity)	26
Working environment measurement expert (Type 1, Type 2)	6
Health supervisor (Type 1), health engineering supervisor	54
Boiler engineer (Class 1, Class 2)	92
Organic solvent work chief	313
Designated chemical substance work chief	707
Radiation protection supervisor	26
Hazardous material handler (Type "ko," Type "otsu")	428
High-pressure gas production and safety supervisor	50
Special high-pressure gas handling chief	109
Internal environmental auditor	176
Internal safety and health auditor	131

Targets and Results of Environmental Activities

Reducing environmental impact under the environmental action plan

Overview of the Environmental Action Plan

The Covalent Group is working to reduce the environmental impacts of its business activities in accordance with the environmental action plan.

■ Environmental Action Plan and Results

Priority items	Target for FY2007	Results	Evaluation
Reduce emissions that lead to global warming	Reduce CO ₂ emissions (emissions intensity) at least 1% in FY2007 compared with FY2006	2.4% reduction	Target achieved
Zero emission ¹	Reduce final disposal rate at least 1 percentage point in FY2007 compared with FY2006 (4.7% or less)	1.2 percentage point reduction (4.5%)	Target achieved
Reduce chemical substances	Reduce Pollutant Release and Transfer Register (PRTR) substance emissions (emissions intensity) at least 2% in FY2007 compared with FY2005	45.9% reduction	Target achieved

■ FY2008 Environmental Action Plan and Mid-term Plan

Priority items	Target for FY2008	Results, Evaluation
Reduce emissions that lead to global warming	Reduce CO ₂ emissions (emissions intensity) at least 1% in FY2008 compared with FY2007	Reduce CO ₂ emissions (emissions intensity) at least 15% by FY2010 compared with FY2005
Zero emission ¹	Reduce final disposal rate to 4.5% or less	Reduce final disposal rate to 4% or less by FY2010
Reduce chemical substances	Reduce PRTR substance emissions (emissions intensity) at least 1% in FY2008 compared with FY2007	Reduce PRTR substance emissions (emissions intensity) at least 27% by FY2010 compared with FY2005

¹ Zero emission of waste: Final disposal rate = Amount of final disposal / Total waste discharged x 100 ≤ 1

Environmental Accounting

The Covalent Group assesses environmental costs and applies the results to business activities.

■ Environmental Costs

Classification	Content	Expenditure (Million yen)	Costs (Million yen)	
I Business area costs		1,868	875	Period: From April 2007 to March 2008 Scope: 3 facilities and 5 consolidated subsidiaries
I - i Pollution prevention costs	Prevention of pollution to atmosphere, water, soil, etc.	1,598	583	
I - ii Global environmental protection costs	Prevention of global warming, protection of the ozone layer, etc.	254	53	
I - iii Resource circulation costs	Effective utilization of resources, recycling of waste, etc.	16	240	Expenditure: Of expenditures subject to depreciation, the amount for environmental protection is reported.
II Upstream/downstream costs	Green procurement, product recovery and recycling, etc.	0	0	
III Administration costs	Monitoring of environmental impacts, planting of greenery, etc.	13	40	Costs: The total amount of expenditures for environmental protection and depreciation of facilities is reported (including labor costs).
IV R&D costs	Development of environmentally conscious products etc.	97	207	
V Social activity costs	Disclosure of information etc.	0	1	
VI Environmental remediation costs	Natural restoration etc.	0	147	
Total environmental cost		1,978	1,270	

■ Environmental Benefits

Actual benefits	Environmental impact reduction ²	Monetary value of benefits ³
Energy consumption	-470,915GJ	Decrease of 209 million yen
Water consumption	-950,000m ³	Increase of 19 million yen
Total amount of waste discharged	179t	Decrease of 67.1 million yen

² Environmental impact reduction is the difference in volumes of environmental impacts between FY2006 and FY2007. Minus figures indicate that environmental impacts increased.

