



Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

CSR Report 2016



**NIPPON
SHOKUBAI**

TechnoAmenity

Providing affluence and comfort to people and society,
with our unique technology.



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innovative chemical company that
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Responsible Care
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The “Reborn Nippon Shokubai” Emerges.



Masanori Ikeda, President

We aim to become a company that everybody can be proud of.

- A company that promotes work safety and peace of mind
- A company that rewards people who make their best efforts and achieve results
- A company that people can be proud to work for

Achieving progress with our medium-term business plan and “Reborn Nippon Shokubai 2020,” our long-term business plan

We have adopted a Group mission we call “**TechnoAmenity** — Providing affluence and comfort to people and society, with our unique technology.” At Nippon Shokubai, we are striving to implement our vision for 2025, which is “to become an innovative chemical company that provides new value for people’s lives.” We have formulated and launched “Reborn Nippon Shokubai 2020,” our long-term business plan spanning the period from fiscal 2014 to fiscal 2020, and our medium-term business plan, which we are implementing for the three years beginning in fiscal 2014.

Under our growth-oriented business foundation

strategy and investment plan, we have addressed company-wide priority issues while strongly demonstrating our sustainable management capabilities. In fiscal 2014 and 2015, we steadily achieved the objectives of our medium-term business plan.

We are now facing very difficult social conditions, marked by a destabilizing global situation and a decline in the global economic growth rate. Despite this somewhat tense situation, we intend to push forward to achieve our objectives in fiscal 2016, the final year of our medium-term business plan.

Safety takes priority over production

Alongside our Group Mission and Management Commitment, we accord the highest priority to our corporate credo of “Safety takes priority over production” and work to strengthen our corporate culture of prioritized safety while improving our safety awareness, knowledge, and skills.

Since the accident that occurred at our Himeji Plant in 2012, we have been focused on safety measures and on further strengthening our safety activities. In fiscal 2016,

we will complete all related efforts and will undergo a third-party inspection by outside experts that will examine our past initiatives. The results will drive forward the progress of the initiatives that we will begin to implement in fiscal 2017. We will continue with our diligent efforts toward ensuring safe and reliable operation in order to become “a company gaining further public trust as a responsible chemical company.”

Developing an active corporate team and organization

In January 2015, employing the slogan, “Think and act on your own,” we launched initiatives intended to renew our organizational culture.

We are currently implementing two initiatives: “reforming awareness,” which focuses on all employees; and “reforming the system,” which targets the entire company. At first, we initiated an activity by which all employees and executive officers swear to “my action declarations” and

make an effort to take the necessary steps to implement these actions. In parallel with this, we initiated on-site visits of executive officers to each workplace and small group activities with interdivisional teams and the like. Moreover, we are addressing organizational reforms in order to transform the structure of our Company. Through these activities, we are transforming our culture into one that promotes active discussions and adopts new challenges.

Strengthening Group management

We recognize that it is even more important to strengthen the business foundations of Group companies that are operating under volatile business conditions, including increasing competition in worldwide markets. We will

utilize the Group’s core competencies in order to maximize the synergy of Group companies and boost corporate value.

Conclusion

We will strive as a team to achieve the “Reborn Nippon Shokubai” — a company that everybody can be proud of.

1. A company that promotes work safety and peace of mind
2. A company that rewards people who make their best efforts and achieve results
3. A company that people can be proud to work for

With this edition, we are introducing the corporate social responsibility (CSR) initiatives of the Nippon Shokubai Group in a manner that is easier to understand. We welcome your continued support and candid opinions, and we greatly appreciate your cooperation with our initiatives.

June 2016

Special Feature

Evolving as an innovative chemical company that provides new value for people's lives



Himeji Plant

Vision, the Corporate DNA Embodied in a Pioneering Spirit, and the Legacy of a Passionate President

After more than 70 years in business, Nippon Shokubai continues to achieve growth. Under our second company president, Taizo Yatagai, who earned the nickname "The Passionate President,"* our Company triumphed over numerous obstacles. Mr. Yatagai guided the Company through the difficulties of constructing flagship plants in Kawasaki and Himeji and faced the significant challenges of growing the Company's varied businesses.

Nippon Shokubai's first success was meeting the bold challenge of commercializing ethylene oxide (EO) and its derivatives by employing Japan's first technology to adopt vapor phase oxidation as a key technology. We also introduced the industry's first method for manufacturing acrylic acid by means of direct oxidation from propylene. This superior technology has been adopted by influential chemical manufacturers around the world. Furthermore, we succeeded in growing our superabsorbent polymer business, which employs acrylic acid as a raw material, into a global business.

*Taizo Yatagai is the name of the main character in *Hono-o no Keieisha* ("The Passionate President"), a novel by Ryo Takasugi based on the business experiences of Nippon Shokubai's president.



Employees at the founding of Nippon Shokubai



Research Center at time of founding

Supporting Sustained Growth Through Strong Management

Many customers appreciate the superiority of an independent company that is not part of a web of corporate alliances. Moreover, they value Nippon Shokubai's production technology and our research and development capabilities. Our successive management executives were able to establish this foundation by taking advantage of the underlying corporate DNA embedded in our visionary spirit.

Through this approach, we have fostered a strong management capability dedicated to sustainable growth. This is the source of Nippon Shokubai's strength. When many companies curtailed their capital spending in the wake of the global financial crisis of 2008, we forecasted the subsequent uptrend and set out to increase our production capacity for acrylic acid and superabsorbent polymers. As a result, we were able to supply the products our customers needed on a timely basis. This testifies to the advantage provided by the corporate DNA we inherited from our founders.



President Ikeda speaking at the groundbreaking ceremony for the extension to our Group company in Belgium

Strengthening Our Business Foundation by Implementing Our Long-term Business Plan

In fiscal 2014, we launched "Reborn Nippon Shokubai 2020," our long-term business plan. This plan encompasses our corporate strategy, in which we set out what we envision for 2020, particularly the milestones we must reach to attain the goals of our long-term plan, our "Vision for 2025." Our first strategy is "to further strengthen our existing businesses and core products;" our second is "to raise a pillar of new business that will power our next surge of growth." Specifically, our new

pillar will be built on functional chemicals, new energy, and health and medical businesses. At the same time, we will further strengthen our existing businesses, which include ethylene oxide as well as our flagship businesses of acrylic acid and superabsorbent polymers. We aim to be a company that continually nurtures the seeds of emerging businesses. By 2020, we will have made more proactive investments in Japan and around the world.

Our Core Business

Our Himeji Plant is constructing a superabsorbent polymer plant capable of producing 50,000 tons/year that is scheduled for completion in summer 2016. Meanwhile, our subsidiary Nippon Shokubai Europe N.V. (NSE) is constructing a superabsorbent polymer plant as well as a plant that produces its base material, acrylic acid. These two plants will each have a capacity of 100,000 tons/year and are scheduled for completion in 2017.

The Company foresees a substantial increase in demand for superabsorbent polymers primarily in Central and Eastern Europe. Therefore, through capital investments that increase our capacity for superabsorbent polymers as well as acrylic acids, the base material used in its production, we are further enhancing the facilities we use to produce superabsorbent polymers.

These measures will bring the Group's global annual production of superabsorbent polymers to a total of 710,000 tons, further solidifying our position as a top supplier.



President Ikeda meets with Belgium's Prime Minister and Deputy Prime Minister.

New Business

In the new energy business, we are commercializing new products and developing products such as zirconia sheets for fuel cells, lithium FSI for lithium-ion batteries, and components for next-generation zinc batteries.

Moreover in our health and medical business, we have entered into a peptide drug joint-development agreement with GlyTech, Inc. After making an initial investment (representing 9.59% of ownership) in GlyTech, we decided to make a 300 million yen capital investment to establish a new laboratory of peptide API synthesis in the Suita Research Center.

Nippon Shokubai and GlyTech will collaborate on the development and mass production of glycosylated somatostatin analogs (G-SRIIF). Utilizing a growth hormone inhibitory action, G-SRIIF is expected to become a next-generation therapeutic drug for the treatment of acromegaly. We believe the new company will add value in the health and medical field by introducing this innovative drug discovery and development support business as a foothold.



Conceptual drawing of the new laboratory in the Suita Research Center



Kawasaki Plant

Outline

Established August 21, 1941
 Common stock ¥25,000 million
 Net sales ¥323,100 million (consolidated)
 ¥211,400 million (non-consolidated)
 Number of employees 4,006 (consolidated)
 2,163 (non-consolidated)
 Osaka Office Kogin Bldg., 4-1-1 Korabashi, Chuo-ku, Osaka 541-0043, Japan
 TEL: +81-6-6223-9111 FAX: +81-6-6201-3716
 Tokyo Office Hibiya Dai Bldg., 1-2-2 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011, Japan
 TEL: +81-3-3506-7475 FAX: +81-3-3506-7598
 Main Plants and Research Centers Himeji Plant, Kawasaki Plant, Himeji Research Center, Suita Research Center, Tsukuba Research Center
 As of March 31, 2016

Major Product Lines

Basic Chemicals 36.4%

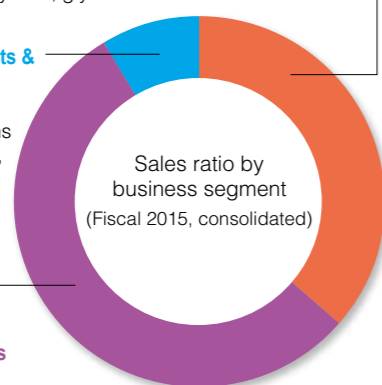
Acrylic acid, acrylates, ethylene oxide, ethylene glycol, ethanolamine, secondary alcohol ethoxylates, glycol ether

Environmental Products & Catalysts 8.6%

Automotive catalysts, De-NOx catalysts, dioxins decomposition catalysts, process catalysts, exhaust gas treatment catalysts, materials for fuel cells

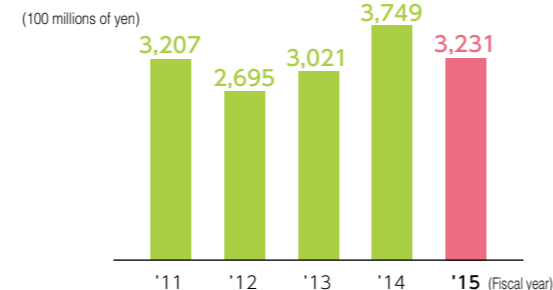
Functional Chemicals 55.0%

Superabsorbent polymers, intermediates for pharmaceutical, polymers for concrete admixture, electronic information materials, iodine, maleic anhydride, resins for adhesives, resins for paints, adhesive products

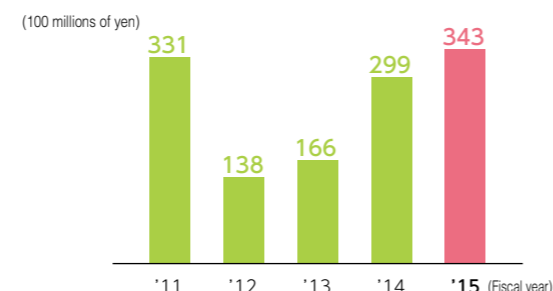


Financial Data

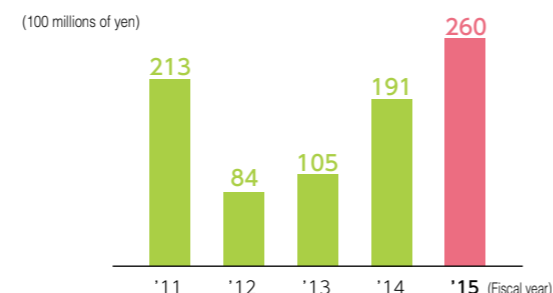
Net sales (consolidated)



Ordinary income (consolidated)

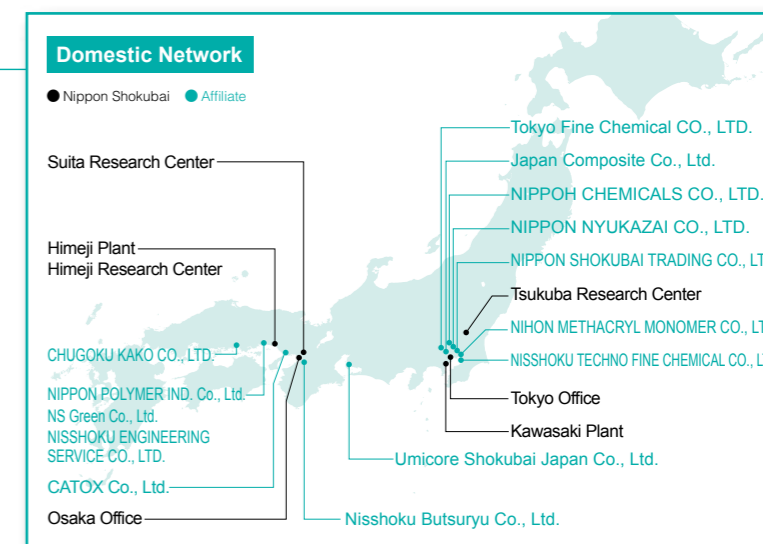


Current net income (consolidated) attributed to parent company as shareholder



Business Locations

Together with its affiliates and trading companies, Nippon Shokubai has established a network encompassing the fields of chemicals, processing, and transportation in order to respond accurately to growing customer needs. Our Group was formed to ensure improved global production and a more effective supply chain (as of April 1, 2016).