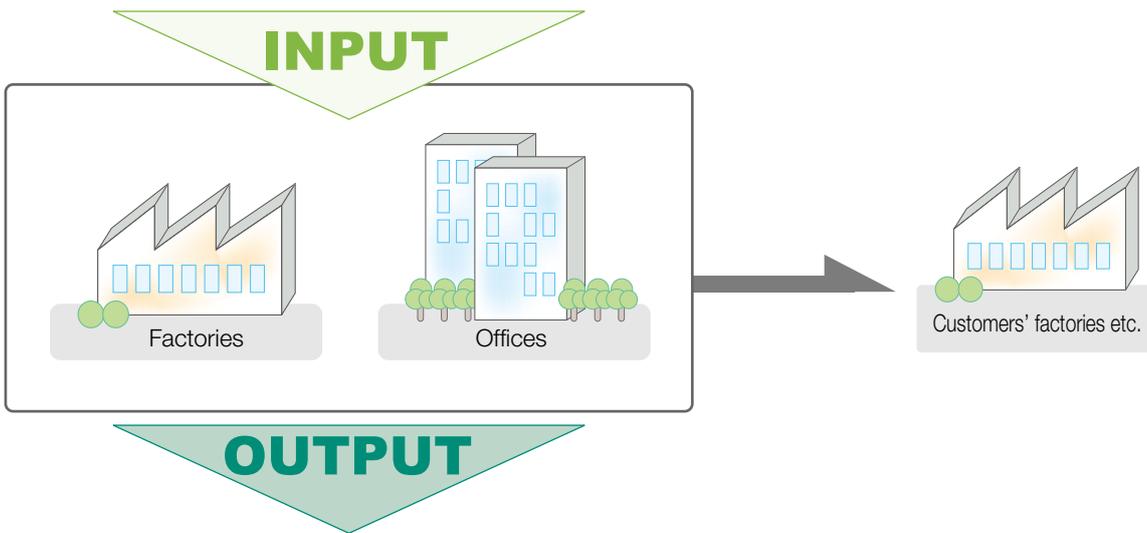
³ Monetary value of benefits is the difference in the amounts of monetary value of benefits between FY2006 and FY2007. Minus figures indicate that costs increased.



Environmental Impact

Reducing environmental impacts by continually analyzing the impact of business activities on the environment

<p>Energy</p> <ul style="list-style-type: none"> ■ Electricity purchased ····· 3,584,197 G J ■ Hydroelectric power generation ····· 593,642 G J ■ Bunker A ····· 363,065 G J ■ City gas ····· 141,257 G J ■ LPG ····· 116,317 G J ■ Kerosene ····· 115,396 G J ■ Steam ····· 18,484 G J <p>■ Total energy input 4,932,357 G J</p>	<p>Principal raw materials¹</p> <ul style="list-style-type: none"> ■ Quartz and silica ····· 6,194 t ■ Alumina ····· 3,946 t ■ Silicon ····· 1,274 t ■ Carbon ····· 648 t ■ Zirconia ····· 578 t ■ Coal tar and tar pitch ····· 433 t ■ Silicon carbide ····· 416 t 	<p>PRTR substances: amount handled</p> <ul style="list-style-type: none"> ■ PRTR substances: amount handled ····· 404 t <p>Water</p> <ul style="list-style-type: none"> ■ Clean water, industrial water ····· 6.94 million m³ ■ Groundwater ····· 0.62 million m³ <p>Principal source gases¹</p> <ul style="list-style-type: none"> ■ Silicon tetrachloride ····· 2,043 t ■ Trichlorosilane ····· 110 t
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<p>Released into the atmosphere</p> <ul style="list-style-type: none"> ■ Nitrogen oxide ····· 321 t ■ Sulfur oxide ····· 15 t ■ PRTR substances: amount released (air) · 7 t <p>Green house gas</p> <ul style="list-style-type: none"> ■ CO₂ emissions ····· 218,096 t -CO₂ 	<p>Discharge of waste</p> <ul style="list-style-type: none"> ■ Total amount of waste discharged · 14,127 t ■ Amount for final disposal ···· 637 t ■ PRTR substances: amount released (waste) ···· 72 t 	<p>Discharged into water</p> <ul style="list-style-type: none"> ■ BOD² + COD³ ····· 46 t ■ SS⁴ ····· 46 t ■ PRTR substances: amount released (water) · 20 t ■ Amount discharged: ···· 6.43 million m³
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¹ Principal raw materials and source gases listed here are those of which 100 tons or more is consumed per year.