Global Network



- Affiliate
- 1 NIPPON SHOKUBAI EUROPE N.V.
- 2 Umicore Shokubai S.A.
- 3 LG MMA Corporation
- 4 NIPPON SHOKUBAI KOREA CO., LTD.
- 5 NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.
- 6 NISSHOKU TRADING (SHANGHAI) CO., LTD.
- 7 SINO-JAPAN CHEMICAL CO., LTD.
- 8 SINGAPORE ACRYLIC PTE LTD
- 9 NIPPON SHOKUBAI (ASIA) PTE. LTD.
- 10 PT. NIPPON SHOKUBAI INDONESIA
- 11 American Acryl L.P.
- 12 American Acryl NA, LLC
- 13 Nippon Shokubai America Industries, Inc.

History

History of Technological Innovation

1941 Osame Gosei Kagaku Kogyo Co., Ltd. is established.

1943 The Suita Factory is opened.

1949 The company is renamed Nippon Shokubai Kagaku Kogyo Co., Ltd.

1950 Nippon Shokubai is the first company in Japan to begin commercial production of phthalic anhydride.

1959 Awarded the Okouchi Memorial Prize for commercialization of ethylene oxide and ethylene glycol.

1960 The Kawasaki Factory (currently the Chidori Plant of the Kawasaki Plant) is opened.

1967 Nippon Shokubai is the first company in Japan to begin commercial production of acrylic acid and acrylates by oxidation of propylene.

1970 The Himeji Factory (currently the Himeji Plant) is opened.

1972 Awarded the Okouchi Memorial Production Prize for developing technology to produce acrylic acid and acrylates.

1974 The Kawasaki Second Factory (currently the Ukishima Plant of the Kawasaki Plant) is opened.

1978 Awarded the Okouchi Memorial Production Prize for developing technology to produce higher alcohols and secondary alcohol ethoxylates.

1980 Nippon Shokubai begins full-scale production of superabsorbent polymers.

1985 Nippon Shokubai begins production of automotive catalysts.

1987 NA Industries, Inc. (currently Nippon Shokubai America Industries, Inc.) is established in Tennessee, U.S.A.

1988 The Himeji Plant discontinues production of phthalic anhydride. The Himeji Plant installs gas turbine cogeneration facilities.

1990 The company is renamed NIPPON SHOKUBAI CO., LTD.

1991 PT. Nisshoku Tripolyta Acrylindo (currently PT. NIPPON SHOKUBAI INDONESIA) is established in Indonesia.

1996 NIPPON SHOKUBAI EUROPE N.V. is established in Belgium.

1999 NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD. is established in China.

2000 Nippon Shokubai begins commercial production of polymers for concrete admixture.

2003 Singapore Acrylic Pte. Ltd. is established through a business swap with Sumitomo Chemical.

2004 The Kawasaki Plant introduces a new ethanolamine production process (with catalyst).

2006 Nippon Shokubai begins production of ACRYVIEWA.

2008 Nippon Shokubai acquires majority of shares of NIPPON NYUKAZAI CO., LTD. and SINO-JAPAN CHEMICAL CO., LTD.

2009 Awarded the Okouchi Memorial Production Prize for new diethanolamine production technology.

2010 NIPPON SHOKUBAI (ASIA) PTE. LTD. merges with Singapore Glacial Acrylic Pte. Ltd.

2013 Awarded the Chemical Society of Japan Award for Technical Development for developing and industrializing ACRYVIEWA.

2014 The Suita Plant is closed (R&D operations in the area are bolstered).

Message from the President

Special Feature

Profile of the Nippon Shokubai Group

Our Product Lines / Research & Development Highlights

Nippon Shokubai's CSR Concept

Corporate Governance

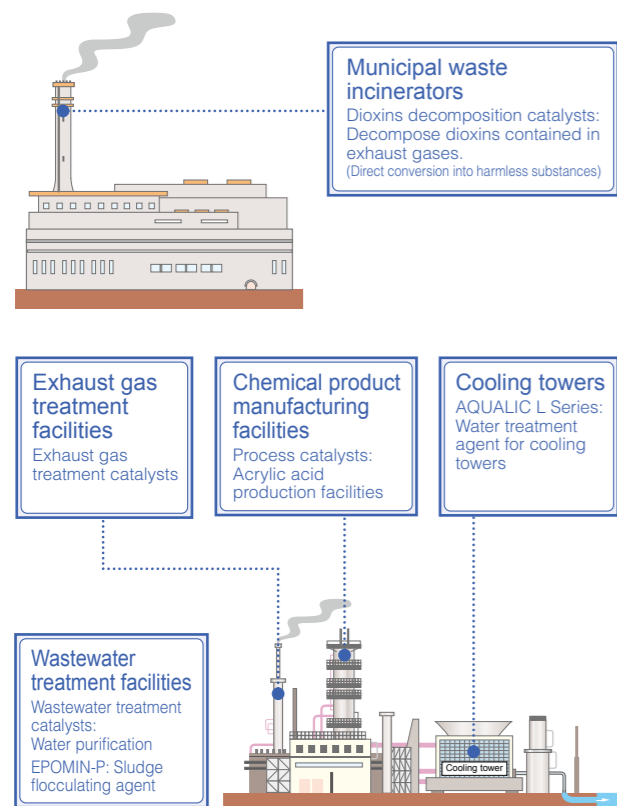
Earning Public Trust and Contributing to Society

Responsible Care Activities

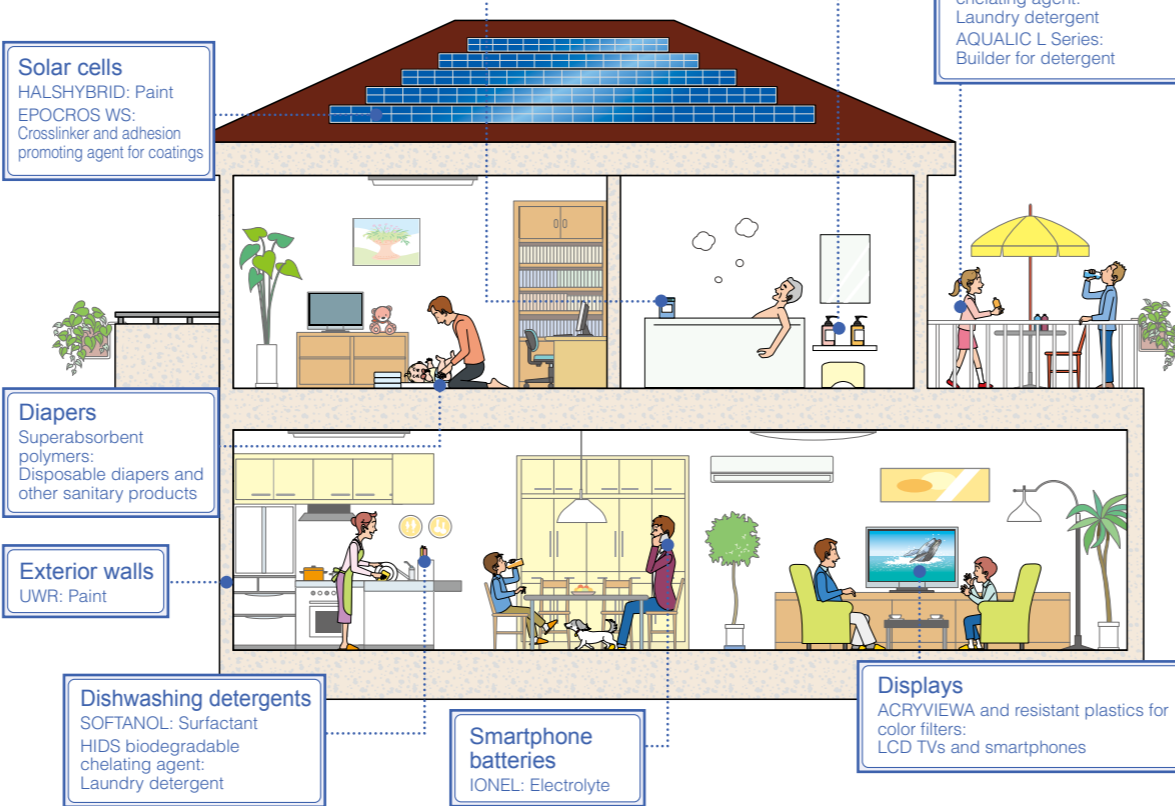
Our Product Lines

Our products and technologies contribute to an improved society and a better life in myriad industries.

Factories



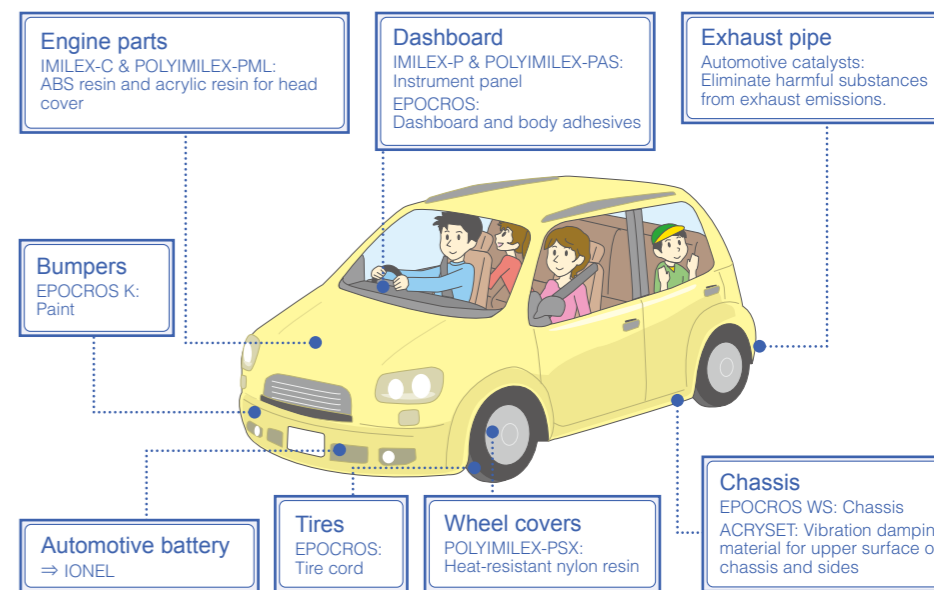
Homes and Offices



Structures



Automobiles



Research & Development Highlights

Ion-Conducting Film (in development)

The ion-conducting film we have developed with our proprietary technology can be used as a battery separator. This material makes it possible to create a rechargeable battery from a zinc battery, which conventionally has been used only as a non-rechargeable cell.

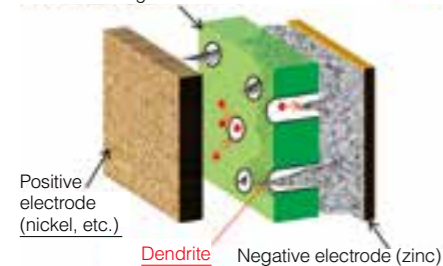
For example, nickel-zinc batteries and air-zinc batteries had been expected to emerge as next-generation rechargeable batteries because they have been considered very safe and eco-friendly, as they incorporate water-based electrolyte solution and contain no lead

or other harmful substances.

With conventional separators, however, the anode and cathode tend to short-circuit easily because the zinc active material forming the negative electrode generates dendrites during charging. This has caused major issues with battery life. Our ion-conducting film, however, effectively minimizes dendrite formation, resulting in a highly reliable rechargeable zinc battery.

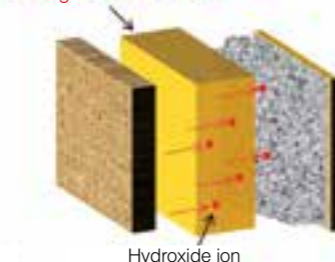
Conventional separator:

Ions flow through fine through-holes formed in the insulating film or nonwoven fabric.



Product in development:

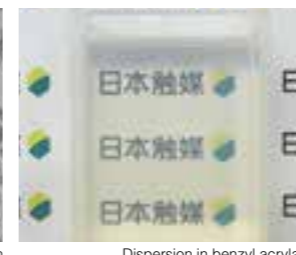
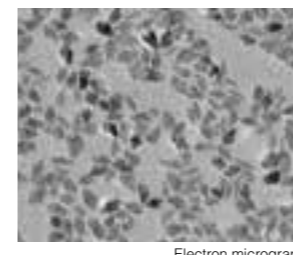
An ion-conducting material stable in strong alkali and used in batteries



ZIRCOSTAR Dispersed Zirconia Nanoparticles*

The zirconia nanoparticles we developed with our proprietary technology exhibit good dispersion in a variety of organic solvents and resins. Resins in which these nanoparticles are dispersed demonstrate good optical characteristics (including high refractive index and high transparency), which are not possible with conventional materials. Materials incorporating ZIRCOSTAR are most suitable for optical material and electronic material applications such as plastic lenses and displays. This product is especially suitable as a contributor to the energy-efficiency of portable devices such as smartphones and tablet PCs, contributing to extended operating time when battery-powered.

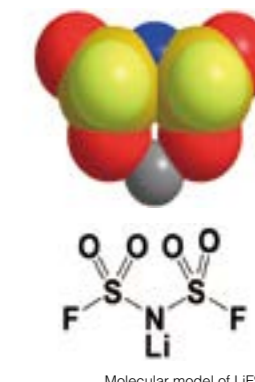
*Zirconium oxide whose particle size is maintained at nano scale (10⁻⁹ m)



IONEL Electrolyte for Lithium Batteries

We have developed a proprietary electrolyte for lithium batteries. Known by the generic term lithium bis(fluorosulfonyl)imide, or LiFSI, it exhibits the largest ionic conductivity among the numerous lithium salts.

Confirmed as effective at improving the performance of lithium ion batteries at low and high temperatures, this product offers societal and environmental advantages in terms of smartphone batteries and hybrid vehicle batteries.





Safety takes priority over production.

Nippon Shokubai Code of Conduct

In the belief that it is our social responsibility to conduct business based upon the principles of compliance and self-responsibility for the sake of proper social development, we have set forth the following basic corporate behavior guidelines as the "Nippon Shokubai Code of Conduct."

1. Guided by our Group Mission of **TechnoAmenity**, we will conduct all of our actions as a good corporate citizen.
2. We will comply with relevant laws both inside and outside of Japan, and act in accordance with in-house regulations.
3. We will create and nurture a sound, vibrant workplace, where each individual can hone their professional competence and find fulfillment in their career.
4. We will develop and market products and services that are both safe and useful, based upon an accurate understanding of social demands.
5. We will commit ourselves to eliminating labor hazards and accidents, and constantly strive to protect the global environment.
6. We will conduct business based on fair and open competition.
7. We will take a firm stance when dealing with unlawful or antisocial groups.
8. We will ensure frequent communications with our shareholders and members of society in general, and guarantee the appropriate disclosure of corporate information.
9. With respect for the culture and customs of every nation/region we serve, we will contribute to their development and wellbeing through community-based business undertakings.
10. We will ensure the solid and sustainable development of the company through business undertakings based soundly upon the above action guidelines.

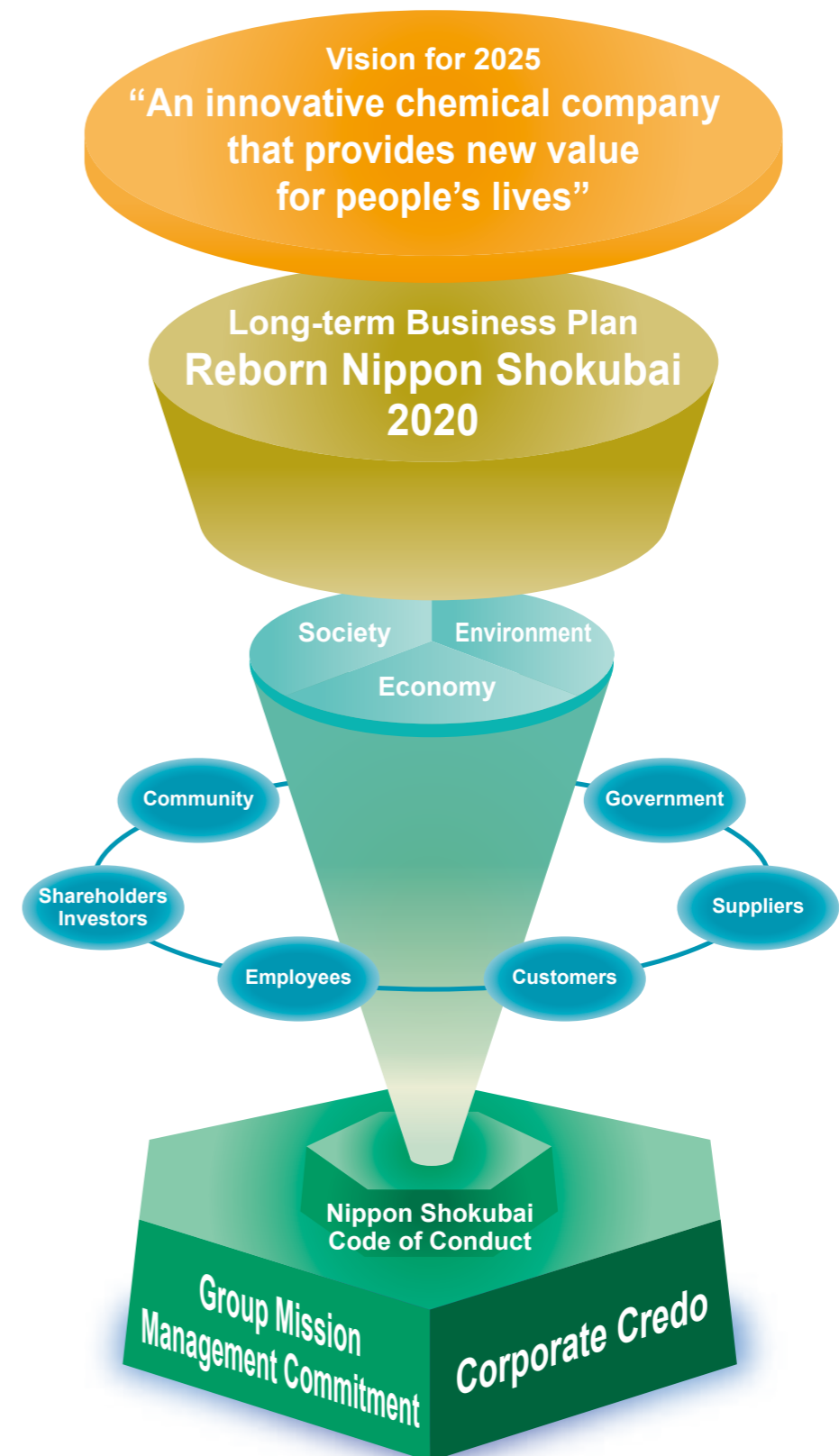
CSR Implementation Structure

In an effort to embody our CSR management with a high degree of effectiveness, the CSR Management Committee, chaired by the president, provides overall coordination while carrying out inspections and monitoring the implementation of the policies, and action plans as well as the achievements of each committee.



Since 1973, Nippon Shokubai has been advocating the spirit contained within our corporate credo, "Safety takes priority over production." In accordance with **TechnoAmenity**, our Group Mission, we have established a Management Commitment and Code of Conduct to comprehensively view our corporate behavior from economic, social, and environmental perspectives, setting out our corporate ethics, Responsible Care (RC), human rights & labor, information disclosure, social contribution, and corporate governance as our management's top priority issues and implementing our activities to enhance our corporate value via continuing dialogue with various stakeholders, including our customers, business partners, shareholders/investors, public administration, employees, and local communities.

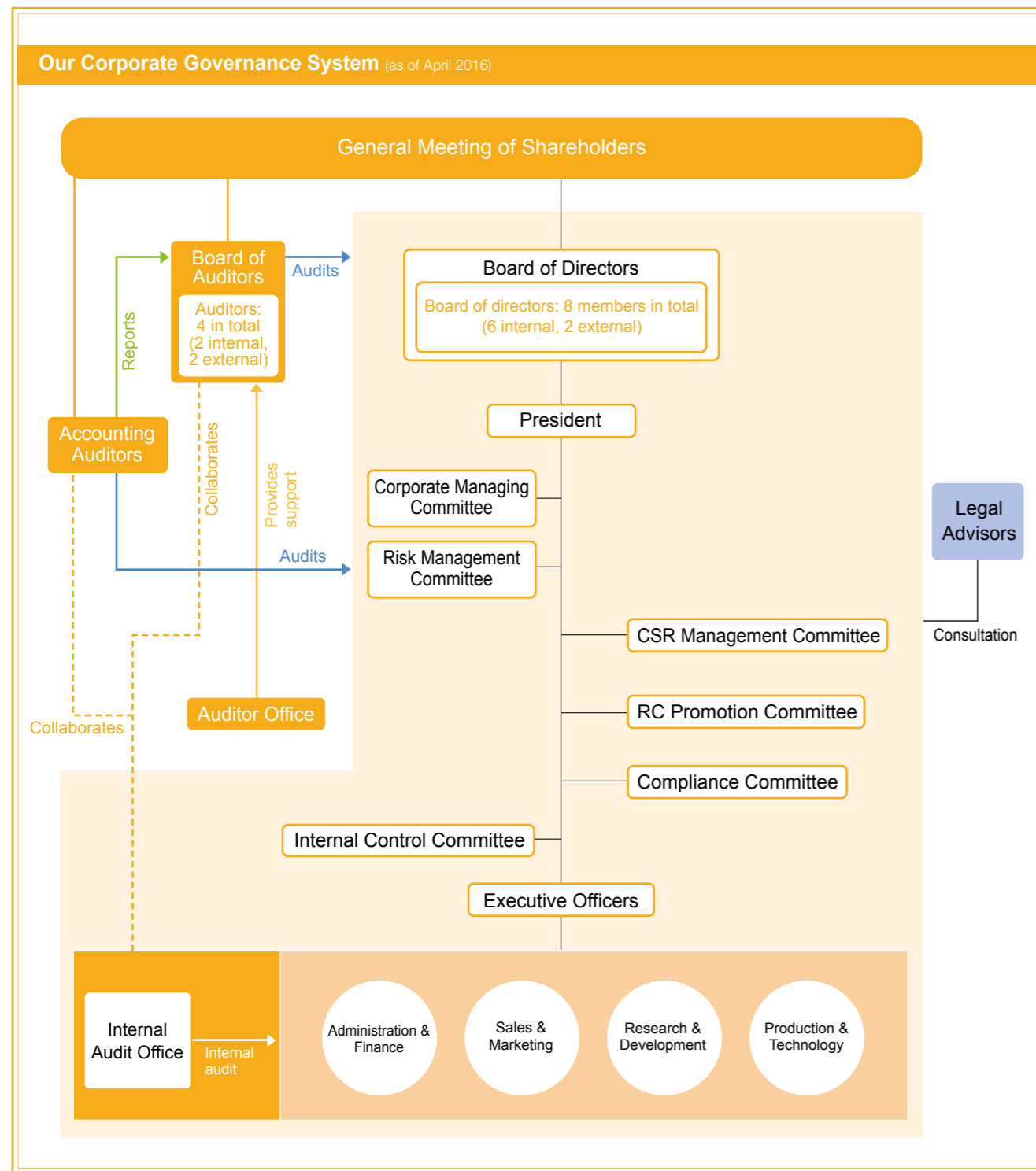
In keeping with our approach to corporate social responsibility (CSR), we will continue to contribute to the emergence of a sustainable society by implementing "Reborn Nippon Shokubai 2020," our long-term business plan, with the goal of adopting our vision for 2025.



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Responsible Care Activities

Under Nippon Shokubai Group's Mission of **TechnoAmenity** — "Providing affluence and comfort to people and society, with our unique technology" — our goals are to emerge as an innovative chemical company that provides new value for people's lives, to earn the greater confidence of the public as a responsible chemical company, and to become a company that all can take pride in, including our varied stakeholders. In this way we will increase our corporate value and achieve sustainable growth.

We consider the achievement of viable corporate governance as essential and have adopted initiatives toward that end: we are securing the rights and equality of shareholders and maintaining open dialogue; collaborating with various stakeholders as appropriate; disclosing information as appropriate and ensuring transparency; ensuring the roles of the board of directors and management teams related to their appropriate execution of duties; ensuring appropriate supervision of the execution of these duties; and strengthening and enhancing internal control systems.



Roles and Functions of Various Bodies and Committees

Board of Directors

Comprising the eight members, including two external members, the board of directors supervises business operations of each director through reports, deliberations, and resolutions regarding important matters. In general, the board of directors convenes monthly under the chairmanship of the president. Four auditors — two external and two internal — also attend to give advice and state their opinions as appropriate when necessary.

Corporate Managing Committee

Comprising the president and executive officers appointed by the president, this Committee generally convenes twice monthly (with all executive officers in attendance at one of these meetings) to deliberate items related to the implementation of basic policies and important management issues. In addition, regarding proposals discussed by the Corporate Managing Committee, important issues involving those proposals are forwarded to the board of directors for their consideration.