² BOD: Biochemical oxygen demand

³ COD: Chemical oxygen demand

⁴ SS: Suspended solids

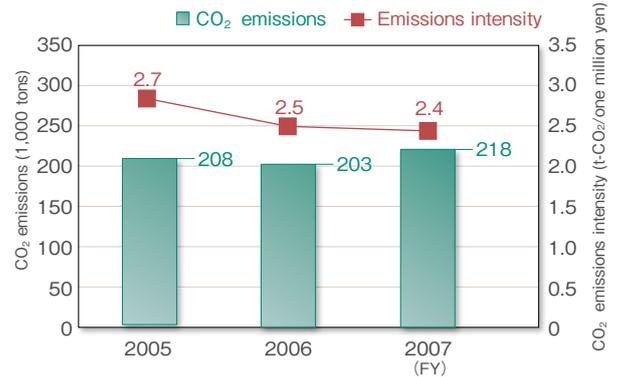
Reducing Global Warming

Reducing CO₂ emissions to tackle global warming

Reduction of CO₂ Emissions

The Covalent Group implemented CO₂ emissions reduction measures with the aim of attaining at least a 1 percentage point reduction in CO₂ emissions intensity (ratio of CO₂ emissions to production) in fiscal 2007 compared with fiscal 2006. These measures included productivity improvement, energy savings and the use of alternative energy. As a result, the Group achieved a 2.4% reduction in the CO₂ emissions intensity compared with fiscal 2006. However, CO₂ emissions totaled 218,000 tons, an increase of 15,000 tons compared with fiscal 2006, because of increased production.

CO₂ Emissions and Emissions Intensity



CO₂ Emissions Reduction Measures

In our efforts to reduce CO₂ emissions, we engage in energy-saving activities, including improved air-conditioning methods at facilities and abolition of power generation facilities that use heavy oil.

CO₂ Emissions Reduction Measures and Reduced Amounts

Improvement example	Site	Improvement	CO ₂ emissions reduced
Reduction of CO ₂ emissions by abolition of power generation facilities that use heavy oil	Kariya Facility	Ultra-high-voltage substation equipment was introduced and power generation facilities that use heavy oil were abolished. CO ₂ emissions were reduced by switching to electricity with smaller CO ₂ emission coefficient.	342 t - CO₂ (From January to April, 2008) Based on emission coefficient of Chubu Electric Power Co. 0.481 kg-CO ₂ /kWh, Bunker A 2.71 kg-CO ₂ /L
Reduction of CO ₂ emissions by improved air-conditioning methods at facilities	Hadano Facility	Previously, the temperature of outdoor air was decreased to 16°C and then heated to 23°C for dehumidifying. Power consumption was reduced by the introduction of a direct digital controller for efficient cooling.	72 t - CO₂/ year Based on emission coefficient of Tokyo Electric Power Co. 0.389 kg-CO ₂ /kWh
Reduction of vehicle heater operating hours in winter as a result of construction of a multistory parking lot	Oguni Facility	Oguni Facility is located in a region with heavy snowfall. Previously, employees needed to remove snow on their cars by turning the heater on. Because of construction of a roofed multistory parking lot, the need to remove snow on cars was eliminated, resulting in less heater operating hours. Also, the frequency of calls for snowplows was reduced.	8.2 t - CO₂ (20 days/month, for 4 months) Calculated based on CO ₂ emissions of 63 g-CO ₂ (according to Team Minus 6% website) for snow plowing for 15 minutes/time, heater operation for 5 minutes and 543 cars/day

At Akashiba Power Plant, a Private Hydroelectric Power Plant

Oguni Facility has a private hydroelectric power plant, Akashiba Power Plant, adjacent to a reservoir on the Ara River between Yamagata prefecture and Niigata prefecture. Akashiba Power Plant, constructed in 1954, expanded its capacity in 1990 with the addition of a second plant. The maximum output of the two plants is 11,200 kW. Electricity generated by Akashiba Power Plant satisfies 40% of Oguni Facility's annual electricity consumption and greatly contributes to the reduction of CO₂ emissions associated with energy use.

Electricity generated in FY2007

- Electricity generated: 60,824 MWh
- If purchased, this amount of electricity would correspond to 33,757 tons of CO₂, which would be equal to 13% of the Covalent Group's CO₂ emissions.



Akashiba Power Plant, Covalent Materials' private hydroelectric power plant



Waste Management

Zero emissions toward a recycling-based society under the 3R concept

Zero Emissions

Each site belonging to the Covalent Group has a recycling center which implements appropriate waste management. Under the 3R concept (reduce, reuse, recycle), we promote zero emissions in a move toward a recycling-based society. This involves minimizing defects and material loss by improving manufacturing yield and working with recycling partners for sludge and scrap waste.