Board of Auditors

Comprising two external auditors and two internal auditors, this board convenes monthly in general, submits reports, and engages in discussions and deliberations on important matters.

CSR Management Committee

Chaired by the president, this committee determines the company's CSR direction and promotes CSR initiatives that contribute to the interests of stakeholders while maintaining coordination with the other committees.

RC Promotion Committee

Chaired by the president, this committee promotes the company's Responsible Care activities. It formulates the RC Promotion Basic Plan and works to further improve safety, quality, and environmental issues.

Compliance Committee

Chaired by the president, this committee improves and strengthens the company's overall corporate ethics and systems for compliance with laws and regulations.

Risk Management Committee

Chaired by the president, this committee implements measures as appropriate in response to various wide-ranging risks to which our Group is exposed.

Internal Control Committee

Under the chairmanship of the president, this committee has established a system to ensure the reliability of financial reporting as enforced by the Financial Instruments and Exchange Act. It also seeks to process company operations more efficiently and effectively.

Earning Public Trust and Contributing to Society

Corporate Ethics

Corporate Ethics

We remain committed to various group-wide initiatives intended to further improve and strengthen our corporate ethics and legal compliance systems.

Corporate Ethics Training Rank-based training

We provide training and lecture sessions in corporate ethics targeted to three specific employee ranks: managerial employees, mid-level employees, and rank-and-file employees (including entrusted workers and dispatched workers from temporary agencies). We require all employees to attend such sessions at least once every three years.

In fiscal 2015, we held corporate ethics training for managerial employees 20 times in total, reaching a total of 500 employees.

Addressing themes such as "consider different viewpoints to eliminate omissions" and "consider factors leading to disparities and ways of responding," these sessions presented scenarios showing desirable behaviors in day-to-day work and showed how disparities conflict with reality (experience). The sessions gave the participants a chance to increase their awareness through group discussions that sought consensus, common vision, and judgment criteria regarding the entire concept of the remorse factor (how to respond on one's own and how to respond in one's capacity).



Rank-based training

Corporate Ethics

Training sessions for Group companies

To ensure that the concept of corporate ethics permeates and becomes well established within each company of the Nippon Shokubai Group, we held corporate ethics training sessions targeted to those in managerial positions in nine domestic Group companies between October 2015 and January 2016. This marked the second round of corporate ethics training sessions held for our Group companies since we first implemented them in 2011. More than 200 participants attended the sessions.

These sessions were intended to highlight and impart the roles of those in managerial positions; introduce methods for providing instruction in corporate ethics; outline basic attitudes for preventing corporate misconduct; and raise the awareness of individuals as Nippon Shokubai Group employees. These topics were presented in three sessions: Part 1: Addressing personal misconduct and acts of omission; Part 2: Addressing legal compliance and corporate ethics through case studies; and Part 3: Considering ways to prevent misconduct. Compared with previous sessions, the participants showed greater interest in the corporate ethics subjects covered, with the sessions breaking into freewheeling group discussions.



Training session for our Group company

Comments from employees of Group companies attending the training sessions

- The sessions were much easier to understand thanks to the careful explanation by the lecturer and group discussion based on case histories.
- I gained a sense of what it is to be seen by the world as a member of the Nippon Shokubai Group.
- I felt the importance of being aware of corporate ethics in the activities of my normal work routine.

Awareness initiatives in the workplace

In order to promote greater penetration and adoption of corporate ethics in the workplace, we conduct corporate ethics training sessions in various workplaces once every three months. These training sessions have become well established, as they offer opportunities for workplace discussion. They are based on a training program covering violations of corporate ethics and legal violations and the like that we created in reference to situations that actually arose in other companies.



Workplace training



Workplace training

Distribution of our Corporate Ethics Guidebook to employees

We published our "Corporate Ethics Guidebook" to present the specific conduct guidelines of the Nippon Shokubai Code of Conduct. It is distributed to all employees as part of our awareness-raising initiative.



Corporate Ethics Guidebook

Awareness activities on our corporate ethics portal

Our corporate intranet hosts our corporate ethics portal titled "Understandable Corporate Ethics." It lists basic information on contracts, competition laws in various countries, observance of anti-bribery laws, various manuals related to subcontract law and the like, links to websites covering related laws and regulations, and a FAQ page. This site presents the latest available information, as it is updated as necessary whenever the relevant laws and regulations are revised.



Web portal

Our Relationship with Shareholders and Investors

Our Policy to Promote Dialogue with Shareholders and Investors

As a basic policy of our approach to IR, we undertake fair and timely information disclosure and release clear and accurate information. We strive to promote constructive dialogue with our shareholders and investors in order to contribute to the sustained growth of our Company and enhancement of our medium- and long-term corporate value.

Promoting Constructive Dialogue with Shareholders and Investors

We are implementing the following initiatives to promote constructive dialogue with shareholders and investors.

Initiative	Content
Meeting of shareholders	1. We use visual techniques when reporting our management review and when deliberating proposals during the meeting of shareholders, as this enables shareholders to develop a deeper understanding. In addition, we hold a shareholder round-table meeting after the annual general meeting of shareholders to promote smooth communication between management and shareholders. 2. For the convocation notice of the general meeting of shareholders, we include graphs and illustrations for clarity and understanding. 3. To enable many more shareholders to attend our annual general meeting of shareholders, we schedule our meeting about one week before the day on which many other Japanese companies tend to hold their shareholders' meetings.
IR meeting for individual investors	We hold an IR meeting for individual investors (irregular, aiming for once annually).
Presentations for analysts and institutional investors	We hold IR meetings for analysts and institutional investors, and we disclose information on our full-year and first-half financial results for the fiscal year as it is released.
IR meeting for offshore investors	We hold IR meetings for offshore investors on an irregular basis.
Publication of IR data on website	Our website lists financial results and other disclosure materials; annual securities reports and quarterly reports; convocation notices for the annual general meeting of shareholders; notices of resolutions; business reports; IR meeting materials; and other presentation materials on a timely basis. In addition, we follow a fixed schedule for posting English-language translations of the briefing materials of our annual and quarterly financial results; convocation notices for our annual general meeting of shareholders; IR meeting materials; and the English-language edition of our Annual Report.
Others	For shareholders, we send out our Business Report in June and December.



Annual Report 2015



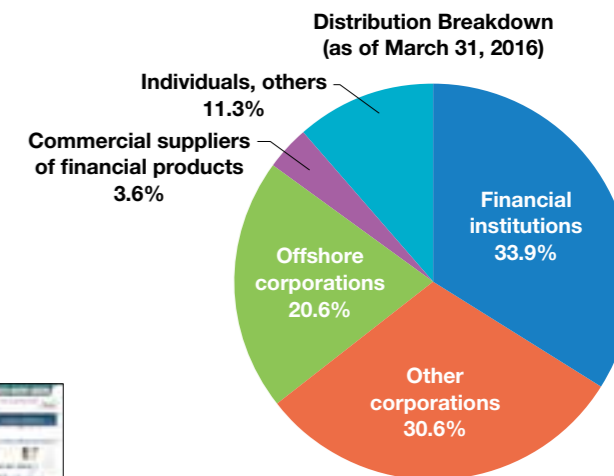
103rd Business Report



IR meeting



Website



Social Contribution

Under our stated Management Commitment to coexist with society and work in harmony with the environment, we conduct a number of initiatives related to environmental protection, involvement in local communities, and providing training assistance according to our policy on social initiatives.

Our Policy on Social Initiatives

In keeping with the Nippon Shokubai Group Mission of **TechnoAmenity** and our commitment to protecting biodiversity, we intend to adopt initiatives focused on benefitting and increasing the prosperity of our stakeholders, including local communities, while maintaining clear communication with society as a good corporate citizen.

Environmental Protection Initiatives

Forest Development Initiatives

Contributing to Our Forests and Water Resources

Location: Akasai Valley, Hara, Haga-cho, Shiso-shi, Hyogo prefecture
 Activities: Forest improvement, river biological surveys, and other activities
 Start of activity: November 2008

In order to improve conservation of the headwater forest in the Akasai Valley that serves as the headwaters of the Ibo River, we have been performing maintenance work in order to leave a beautiful forest for future generations. In addition, we are learning to impart the importance of protecting biodiversity through our research on the creatures inhabiting the Akasai River.

In May, August, and October of fiscal 2015, we undertook three initiatives. Our August activity included collaborating with professors and students of the University of Hyogo on a survey of creatures and the water quality of the river.



Biological survey on Akasai River

Contributing to the “Yugawara Myriad Leaves Forest”

Location: Kajiya, Yugawara-machi, Ashigarashimo-gun, Kanagawa prefecture
 Activities: Forest improvement, nature observation tours, and other activities
 Start of activity: November 2013

In the headwater forest of upper reaches of the Shinzaki River in Yugawara-machi, we conduct forest improvement and nature observation tours. Local residents participate and collaborate with us to create an opportunity for learning about the natural environment.

In May and October of fiscal 2015, we undertook two initiatives. Working with residents of Yugawara-machi, we made tables and undertook a forest improvement effort.



Forest maintenance in Yugawara

Japan-China Friendship Forest Development and Global Warming Prevention

Location: Ejina Horo Banner, Inner Mongolia Autonomous Region, China
 Activities: Afforestation, maintenance, management, and the like
 Start of activity: October 2008

As part of a project to prevent desertification in inland China, we have been engaged in initiatives to restore forest throughout the area where it once existed. Every year, we return to this area to plant trees.

In September of fiscal 2015, we undertook a tour, working on tree planting together with local university students. We planted about 50 seedlings.



Tree planting project in China

Note: The forest development initiatives of Nippon Shokubai are undertaken in cooperation with NPOs through the Green Fund of the National Land Afforestation Promotion Organization.

Conserving and Popularizing the Nojigiku Chrysanthemum

In order to protect, conserve, and popularize the endangered *nojigiku* chrysanthemum, the prefectural flower of Hyogo, our Himeji Plant has cultivated 160 varieties of this flower, including foundation stock, in a 2,000-square-meter green yard by the plant.

Cultivation began in 1972 and by 1974 the Himeji Plant began distributing seedlings annually in cooperation with Hyogo prefectural government.

In fiscal 2015, we distributed 30,000 seedlings to 297 organizations, including local governments, kindergartens, elementary and junior high schools, and community associations.



Nojigiku in a conservation garden

Assisting the Community

Cleanup Campaign

We conduct periodic cleanups of the environs around all our plants as a local beautification initiative.

In Suita district, as part of the Kanzaki River Adopt-a-River Program promoted by Osaka Prefecture, we participate in the annual Kanzaki Riverside Cleanup Campaign every year.



Kanzaki Riverside Cleanup Campaign

Sweet Potato Harvest Party

We grow sweet potatoes in the potato fields we have created in the green yard of the Himeji Plant. Every year, we invite neighborhood kindergartners and nursery school children to enjoy harvesting our crop of sweet potatoes. We have been holding this activity since 1971, as it has helped us forge strong ties in the community. In fact, some of the children who harvested potatoes in the past are now employed with us.

In fiscal 2015, about 800 children participated.



Children harvest potatoes

Initiatives to Support Training

Children's Chemistry Experiment Show

For the children who will form the next generation (mainly elementary and junior high school students), we have been presenting an Experiment Show titled “Superabsorbent Polymer, the Mysterious Powder.”

The children enjoy experimenting with chemistry and take great interest.

In fiscal 2015, we held shows at the following venues.

Sakurayama Park Festival/ Science Booth Exhibit

Date: July 18–19, 2015
 Site and Sponsor: Himeji City Science Museum

Children's Chemistry Experiment Show 2015

Date: October 24–25, 2015
 Site: Kyocera Dome Osaka
 Sponsor: Dream Chemistry 21

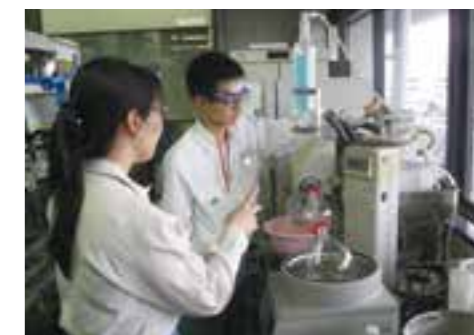


Science Booth Exhibit

Hosting Internship Trainees

Our Himeji and Kawasaki Plants and our Suita Research Center provide internship opportunities that offer training for students from technical colleges.

In fiscal 2015, a total of 27 students from 16 colleges gained experience and skills — such as how to take measurements with analytical instruments — through this program.



Internship

Our Relationship with Our Employees

While maintaining the utmost respect for individual human rights, we remain committed to supporting every one of our employees by working to maintain a healthy work environment and by providing a positive working environment that contributes to a high level of job satisfaction.

An Environment That Contributes to Job Satisfaction

By implementing the long-term business plan we have titled “Reborn Nippon Shokubai 2020,” we seek to revitalize our employees and our organization as the foundation for the sustained growth of our Group. We are training our employees to become independent personnel who can exert their best efforts and achieve results in order to create “a company that we can be proud to work for” while striving to design and manage a system framework that allows our employees to demonstrate their abilities.

Moreover, by adhering to the ideal of encouraging each individual employee to “determine his or her own way forward and take action,” we are developing a variety of company-wide initiatives intended to reform our corporate culture.

Human Resources Management System

We have introduced a human resources management system based on management by objectives, which is applicable to all employees. After a given period of time, we will introduce an environment in which employees can achieve significant results by working with independence as a result of ongoing reviews of our system and our operational environment.

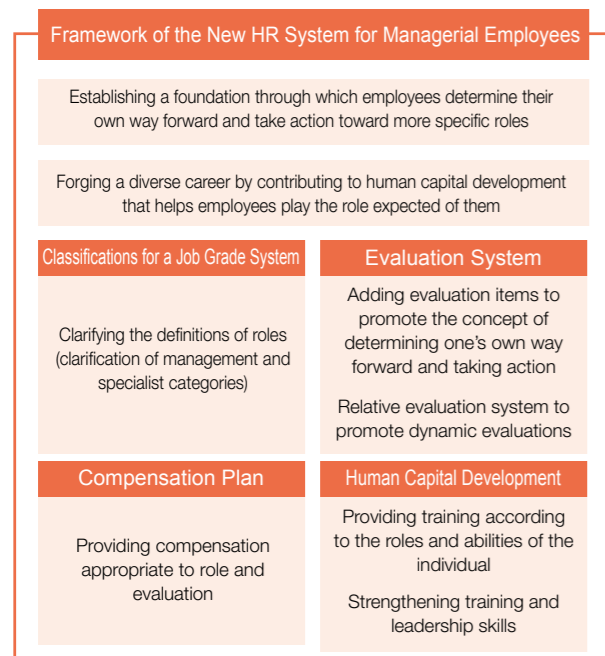
1. Provisions for Managerial Employees

In April 2016, we revised the managerial employee personnel system that had been in place for 16 years. Managerial employees are the drivers behind what needs to be accomplished under our medium- and long-term business plans and our vision for 2025. Because these managerial employees are motivated by the concept of *kodo*, meaning “to determine their own way forward and take action,” this system is designed to reward those who demonstrate their best efforts and heed the call to fulfilling their roles.

2. Provisions for Non-managerial Employees

We remain committed to a variety of efforts to continually maintain the current system. To ensure we set more challenging and more ambitious goals, we are conducting more study and are implementing policies in addition to providing evaluator training to ensure the fairness of employee evaluations.

Framework of the New HR System for Managerial Employees



Promoting Female Employees

Our Company has been working actively to ensure gender-neutral recruitment and institutional development.

We have now formulated an action plan for fiscal 2016–2020 that is intended to increase the number of female employees in managerial positions (or above the level of section manager class). Our goal is to double the number relative to the fiscal 2015 year-end levels by the end of fiscal 2020.

Human Resources Development

We have adopted the following four items as “personnel objectives.” They are intended to instill in personnel a sense of ownership so that work is not left to others to perform.

- Independently minded personnel capable of taking the initiative in identifying and resolving issues
- Personnel capable of flexibly adapting themselves and their organizations
- Personnel capable of demonstrating sophisticated expertise
- Personnel capable of working with a diverse international community

We provide opportunities for our employees to develop the abilities they require. When an employee independently acquires the necessary abilities and a variety of skills, future value is generated for both the company and the individual employee. Under this arrangement, we provide participatory applicant-type “self-selection training” in addition to carrying out rank-based training that employees participate in at each step of their careers. We have also established a system to help all employees proactively develop the skills that suit them by offering English-language training, a system for overseas study, distance learning, and assistance in acquiring qualifications and the like.

Human Resources Development Support System



Re-employment System

This system corresponds to measures addressing the rescheduling of pension eligibility age and is intended to help stabilize the lives of retired employees. The period of re-employment extends until the age of 65. This initiative contributes to an employee’s sense of security, self-worth, job satisfaction and motivation, as it provides ongoing employment in a familiar work environment.

Note: Re-employment rate of retired employees: 77% (FY 2015)

Employment of People with Disabilities

We are committed to our employment of people with disabilities and giving them active roles at each of our workplaces and at our designated Group subsidiary, NS Green Co., Ltd.

A Positive Working Environment

In an effort to provide our employees with the opportunity to achieve “the good life,” we offer a wide-ranging employee welfare system for the benefit of our employees and their families. This initiative includes wealth building, emergency preparedness, support for daily life activities, planning for a stable retirement, positive use of personal time, and maintenance of health and wellness. Our company will continue to support a good life for our employees through self-help as we enter the era of a low birth rate and an aging population.

Supporting the Positive Use of Personal Time

In order to contribute to a balance among work, family, and social engagement while maintaining a full life, we hold various events that provide opportunities for mutual understanding among employees, family interaction, and maintenance of mental and physical health.



Ski tour held as an employee welfare event



Inter-departmental Sports Competition

Providing Balanced Assistance for Work, Child Care and Nursing Care

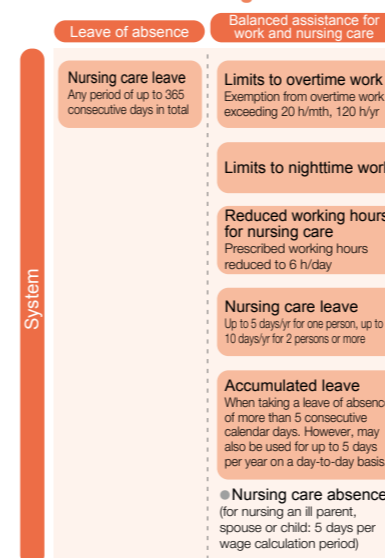
Japan’s low birth rate and aging population remain pressing issues; therefore, it is essential that all sectors of society continue to support child care and nursing care. Private enterprises are also required to create an environment that supports a balance among work, child care, and nursing care. We are responding to these social realities by striving to create an environment and infrastructure that provides a variety of systems for supporting employees with their parenting and nursing responsibilities while employed. We also published a guidebook that summarizes our

balanced support system, and we continue to keep our employees broadly informed and educated.

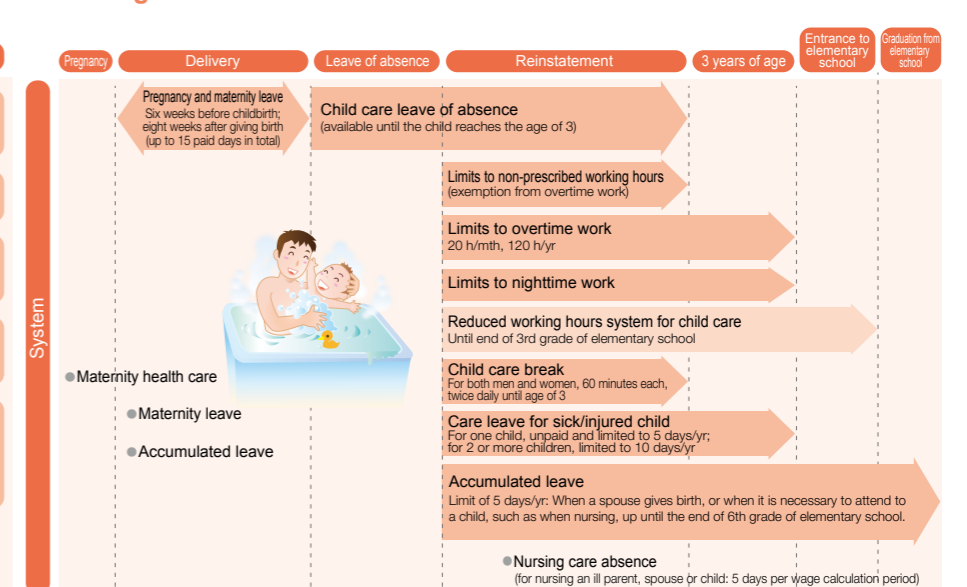
The Osaka Labour Bureau of the Ministry of Health, Labour and Welfare granted us an authorization for complying with Standards for General Employers under the Next Generation Nurturing Support Measures Promotion Law.



Providing Balanced Assistance for Work and Nursing Care



Providing Balanced Assistance for Work and Child Care



Notes: Number of employees using child care leave of absence: 16 (Total number of employees for fiscal 2015)
Number of employees using reduced working hours system for child care: 205 (Total number of employees for fiscal 2015)

Managing Mental and Physical Health

We promote a variety of measures related to management and promotion of healthcare through the health promotion office in each workplace. This is intended to assist our employees in living lives with healthy minds and bodies under the guidance of industrial physicians and nurses. In cooperation with the Nippon Shokubai Health Insurance Union, employees can undergo specific medical

examinations and receive tailored health guidance.

Moreover, we formulated a Mental Health Plan with the intention of preventing mental and physical illness while contributing to improved productivity and a bright, vibrant workplace. We also provide mental health training for all employees through position-specific training.

Toward a Sound Labor-Management Relationship Based on Mutual Respect

Nippon Shokubai and the Nippon Shokubai Labor Union, a member of the Japanese Federation of Energy and Chemistry Workers Unions, maintain a dialogue based on mutual respect. Through our good labor-management relationship based on mutual understanding and trust, we are addressing the resolution of various issues and achievement of goals through cooperation. Under the union shop agreement, all our employees — except for managerial employees — are required to join the union.

Responsible Care Initiatives

All companies in the chemical industry responsible for handling various chemical substances voluntarily agree to protect the environment and human health and safety in all processes ranging from the development of chemical substances to their manufacture, distribution, use, end consumption, disposal, and recycling. The results of these activities are publicly disclosed and the companies engage in dialogue and communication initiatives with the public. This effort is part of the initiative known as Responsible Care (RC). The RC Global Charter was developed in 2006 and revised in 2014 by the International Council of Chemical Associations (ICCA), which promotes Responsible Care worldwide.

Nippon Shokubai has participated in the Japan Responsible Care Council (JRCC; currently known as the Japan Chemical Industry Association Responsible Care Committee) since it was established in 1995. We actively promote Responsible Care by focusing on our main pillars: environmental protection; process safety and disaster prevention; occupational safety and health; chemical safety; quality; and communication with society.

We are determined to continue contributing to society while fulfilling our corporate social responsibility through our group-wide commitment to Responsible Care.



President's signature on the RC Global Charter (Revised 2014 version)

RC Policy

In conformity with the Nippon Shokubai Group Mission, Management Commitment, Corporate Credo, and the Nippon Shokubai Code of Conduct, we rank it as an important management measure to provide products and technologies that contribute to society and environmental protection. In addition, while paying due respect to the principle of Sustainable Development, we are determined to conduct all activities in accordance with the following policy related to environmental protection, safety, and product quality that will bring our business operations into harmony with the global environment.

- 1 **Aim at environmental protection and reduction of negative environmental impact throughout the entire life cycle of a product, from development to disposal.**
- 2 **Ensure the safety of our employees and our communities by targeting zero accidents and zero disasters with a commitment to the principle "Safety takes priority over production."**
- 3 **Confirm the safety of chemical materials, intermediates and products, and consider the health of our customers, employees of our logistics subcontractors, our employees, and others.**
- 4 **Stably supply products and associated services that meet customer satisfaction and inspire their trust.**
- 5 **Publicly announce the results of these activities and make an effort to communicate for proper understanding.**

We will implement this RC Policy in all our business operations by ensuring all employees have a thorough understanding and awareness of its importance. The president shall be the person with the ultimate responsibility for implementing this policy.

RC Promotion Organization

The president is chairman of the RC Promotion Committee, and technical committees and sub-committees are established to promote company-wide Responsible Care activities.



9th Medium-term Responsible Care Basic Plan (Fiscal 2014–2016) and Results

We formulated our 9th Medium-term Responsible Care Basic Plan as a three-year plan commencing in April 2014. As a continuation of our 8th plan, this plan enhances our initiatives to eliminate facility disasters, facility accidents, and occupational accidents. In addition, we have maintained our environmental impact reduction initiatives in the interests of sustainable development, and we are continuing to implement the priority initiatives intended to improve customer satisfaction and meet customer needs for functional products and the like. Moreover, we are enhancing our comprehensive chemical management system.