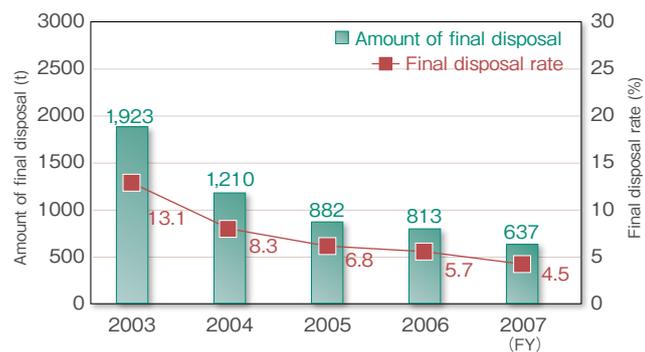
The amount of final disposal in fiscal 2007 was 637 tons and accounted for 4.5% of the total discharge, which is 1.2 percentage points lower than in fiscal 2006. We achieved the target for fiscal 2007 of a final disposal rate of 4.7% or less and a reduction of at least 1 percentage point compared with fiscal 2006.

Hadano Facility, Covalent Materials Niigata Corporation and Covalent Materials Sekikawa Corporation maintained their zero emissions status. Other sites are vigorously promoting the 3Rs to achieve zero emissions.



Recycling Center at Oguni Facility

Amount of Final Disposal and Final Disposal Rate



Niigata Prefecture Certifies Covalent Materials Sekikawa as an Excellent Recycling Site

On February 25, 2008, Covalent Materials Sekikawa Corporation was certified by Niigata prefecture as an excellent recycling site.

With the aim of encouraging businesses in Niigata prefecture to promote waste reduction and recycling, the prefecture has a program for certifying businesses with excellent waste reduction records as excellent recycling sites.

Covalent Materials Sekikawa has been promoting the 3Rs, including reuse of wastewater sludge and recycling of waste hydrofluoric acid, and has achieved zero emissions. These achievements were recognized by the prefecture.

Encouraged by the certification, Covalent Materials Sekikawa will step up its efforts to maintain zero emissions of waste.



Management of Chemical Substances

“One drop control”* policy for managing chemical substances

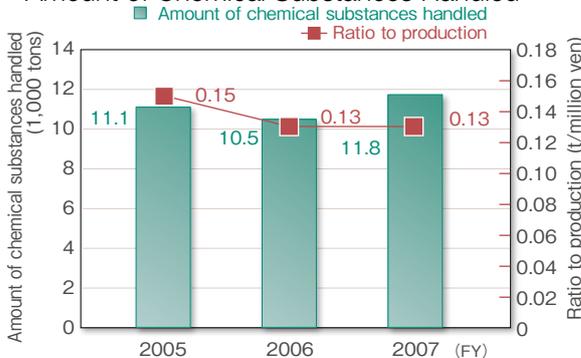
Chemical Substance Management Measures

The Covalent Group considers people’s health and safety and manages chemical substances in accordance with the PRTR Law and the Poisonous and Deleterious Substances Control Law. We have strengthened a policy known as “one drop control,” which we implement to manage the handling of chemical substances.

We promote green procurement to eliminate harmful substances from our products as part of our concerted effort to create environmentally conscious products and use safe alternatives.

In fiscal 2007, the amount of chemical substances handled increased due to increased production.

■ Amount of Chemical Substances Handled



■ Main Chemical Substances

Toxic substances	Arsenic	Hydrofluoric acid
	Ammonium fluoride	Caustic soda
Harmful substances	Methanol	Ammonia water (25%)
	Phenol resin	Hydrogen peroxide
	Hydrochloric acid	Sodium fluorosilicate
	Sulfuric acid	Chromium trioxide
	Nitric acid	Lead oxide
Other	Acetic acid	Tar pitch
	Glacial acetic acid	Coal tar

Subject: 3 facilities and 5 consolidated subsidiaries

* One drop control

This is the Covalent Group’s policy for thorough substance management and it involves daily cleaning and inspection so that not even one drop of oil, chemicals or other substance remains behind. Structures are designed and maintained so that leaks can be easily detected. For example, pans and dikes are kept dry.

Pollutant Release and Transfer Register (PRTR) Substances

PRTR is a system for obtaining data on the amounts of harmful chemical substances released into the environment or transferred offsite, and the sources of such substances. Data are aggregated and disclosed.

In fiscal 2007, the amount of PRTR substances released decreased 45.9% to 27.1 tons compared with fiscal 2005 as a result of the optimization of chemical consumption and recycling of waste chemicals, in addition to a decrease owing to business changes. The Group achieved a target of at least a 2% reduction in PRTR substance emissions (49.1 tons or less) in fiscal 2007 compared with fiscal 2005.