Evaluation: 😊 Achieved 😐 Partially Achieved 😞 Not Achieved

Environmental Protection	Chemical Safety
<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> To reduce energy intensity by 25% from fiscal 1990 levels (96.2 l/t) To maintain zero emissions¹ Emissions of substances subject to the PRTR Law: To reduce by 20% from fiscal 2010 levels (Fiscal 2016 level: 90.8 tons/year) <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> Energy intensity: 108.6 l/t (Previous fiscal year: 106.1 l/t) Zero emissions achieved and maintained. Emissions of substances subject to the PRTR Law: 5% reduction <p>Priority Initiatives</p> <p>To promote continuous improvement through our environmental management system</p> <ol style="list-style-type: none"> To promote energy conservation initiatives and technical reviews in order to reduce waste and release of PRTR-controlled chemical substances To promote development of technology to reduce CO₂ emissions by improving process catalyst and utilization of plant-derived raw materials To evaluate by means of c-LCA² how all our products contribute to the avoidance of CO₂ emissions throughout their life cycles and publicly disclose the reductions achieved 	<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> Zero problems related to chemical safety (legal or social problems) <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> Zero problems related to chemical safety occurred. <p>Priority Initiatives</p> <ol style="list-style-type: none"> To collect, share, and effectively apply information on hazardous substance risk To improve the function of the chemical substance management system through central management of the information To appropriately comply with the laws and regulations on chemical substances both inside and outside Japan (by collecting information on laws and regulations, keeping our employees informed, and providing information to our Group companies both inside and outside Japan) To promote Global Product Stewardship (GPS) (by participating in the Japan Initiative of Product Stewardship (JIPS) launched by the Japan Chemical Industry Association)
Process Safety and Disaster Prevention	Quality
<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> Zero disasters • Zero accidents <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> Zero disasters occurred. • One accident occurred. <p>Priority Initiatives</p> <p>In the wake of the accident, we will improve our process safety capabilities by fostering a culture of safety and operating our process safety management system with diligence.</p> <ol style="list-style-type: none"> To conduct thorough risk assessments To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk) To enhance education and training To strengthen the "safety first" mindset To strengthen the inspection system related to process safety To promote earthquake response measures and measures for aging facilities To strengthen the support system for logistics safety 	<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> Zero serious customer complaints • Zero quality nonconformities⁶ <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> One serious customer complaint was filed. • Five quality nonconformities were discovered. <p>Priority Initiatives</p> <ol style="list-style-type: none"> To promote initiatives to prevent quality issues and complaints To strengthen the quality assurance system for functional products and products of new businesses To strengthen the quality assurance initiatives of Group companies in Japan To strengthen the quality assurance system of locations outside Japan To conduct continuous quality training and raise awareness
Occupational Safety and Health	Communication with Society
<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> Zero injuries with loss of workdays³ (including contractors) Zero injuries without loss of workdays⁴ (including contractors) <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> One injury with loss of workdays occurred. Five injuries without loss of workdays occurred. <p>Priority Initiatives</p> <p>To foster a safety culture and promote continuous improvement through the Occupational Safety and Health Management System</p> <ol style="list-style-type: none"> To conduct thorough risk assessments To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk) To improve knowledge and sensitivity to risk prediction through enhanced education and training To strengthen the "safety first" mindset To enhance support for safety initiatives among our contractors 	<p>Objectives for Fiscal 2014–2016</p> <ul style="list-style-type: none"> To maintain a dialogue with stakeholders and implement reasonable information disclosure <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> The Kawasaki Plant participated in the community dialogue. <p>Priority Initiatives</p> <ol style="list-style-type: none"> To participate actively in RC community dialogue meetings and community social activities To disclose the status of RC initiatives to stakeholders through the company website and the CSR Report
Developing RC among Our Group Companies⁶ (Measures Common to Our Group Companies)	
<p>Objectives for Fiscal 2014–2016</p> <ol style="list-style-type: none"> Environmental Protection <ul style="list-style-type: none"> To reduce energy intensity To reduce disposal at off-site landfills (Group companies in Japan) To reduce the amount of waste (Group companies outside Japan) To reduce emissions of substances subject to the PRTR Law Process Safety and Disaster Prevention: To achieve zero disasters and zero accidents Occupational Safety and Health: To achieve zero injuries with loss of workdays Chemical Safety: To achieve zero problems related to chemical safety (legal or social problems) Quality: To receive zero serious quality complaints Communication with Society: To maintain a dialogue with stakeholders and implement reasonable information disclosure Management System: To effectively implement the management system <p>Results for Fiscal 2015</p> <ul style="list-style-type: none"> Five of 12 Group companies reduced their energy intensity. Waste subject to final disposal at off-site landfills was reduced by 10% compared with the level of the previous fiscal year. Amount of waste generated increased 5% year-on-year. Emissions of substances subject to the PRTR Law were reduced by 17% compared with the level of the previous fiscal year. Zero facility disasters occurred. • Four facility accidents occurred. Five injuries with loss of workdays occurred. • Zero problems related to chemical safety occurred. Zero serious customer complaints were filed. Published an Environmental Report and participated in community events. EMS: All Group companies have already introduced an EMS. Risk assessment: All Group companies have already introduced risk assessments. <p>Priority Initiatives</p> <ul style="list-style-type: none"> To support their implementation of accident countermeasures To improve the RC level of the entire Group by strengthening support of all Group companies 	

Definitions

¹ Zero emissions: Reducing the quantity of waste subject to final disposal at off-site landfills to less than 0.1% of the total amount of waste generated (In the calculation of total waste, the amount of sludge subject to activated sludge treatment is calculated before dehydration.)

² c-LCA (carbon-Life-Cycle Analysis): A method of assessing greenhouse gas emissions throughout the life cycle of a finished product incorporating chemical products and a comparison product containing no such chemical products when used by consumers and in other industries. The evaluation method calculates a chemical product's net contribution to GHG emissions reduction by determining the increased emissions when no such chemical product is used.

³ Injury with loss of workdays: Injury requiring at least one lost workday for medical treatment

⁴ Injury without loss of workdays: Injury requiring no loss of workdays for medical treatment

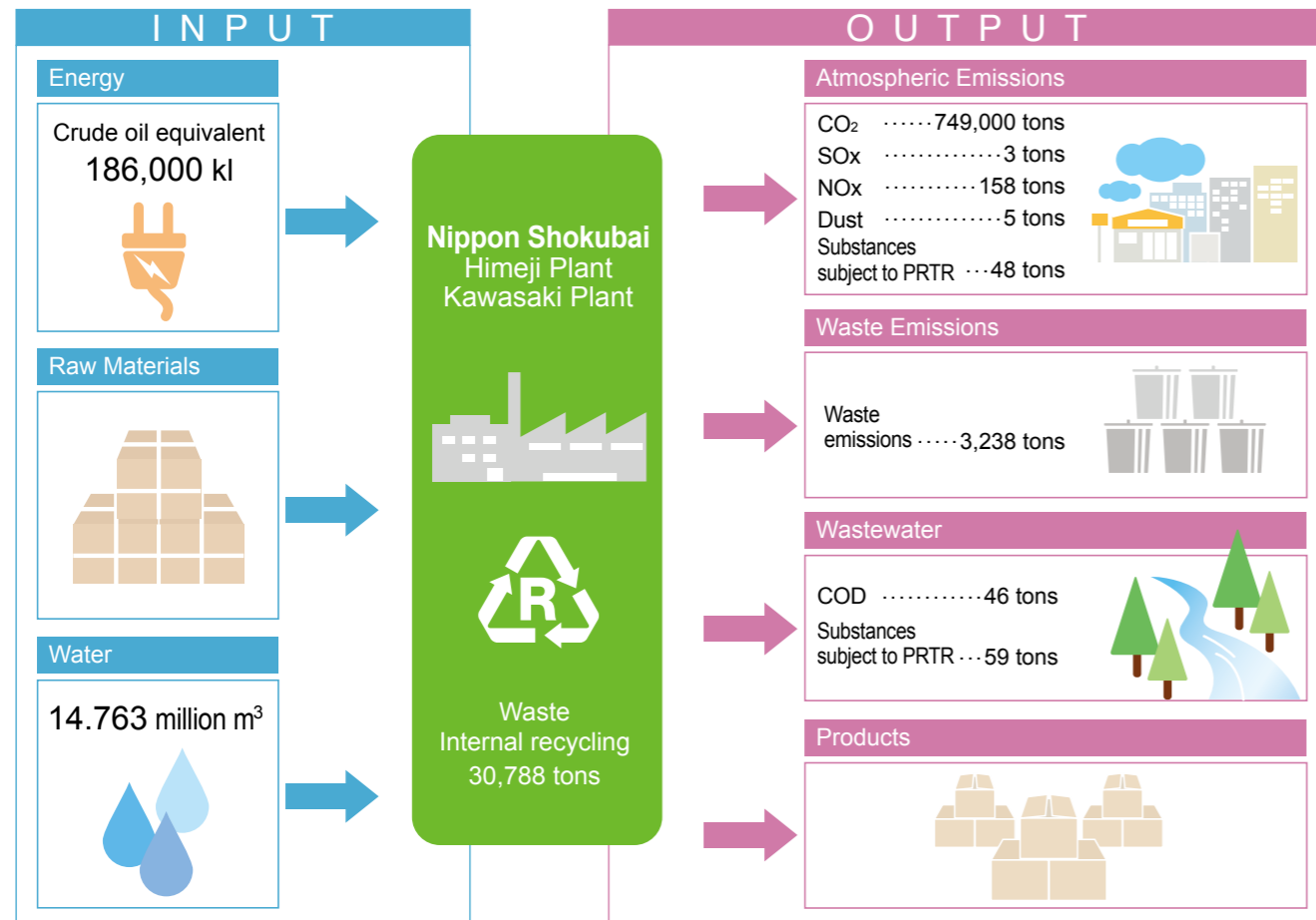
⁵ Quality nonconformities: Involving a minimum loss of ¥1 million

⁶ Refers to group companies inside and outside Japan, unless otherwise specified.

Environmental Protection Initiatives

Environmental Impacts of Our Business Operations

We are engaged in various initiatives to reduce the environmental impacts of our business operations and to provide better products and services.



Initiatives for Preventing Global Warming

Promoting Energy Efficiency

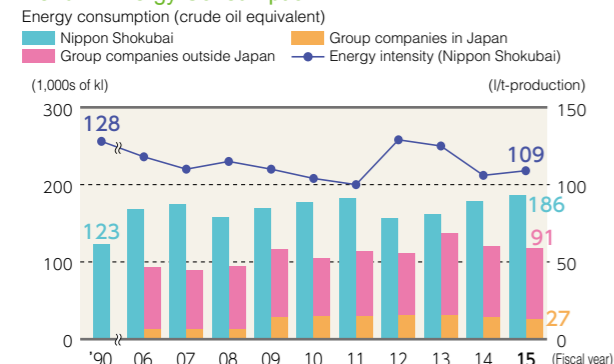
Reductions in energy intensity and CO₂ emissions intensity

In an effort to achieve the goals of the Kyoto Protocol, the Japan Chemical Industry Association has adopted the goal of reducing the chemical industry's energy consumption rate per unit of production ("energy intensity") to 80% of the fiscal 1990 level as an average value for the period fiscal 2008-12. In order to contribute to global warming mitigation without pause after fiscal 2013, the industry is pushing forward with energy efficiency and CO₂ reduction initiatives through Keidanren's Commitment to a Low Carbon Society.

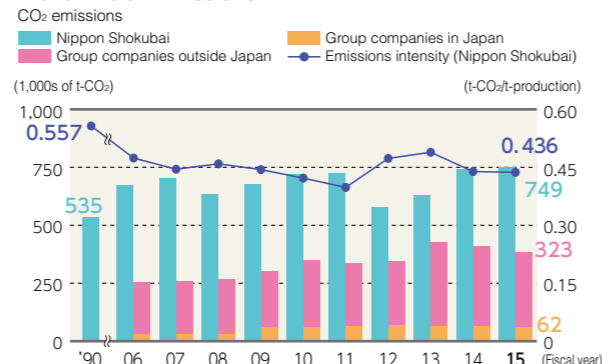
With the goal of further improving energy efficiency, we will promote energy conservation initiatives at each of our plants in view of the goals included in the Action Plan for a Low-Carbon Society adopted by the Japan Chemical Industry Association.

Our results for fiscal 2015 show that energy consumption and CO₂ emissions both increased. However, our energy intensity declined by 15% and our CO₂ emissions intensity declined by 22% from fiscal 1990 levels.

Trend in Energy Consumption



Trend in CO₂ Emissions



* Excludes head office, research centers, plant administration buildings and employee welfare facilities.
 * The amount of energy consumed and CO₂ emissions in fiscal 2015 totaled 7,516 kiloliters and 16,150 tons, respectively, for the head office, research centers, plant administration buildings, and employee welfare facilities of Nippon Shokubai.
 * Data for Group companies outside Japan covers the calendar year, January 1-December 31, 2015.

Promoting CO₂ Emissions Reductions Throughout the Product Life Cycle

c-LCA Assessment

The c-LCA assesses CO₂ emissions throughout the life cycle of a finished product incorporating chemical products and a comparison product containing no such chemical products. The emissions avoided are calculated as the net amount of emissions avoided as a result of the use of these chemical products.