■ PRTR Results for Fiscal 2007

Substance number specified by the PRTR Law	Substance name	Amount handled	Amount released	Release				Landfill within sites	Transfer		
				to air	to water	to soil	transferred		to sewage	as waste	
63	Xylene	1.4	0.3	0.3	0.0	0.0	0.0	1.1	0.0	1.1	
68	Chromium and chromium (III) compounds	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
227	Toluene	1.6	1.4	1.4	0.0	0.0	0.0	0.2	0.0	0.2	
266	Phenol	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	
283	Hydrogen fluoride and its water-soluble salts	381.3	19.7	0.7	19.0	0.0	0.0	70.5	0.0	70.5	
304	Boron and its compounds	2.4	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	
309	Poly (oxyethylene) nonylphenyl ether	3.5	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	
Total		403.9	27.1	-	-	-	-	71.8	-	-	

Scope : 3 facilities and 5 consolidated subsidiaries



Storage of Polychlorinated Biphenyls (PCBs)

The Covalent Group implements strict management of products containing PCBs, including those stored and currently in use, to ensure that no environmental pollution occurs during the period until 2016 when treatment of such products must be completed by disposal companies according to law.

■ Storage of PCBs

Types of products containing PCB	Unit	Quantity stored	Quantity currently in use	Total
Transformer	Unit	7	1	8
Capacitor	Unit	153	70	223
Stabilizer	Unit	1,087	0	1,087
Other equipment	Unit	0	3	3
Other	kg	11,804	0	11,804

Scope: 3 facilities and 5 consolidated subsidiaries

Preventing Air Pollution and Offensive Odors

The Covalent Group prevents air pollution and offensive odors with the installation of exhaust gas treatment equipment. The use of heavy oil is reduced by using alternative fuels and waste heat from heat-treating furnaces.

Kariya Facility has installed exhaust gas treatment equipment to remove volatile organic compounds (VOCs) such as formaldehyde, which is generated during the ceramics firing process. As a result, 98%* of VOCs are removed.

* Total organic carbon (TOC) equivalent



Exhaust gas treatment equipment (Kariya Facility)

Preventing Water Pollution

The Covalent Group is improving wastewater treatment facilities while strengthening the monitoring of water quality.

Kariya Facility previously treated hydrofluoric acid and nitric acid effluents discharged from the cleaning process in-house. By finding ways of recycling the waste, Kariya Facility achieved a 30% reduction in the total amount of nitride contained in the wastewater discharged from its wastewater treatment facility.



Hydrofluoric acid and nitric acid mixture recovery facility (Kariya Facility)

Preventing Soil and Groundwater Pollution

Regarding the soil and groundwater pollution by PCBs that was detected in 2005 at Kariya Facility, we finished removing the contaminated soil and purifying the groundwater in August 2006, and submitted notifications of completion to Aichi prefecture and Kariya City the following October, which the local governments accepted. The PCB-contaminated soil is currently stored at Kariya Facility under strict management. We have contracted treatment of the contaminated soil to Geo Steam Co., Ltd., a company in Kita-kyushu with PCB-contaminated soil purification facilities. Treatment of the stored soil started in December 2007 and is scheduled to be completed in March 2009.

For treatment, the contaminated soil is transported with strict safety measures to PCB-removal facilities, and purified through PCB decomposition measures. The purified soil will be recycled as raw material for cement after its safety is confirmed.

Development of Environmentally Conscious Products and Technologies

Creating new environmental value for society, based on our development capabilities

Guidelines for Environmentally Conscious Products

Contributing to society through the development of excellent environmental technologies and environmentally conscious products (ECPs) is a key theme of the Covalent Group's product development.

Adhering to the ECP Guidelines, the Covalent Group incorporates environmental consciousness in product development throughout product life cycles from the procurement of parts and materials to disposal.

■ Items for Environmental Consideration

Life cycle	Items for environmental consideration
Procurement of parts and materials	Green procurement
Manufacturing process	<ul style="list-style-type: none"> · Ozone depleting substances (ODSs) are not used. · Voluntarily prohibited substances (acetone etc.) are not used. · Resource savings and energy savings are considered.
Product distribution	Measures are taken to reduce packaging (use of recycled items, recovery, etc.)
Use by customers (product specifications)	Reduction in the product usage process Specifically, reduction of power consumption, consumables, etc.
Other environmental items	Products and manufacturing process are assessed.

Core Technology Center

Spearheading the drive to become a world-class leading edge manufacturer

The Core Technology Center develops new materials and innovative technologies that support various industries, such as those connected to semiconductors and electronics, as well as structural ceramics.

In the electronics-related market, which has been the Covalent Group's principal business field, we develop functional and structural materials and parts based on our integrated technologies concept. We aim to expand our business further in the semiconductor, flat panel display (FPD) and optical communication fields. We are also entering new business fields with a focus on bio, energy and the environment, and we are advancing the development of materials. We continue to refine our evaluation and design technologies, which support the foundation of these developments.

At the Core Technology Center, we aim to make the Covalent Group a world-class leading-edge enterprise in the fields of highly functional materials and parts. As the engine of the Group, we intend to contribute to the enhancement of corporate value and competitiveness through medium- and long-term research and development.



Core Technology Center
(Hadano Facility)



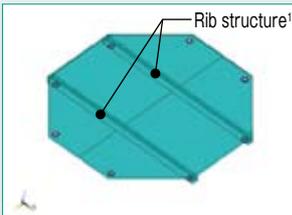
Environmentally Conscious Product Development Examples

■ Use of Simulation Technology to Develop Environmentally Conscious Products

Simulation Technology Conserves Energy and Other Resources

The Covalent Group makes an effort to develop environmentally conscious products characterized by environmental conservation throughout the entire product lifecycle. A noteworthy example of this is the use of computer simulation for environmentally conscious product design, product manufacturing process design, and product and manufacturing technology development processes.

For example, a problem occurred in the design of parts and materials used in furnaces for ceramics. Although the thermal efficiency of a given material increases when weight is reduced, rigidity decreases. By using simulation technology in the design of holding plates to optimize the rib structure (a reinforcement structure that resembles bone structure) and improve rigidity, we were able to achieve both weight reduction and rigidity. By using the simulation method, we were able to reduce material use to one-sixth of that of the previous method, and this contributed to a dramatic improvement in thermal efficiency and energy conservation in the firing process. Furthermore, we were able to conserve resources by reducing materials use through weight reduction and by sharply curtailing trial production processes by using simulation.



A holding plate simulation image

Developer Comment

Quantitative evaluation techniques used in simulations play an important role in product development and design. These achieve both component functionality and resource savings. In optimal design, although we repeatedly experiment with shapes and materials and conduct simulations, we struggle to discover new ideas for shape and material combinations.

Ping Xin, Simulation Technology Group, Core Technology Center

¹ Rib structure: A reinforcement structure that resembles bone structure

■ Development of Gallium Nitride Semiconductor Substrate for Power Devices

High Performance Semiconductors for Energy and Resource Conservation

Power devices² that convert and control electricity require energy-efficient semiconductor substrates that are resistant to corrosion and temperature and other environmental changes. As such a substrate, gallium nitride (GaN) semiconductors are expected to be used in next-generation power devices.

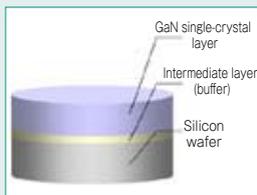
However, manufacturing single-crystal GaN substrates is not easy, as most GaN single crystals used for light-emitting devices are currently grown on sapphire and silicon carbide wafers, which are small and expensive.

At the Core Technology Center, researchers have developed the growth of GaN single crystals on silicon wafers that are larger and less expensive than sapphire and silicon carbide wafers. However, growing GaN single crystals directly on silicon wafers results in cracking, owing to the large difference in material properties or growth of low-quality crystals that hinder semiconductor performance. This problem was solved by growing GaN single crystals on an intermediate layer, which acts as a buffer between the GaN single-crystal layer and the silicon wafer and has resulted in devices that can be used as prototypes.

Power devices that use this substrate are expected to produce such efficiencies as smaller electric power supply devices (AC adapters, etc.) and energy conservation through the use of inverters. Furthermore, the use of these power devices in mobile phone base stations is expected to produce faster speeds and larger capacities for information transmission.



Image of GaN substrate



GaN substrate

Developer Comment

The focus of our development was growing high-quality GaN single crystals on a substrate of a different material. We changed the conditions of the film formation process and aimed to achieve both crystallinity and film thickness. We strive for originality and innovation every day in hopes that the semiconductor substrates we develop will be used in home appliances and industrial electronic equipment and contribute to the reduction of energy and space.

Akira Yoshida, Core Technology Development Group, Core Technology Center

² Power devices: Devices for efficiently controlling high-power electricity, such as AC/DC conversion and voltage conversion, that are used for various applications such as transportation equipment, office equipment, and home appliance power control and motor control.