Nippon Shokubai's products that are expected to contribute to the avoidance of CO₂ emissions

Aqua Guard

3.4 million tons

Calculation of CO₂ emissions avoided in one year when all apartments are built as long-lasting structures

ACRYSET

310,000 tons

Calculation of CO₂ emissions avoided when an application-type vibration-damping material is installed in all automobiles manufactured in one year

Note: The above assumed values are for comparative purposes only; the actual service life and performance are not guaranteed.

Aqua Guard was developed to reduce the cracking and spalling of concrete. The combination of Aqua Guard with a high-range water reducer for concrete is expected to contribute to much longer-lasting concrete structures.

We developed an emulsion for application-type vibration-damping materials intended for mounting on the lower part of a vehicle body in order to reduce noise and vibration from the engine and road surface. By using such material, it is possible to keep the vehicle light and energy-efficient.

Assumption for assessment

Service period: The life cycle assessment assumes that a long-life apartment has a 100-year service life and a conventional apartment has a 50-year service life. CO₂ emissions associated with the production, use, and disposal of an apartment are evaluated with reference to the "Guidelines for LCA for Buildings" published by the Architectural Institute of Japan.

Assumption for assessment

The annual travelling distance is assumed to 10,000 km with a 10-year service life. Automobiles using asphalt sheeting as a vibration-damping material are compared and evaluated.

Reducing Emissions of Fluorocarbons that Contribute to Global Warming

Aggregated calculated leakage of fluorocarbons

The Law Concerning the Recovery and Destruction of Fluorocarbons was revised in part and promulgated in June 2013. The Act on Rational Use and Proper Management of Fluorocarbons has been in full force since April 2015. This Act includes comprehensive measures that focus on the entire lifecycle from production to the disposal of fluorocarbons, and this system requires initiatives such as demanding the compliance of "evaluation criteria" from the parties involved at each stage.

We act as a "user of specified products," and are required to "report the calculated amount of fluorocarbon leakage." We are also required to comply with the "consignment of the charging and recovery of fluorocarbons at the time of maintenance" and "initiatives at the time of disposal of specified products." These requirements are in addition to "evaluation criteria" such as simple inspection, periodic inspection, and preparing and maintaining records.

In fiscal 2015, we conducted our scheduled simple inspections and periodic inspections. In addition, we calculated the total leakage of fluorocarbons by Nippon Shokubai as 2,513 t-CO₂, which includes 1,200 t-CO₂ from the Himeji Plant and 1,257 t-CO₂ from the Kawasaki Plant. In the future, we intend to continue devising methods of reducing the calculated leakage amount.

Calculated Leakage of Fluorocarbons in Fiscal 2015 (t-CO₂)

Himeji Plant	1,200
Kawasaki Plant	1,257
Others	55
Entire Company	2,513

Calculating the CO₂ Emissions Resulting from Our Entire Supply Chain

Calculation of Scope 3 emissions

We report our greenhouse gas (GHG) emissions according to the three categories set forth in the GHG protocol: Scope 1, 2 and 3.

- Scope 1** Direct emissions: GHG emissions resulting from the burning of fuel or other products as part of business operations
- Scope 2** Indirect emissions: GHG emissions resulting from purchased energy, such as purchased electric power
- Scope 3** Other indirect emissions: GHG emissions resulting from operations across the entire value chain (from resource extraction to product disposal).

Nippon Shokubai reported Scope 1 and Scope 2 emissions to the national government under the terms of the Energy-saving Act and has disclosed these in previous reports. In 2014, we began calculating Scope 3 emissions as well.

Nippon Shokubai will continue to calculate Scope 3 emissions in the future as we investigate the possibility of reducing CO₂ emissions resulting from all corporate activities.

No.	Category	Emissions (CO ₂ e, 1,000-t)	
		FY2015	FY2014
1	Purchased goods and services	1,508	1,418
2	Capital goods	22	51
3	Fuels and energy-related activities (not included in Scope 1 or Scope 2)	58	55
4	Upstream transportation and distribution	13	13
5	Waste generated in operations	3	2
6	Business travel	0.3	0.2
7	Employee commuting	0.8	0.7
Total		1,605	1,541

Interview



We conduct stringent inspections based on the fluorocarbons emissions law.

Yusuke Okamoto
 General Affairs Department
 Himeji Plant

The Revised Fluorocarbons Recovery and Destruction Law, enacted in April 2015, requires simple inspections of all commercial refrigeration and air conditioning equipment (at least once every three months). Also, The requirement for periodic inspection of specific apparatuses was added.

I am responsible for simple inspection of 104 units of refrigeration and air conditioning equipment located in office buildings, cafeterias, dormitories, and company housing and the like.

Although it initially required about a week to inspect all the equipment installed on site, it is now possible to conduct all inspections in about two days.

In addition to conducting strict inspections, we will continue to take steps to reduce our fluorocarbon emissions.

Initiatives for Eco-friendly Distribution

Promoting Modal Shift

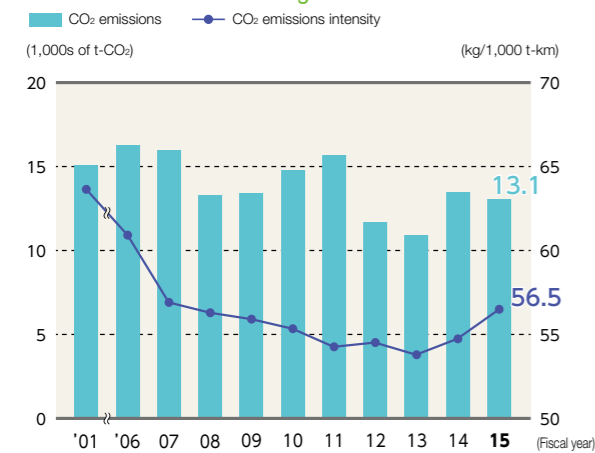
As a means of fighting global warming through our logistics operations, we are taking steps to reduce our CO₂ emissions intensity and implement exhaust gas countermeasures to control air pollution. Although changing economic conditions can affect the amount of goods we ship and our CO₂ emissions, we are implementing initiatives to reduce CO₂ emissions intensity. These include modal shift, improved transport efficiency, introduction of digital tachometers (including GPS and drive recorders), and

energy-efficient vehicle operation such as minimized idling and the installation of energy-efficient tires.

As an air pollution control measure, we adopted the Kawasaki Eco-Transport System* (effective April 1, 2010) and began promoting three initiatives: eco-friendly driving and display of "eco-drive" stickers; elimination of vehicles that do not comply with laws regulating NOx and PM emissions; and widespread adoption of low-emission vehicles.

* An environmentally friendly transportation system established with the partial amendment of the "Kawasaki City Ordinance for Conservation of Life Environment, including Pollution Prevention."

Trend in CO₂ Emissions and Emissions Intensity Attributable to Domestic Logistics



As a result of a modal shift to railway tank cars and container cargo packing equipment, delivery of main products was improved.



Nishshoku Butsuryu Co., Ltd. switched to low-emission vehicles.

Pollution Control Initiatives Targeting Air and Water

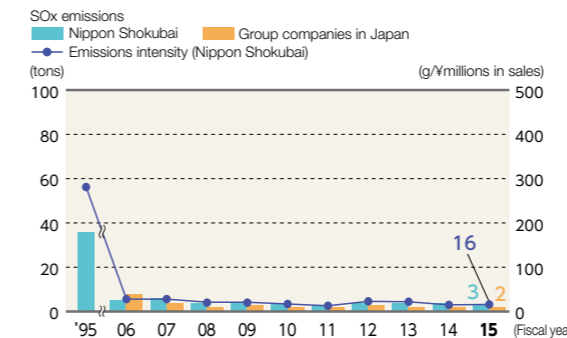
To handle the increased volume of wastewater resulting from our expanded plant, we installed a new waste liquid combustion facility.

To control air pollution, we are taking steps to reduce consumption of fuel oil and are converting fuel sources to natural gas while monitoring our emissions of SO_x, NO_x and dust.

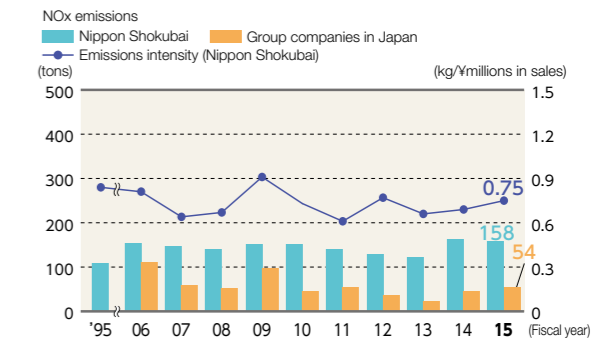
In addressing water pollution control, we are endeavoring to reduce the environmental impact (reduction in chemical oxygen demand, or COD) of our wastewater by recovering wastewater from the production process and reusing it. We have also installed an activated sludge treatment system and a waste liquid combustion furnace.

In addressing water pollution control, we are endeavoring to reduce the environmental impact (reduction in chemical oxygen

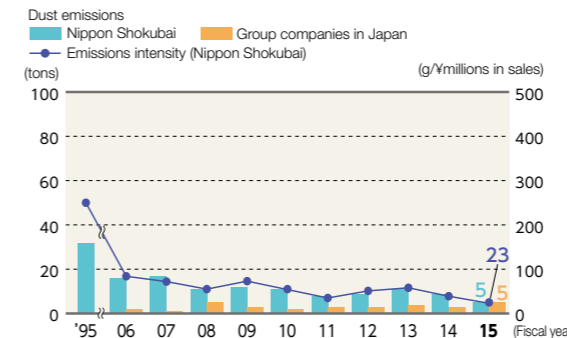
Trend in SO_x Emissions



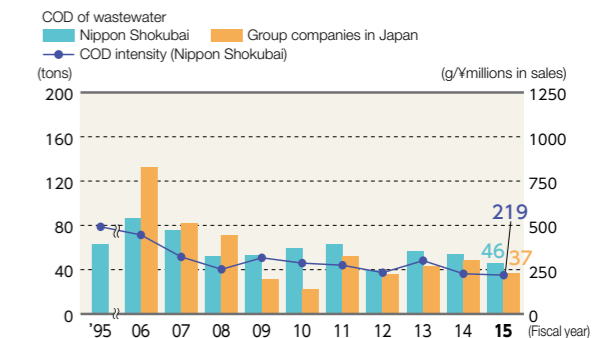
Trend in NO_x Emissions



Trend in Dust Emissions



Trend in COD of Wastewater



Note: Regarding the values agreed to by the city and prefecture, SO_x emissions total 1/50th and dust emissions total 1/10th. NO_x and COD totals are below the agreed values.

RC Training

We provide ongoing employee training in Responsible Care for the purpose of improving their knowledge, skill, and understanding of overall RC initiatives.

In keeping with our training curriculum for fiscal 2015, we provided this training to new employees entering our Company; to those being promoted to the position of subsection chief; and to those being promoted to manager.

We intend to continue improving our RC training capabilities in the future.



RC training for recently hired employees

RC Community Dialogue Meeting

We participate in the community dialogue meetings held by the Responsible Care Committee of the Japan Chemical Industry Association and introduce our Company's RC initiatives. Participants include members of residents' associations, administrators, NPOs, trade groups, and companies located in the same districts as our plants. This communication initiative is helping to promote mutual understanding.

In fiscal 2015, the Kawasaki district meeting was held with the participation of the Kawasaki Plant.



RC community dialogue meeting

Waste Reduction Initiatives

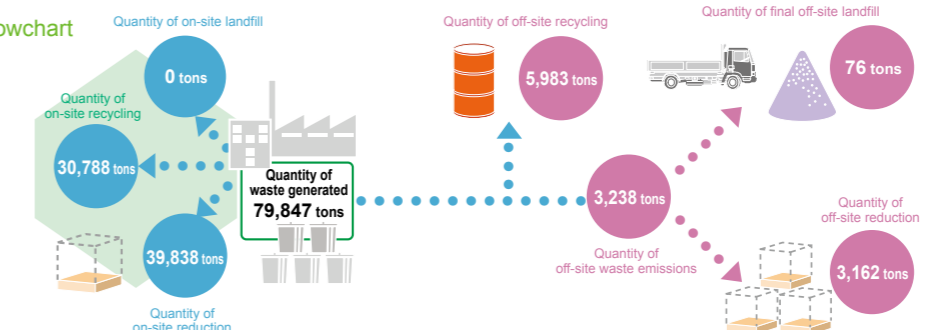
We are striving to reduce the amount of waste subject to final disposal at off-site landfills.

Addressing waste reduction is a necessary initiative to support the emergence of a society committed to recycling. By achieving and continuing our initiative toward zero emissions (defined as "reducing the quantity of waste subject to final disposal at off-site landfills to less than 0.1% of total amount of waste generated"), we are promoting the sorting for recovery and recycling of our waste.