Environmental Communications

Active dialogue on the environment with stakeholders

The Covalent Group disseminates environmental information in the Social and Environmental Report, on the corporate website and at seminars, and also holds community discussions to engage in direct dialogue with people in the communities where we have a presence.

■ Kanto Energy Conservation Conference

The Kanto Energy Conservation Conference, sponsored by the Ministry of Economy, Trade and Industry, was held from September 26–28, 2007.

Covalent Materials Sekikawa Corp. made a presentation about energy conservation activities involving the effective utilization of electric furnace waste heat and energy loss reduction, by which it achieved a 6.7% reduction in CO₂ emissions (per unit of output).



The Kanto Energy Conservation Conference
(Covalent Materials Sekikawa Corp.)

■ Participation in a Responsible Care Community Meeting

Covalent Materials Tokuyama Corp. participated in the 4th Shunan Area Responsible Care Community Meeting, held on November 13, 2007.



The 4th Shunan Area Responsible Care Community Meeting
(Covalent Materials Tokuyama Corp.)

■ Community Dialogue

On September 18, 2007, Covalent Materials Tokuyama Corp. held a community dialogue meeting with the Dogenkaisaku Residents' Association. Six people from the residents' association and five from Covalent Materials Tokuyama Corp. participated in the meeting. Here they exchanged opinions concerning environmental safety activities, security and accident prevention activities and requests made by members of the community to the company.



Community dialogue meeting
(Covalent Materials Tokuyama Corp.)



History of the Covalent Group's Commitment to the Environment

Since its foundation, the Covalent Group has accorded priority to harmony with society and the environment in the conduct of its business. We intend to continually strengthen the foundation of environmental management with the aim of establishing sustainable management*.

* Sustainable management means contributing to the establishment of a sustainable society through the fulfillment of corporate responsibility in terms of the economy, society and the environment and by respecting people.

80 Years of History since the Foundation of the Covalent Group

Year	History of the Covalent Group	Major environmental protection activities and evaluation	Major improvements of environmental protection-related facilities
1900	<p>1918 Toyo Taika Renga Co., Ltd. (the current Kariya Facility) is established.</p> <p>1928 Denki Kinyu Co., Ltd. (the current Oguni Facility) is established.</p>		
1950	<p>1956 Kawatana Plant (the current Covalent Materials Nagasaki Corporation) is established.</p> <p>1958 Nihon Denko Co., Ltd. is renamed Toshiba Denko Co., Ltd.</p> <p>1959 Tokai Rozai Co., Ltd., is renamed Toshiba Internal Insulation Co., Ltd.</p> <p>1961 Hadano Plant (the current Hadano Facility) is established.</p> <p>1968 Toshiba Ceramics Co., Ltd. (the current Covalent Materials Corporation) is established as a result of the merger between Denko Co., Ltd. and Toshiba Rozai Co., Ltd.</p> <p>1971 A research center (the current Core Technology Center) is established.</p> <p>1982 Tokuyama Ceramics Co., Ltd. (the current Covalent Materials Tokuyama Corporation) is established.</p> <p>1984 Tokai Ceramics Co., Ltd. is established.</p> <p>1985 Sekikawa Denshi Co., Ltd. (the current Covalent Materials Sekikawa Corporation) is established.</p> <p>1991 Niigata Toshiba Ceramics Co., Ltd. (the current Covalent Materials Niigata Corporation) is established for volume production of large-diameter silicon wafers.</p>	<p>1951 Oguni Facility receives the Director-General Award for Excellent Factories for Energy Control (Heat Category).</p> <p>1974 Oguni Facility receives the Director-General Award for Excellent Factories for Energy Control (Heat Category).</p> <p>1978 Oguni Facility receives the Award of the Minister of International Trade and Industry for Excellent Factories for Energy Control (Heat Category).</p> <p>1984 Kariya Facility receives the President's Prize of the Japan Energy Conservation Center for Excellent Energy Saving Cases.</p> <p>1991 Use of chlorine-based organic solvents is abolished throughout the group.</p> <p>1997 Oguni Facility starts manufacturing lead-free carbon brushes. (Full-scale manufacturing starts in July 2001.)</p> <p>1998 Oguni Facility receives the Award of the Director-General of the Tohoku Bureau of Economy, Trade and Industry for Excellent Factory Greening.</p> <p>1999 Kariya Facility receives an award in the Aichi Prefecture Factory Greening Contest.</p> <p>1999 Nagasaki Toshiba Ceramics Co., Ltd. (the current Covalent Materials Nagasaki Corporation) gains Eco-Mark certification for its foamed ceramics.</p> <p>1999 Use of acetone is abolished throughout the group.</p>	<p>1954 Oguni Facility's Akashiba Power Plant (hydroelectric) in Oguni, Yamagata prefecture, is completed.</p> <p>1985 Oguni Facility starts introducing waste-heat-based snow removing equipment, the use of which does not involve water spraying.</p> <p>1990 Oguni Facility's second Akashiba Power Plant (hydroelectric) is completed.</p> <p>1998 BOD treatment equipment is installed at Oguni Facility.</p> <p>1998 Waste Recycling Center is completed at Oguni Facility.</p> <p>1998 An emergency automatic shut-off gate is introduced at the final discharge outlet of Oguni Facility.</p> <p>1999 Noise-proof walls are installed at site boundaries of Hadano Facility.</p>
2000	<p>2006 SIC Investment, a special purpose corporation for the tender offer of Toshiba Ceramics' shares, is established.</p> <p>Toshiba Ceramics Co., Ltd. becomes a subsidiary of the special purpose corporation following completion of the tender offer.</p> <p>2007 Toshiba Ceramics Co., Ltd. becomes a wholly owned subsidiary of the special purpose corporation following completion of share exchange.</p> <p>2007 Toshiba Ceramics merges with the special purpose corporation and the new Company, Covalent Materials Corporation, is inaugurated.</p>	<p>2000 Green Procurement Guidelines are established and evaluation of suppliers for green procurement starts.</p> <p>2003 ISO 14001 certification is completed for all sites in Japan.</p> <p>2004 Niigata Toshiba Ceramics Co., Ltd. (the current Covalent Materials Niigata Corporation) achieves zero emissions of waste.</p> <p>2005 Oguni Facility receives the Minister of Economy, Trade and Industry Award for Excellent Factories for Energy Control (Heat Category).</p> <p>2005 Sekikawa Toshiba Ceramics Co., Ltd. (the current Covalent Materials Sekikawa Corporation) achieves zero emissions of waste.</p> <p>2006 Kariya Facility holds an explanatory meeting for local residents on soil and groundwater pollution.</p> <p>2006 Implementation of soil and groundwater countermeasures within the site is completed at Kariya Facility.</p> <p>2006 Hadano Facility achieves zero emissions of waste.</p> <p>2007 Kariya Facility receives a letter of appreciation from the Kariya 530 Campaign Liaison Committee for its support of the 530 Campaign.</p> <p>2007 Purification of contaminated soil at Kariya Facility starts.</p> <p>2007 Covalent Materials Sekikawa Cooperation makes a presentation at the Kanto Regional conference on energy-saving best practices held by the Energy Conservation Center, Japan.</p> <p>2007 Covalent Materials Sekikawa Cooperation is certified by Niigata prefecture as an excellent recycling site.</p>	<p>2000 Removal of incinerators from all production sites is completed.</p> <p>2001 Oguni Facility's cogeneration system is completed.</p> <p>2001 Heat storage combustion type exhaust gas treatment equipment is installed at Kariya Facility as a countermeasure for offensive odor and volatile organic compounds.</p> <p>2004 Measuring equipment for total phosphorus and total nitrogen is installed at Kariya Facility.</p> <p>2004 Introduction of central monitoring systems at final discharge outlets is completed at Oguni Facility, Hadano Facility and Kariya Facility.</p> <p>2004 Nagasaki Toshiba Ceramics Co., Ltd. (the current Covalent Materials Nagasaki Corporation) changes furnace fuel from heavy oil to kerosene in order to reduce SOx.</p> <p>2005 Kariya Facility introduces catalyst combustion type deodorizing equipment for furnaces at advanced ceramics factories No. 1, No. 2, and No. 3.</p> <p>2005 Nagasaki Toshiba Ceramics Co., Ltd. (the current Covalent Materials Nagasaki Corporation) changes furnace fuel from kerosene to LPG in order to reduce CO₂ emissions.</p> <p>2006 Hadano Facility changes boiler fuel from heavy oil to LPG in order to reduce CO₂ emissions.</p> <p>2007 Kariya Facility introduces catalyst combustion type deodorizing equipment for the furnace at the advanced ceramics factory No. 7.</p> <p>2007 Kariya Facility introduces ultra-high-voltage substation equipment (eliminating the use of heavy oil).</p> <p>2007 Covalent Materials Niigata Corporation installs additional wastewater treatment facilities (3 systems).</p>
2008			

Covalent Materials Corporation

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For any comments or inquiries concerning this report or our CSR activities, please contact us.

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