In fiscal 2015, we are continuing to implement our zero emissions policy by reducing the amount of waste subject to final disposal at off-site landfills through on-site treatment of production residues and by implementing thorough sorting for recovery and recycling.

In fiscal 2014, we began posting waste-related data for our Group companies outside Japan.

Waste Flowchart



Definitions

SO_x

A hazardous air pollutant. This is a general term for sulfur oxides such as sulfur dioxide (SO₂) and sulfur trioxide (SO₃), which are generated mainly from the burning of fossil fuels.

NO_x

A general term for nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO₂). These substances contribute to acid rain and photochemical smog.

Dust

Fine particles generated through incineration of materials and other processes

COD (Chemical Oxygen Demand)

An index of water pollution caused by an organic substance. It represents the volume of oxygen consumed when an organic substance is oxidized.

Definitions

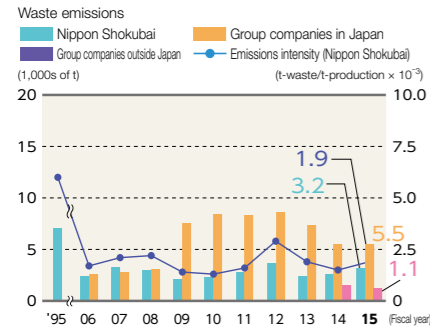
Modal Shift

By changing our shipping method toward bulk transport using railways and ships, we are optimizing our transport method to conserve energy and reduce our environmental impact.

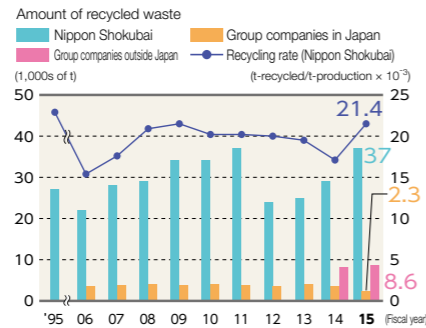
Ton-kilometer

Transport ton-kilometer is a unit of transportation measurement referring to freight transport volume. As an index for precisely expressing transport as an economic activity, it is the multiple of freight haul distance (in kilometers) and the transported freight weight (tons).

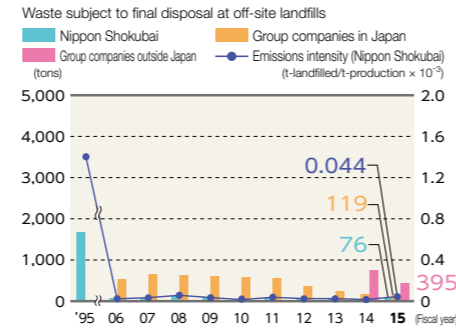
Trend in Waste Emissions



Trend in Amount of Recycled Waste



Trend in Amount of Waste Subject to Final Disposal at Off-site Landfills



Note 1: Increased as a result of the inclusion, in the scope of this report, of one additional Group company in Japan in fiscal 2009.
 Note 2: The reporting period for Group companies outside Japan is Jan. 1–Dec. 31, 2015.

Interview



Takaya Hirano
Technology Department, Himeji Plant

Introduction of a waste gas combustion facility helps to reduce the risk of chemical substance emissions.

Following the opening of our new acrylic resin production facility, we are planning to increase production of monomers as raw materials. By introducing a waste gas combustion facility, we have reduced the risk of emitting chemical substance from the process.

Employing a catalyst developed by our Company, this equipment is designed as a compact balanced system for efficient processing and for energy efficiency. It entered into operation in January 2016 after tests confirmed that it operates safely and stably.

We will continue to strive for efficient operation in order to reduce chemical substance emissions in response to increased production in the future.

Chemical Substances Control Initiative

We are focused on reducing our chemical emissions.

In 1995, we participated in a voluntary PRTR survey undertaken by the Japan Chemical Industry Association and have set out to reduce our emissions of chemical substances into the environment.

In fiscal 2015, we released 108 tons of substances subject to

the PRTR, which represents a 5% decrease in emissions compared to fiscal 2010 levels.

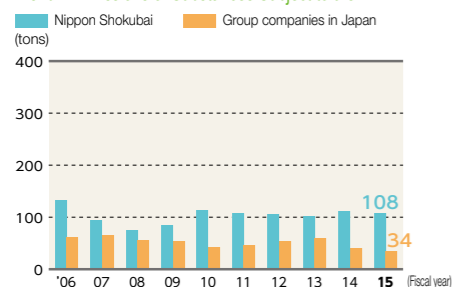
We remain focused on further reducing emissions toward our fiscal 2016 target of a 20% reduction from fiscal 2010 levels.

Top 10 Substances Subject to the PRTR Released in Fiscal 2015

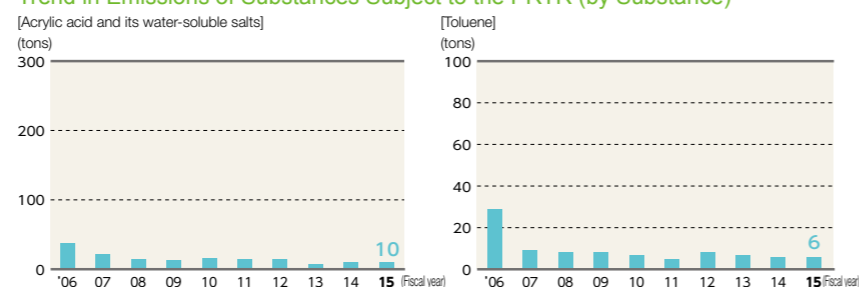
No.	Government Designation No.	Substance Subject to PRTR	Released into Atmosphere	Released into Water	Total Emissions
1	405	Boron compounds	0.00	43.43	43.43
2	4	Acrylic acid and its water-soluble salts	10.30	0.00	10.30
3	321	Vanadium compounds	0.00	9.55	9.55
4	400	Benzene	7.96	0.00	7.96
5	80	Xylene	6.07	0.00	6.07
6	300	Toluene	6.04	0.00	6.04
7	56	Ethylene oxide	4.24	0.00	4.24
8	58	Ethylene glycol monomethyl ether	3.53	0.00	3.53
9	154	Cyclohexylamine	1.6	0.2	1.8
10	7	Butyl acrylate	1.5	0.0	1.5

Note: In fiscal 2010, acrylic acid and its water-soluble salts, vanadium compounds, and other substances were included in the PRTR.

Trend in Emissions of Substances Subject to the PRTR



Trend in Emissions of Substances Subject to the PRTR (by Substance)



Definition

PRTR (Pollutant Release and Transfer Register)

A regulatory system that requires the reporting of emissions of designated chemical substances into the air, water and soil as well as the volume of waste transferred. Data compiled and submitted to governmental agencies are disclosed to the public.

Environmental Accounting

The values determined in our environmental accounting were aggregated according to the *Environmental Accounting Guidelines* published in 2005 by the Ministry of the Environment of Japan and the *Environmental Accounting Guidelines for the Chemical Industry* published in 2003 by the Japan Chemical Industry Association and the Japan Responsible Care Council. We also made reference to the 2012 Edition of the *Environmental Accounting Guidelines* published by the Ministry of the Environment of Japan.

Environmental Protection Costs & Environmental Protection Benefits

Applicable period: April 1, 2015–March 31, 2016
 Scope: Nippon Shokubai (nonconsolidated) (millions of yen)

Classification	Main Initiatives	Amount Invested	Expenses	Effects	Relevant Page
Environmental protection cost related to control of the environmental impacts of our production and service business operations (Business area cost)	1. Pollution Control Cost	405	2,139	No pollution problems occurred.	23, 24
	2. Global Environmental Protection Cost	66	1,970	Energy efficiency efforts resulted in a 22% reduction in CO ₂ emissions intensity from fiscal 1990 level. ● CO ₂ emissions intensity Fiscal 2014: 0.439 t/t (21% reduction) → Fiscal 2015: 0.436 t/t (22% reduction)	24, 25
	3. Resource Recycling Cost	11	437	We maintained zero emissions by sorting and recycling our solid waste. ● Amount of waste subject to final disposal at off-site landfills Fiscal 2014: 27 tons → Fiscal 2015: 76 tons	27, 28
Cost of controlling the environmental impacts of production and service operations occurring upstream & downstream (Upstream/downstream cost)	Reuse of drum containers	0	45	Some of drum containers are reused.	—
Environmental protection cost related to management activities (Environmental management cost)	Operation of environmental management structure; acquisition and maintenance of ISO 14001 registration	2	534	All our plants successfully acquired certifications, and we enhanced our environmental management systems.	—
Environmental protection cost related to R&D activities (R&D cost)	Reduction of the environmental impact through development and manufacturing of green products	0	1,801	Conducting R&D of catalysts for treating wastewater containing organic substance(s) and catalysts for dioxin decomposition	—
Environmental protection cost related to social activities (Social activity cost)	Environmental-related contributions	0	48	Forest development initiatives	18
Cost of dealing with environmental remediation (Environmental damage cost)	—	0	7	—	—
Total		484	6,982		

Economic Effects (Monetary Benefits) Resulting from Environmental Protection Initiatives

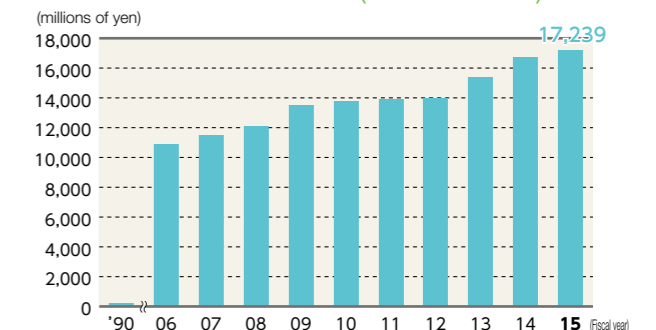
Effect	Amount
Income	6
Cost saving	619
	2,031
Total	2,655

Reference Total investment for the period: 8,979 million yen
 Total R&D expenses for the period: 11,551 million yen

Environmental Investment

Every year, we actively invest in environmental protection measures. Beginning in fiscal 1990, we began to calculate our total investment in environmental protection.

Total Environmental Investment (since fiscal 1990)



Interview



Tatsuya Murakami
Production No. 3 Section
Kawasaki Plant

More efficient heat usage eliminates 557 tons of CO₂.

The facilities that I am in charge of have conventionally used the steam generated from the plant efficiently. By introducing a new heat exchanger, which enables us to use this steam more effectively, we have been able to further reduce our CO₂ emissions by 557 tons.

We will continue to focus on energy-efficiency initiatives in the future.

Definition

Environmental Accounting

This system collects and analyzes the costs and effectiveness of environmental protection in business activities, quantitatively and to the maximum extent, and makes the data available to the public. It is focused on sustainable development for companies with the goal of efficiently and effectively promoting environmental protection initiatives while maintaining a good relationship with society.

Process Safety and Disaster Prevention Initiatives

Basic Approach to Safety Issues

At Nippon Shokubai, we have singled out one overarching commitment — “Safety takes priority over production” — which we have adopted as our corporate credo and which underpins both our Group Mission and Management Commitment.

In the aftermath of the explosion and fire that occurred in our acrylic acid production facility in 2012, we published our Safety Handbook under the direction of the president. This publication contains our corporate credo above and our Safety Oath, our safety management regulations, and the roles of each position in our hierarchy. We have made it a point to distribute this handbook to all our employees and to keep them informed. Furthermore, in fiscal 2013, we adopted our own Safety Oath and established September 29 as Safety Oath Day to clarify our determination to never again allow such an accident to recur and to resolve to never let the memory of this accident fade with time. On September 29, 2015, we held a Safety Oath Ceremony opposite our Safety Oath Monument at the Himeji Plant. At this time, we renewed our vow to improve our safety competency.

Moreover, regarding our Process Safety and Disaster Prevention Initiatives, we conduct an annual review according to the Action Plan and Guidelines provided by concerned entities. These results, in addition to the results of activity records and various audits, are used to plan the continuous improvement of our Process Safety and Disaster Prevention Initiatives.



Safety Oath Ceremony



Safety Oath Monument



Corporate Credo, Safety Oath

Committed to Restoring Public Trust in Nippon Shokubai as a Responsible Chemical Company

Message from the President Regarding Safety Issues

On our commemoration of Safety Oath Day in fiscal 2015, our president marked the beginning of Safe Operation Month (September 16 to October 15) and instructed all employees to discuss any accidents that might occur at their own workplaces and to determine what is required to ensure safety by holding company-wide and workplace-wide round-table safety meetings.

In addition, in July the president visited both our Himeji and

Kawasaki Plants. After inspecting the Himeji Plant, he attended a safety meeting. Moreover, after inspecting an emergency drill at the Kawasaki Plant, he attended a TPM presentation meeting where he again appealed to all present to commit to safe operation initiatives and to maintain a sense of ownership under our corporate credo.



Visit to the Himeji Plant



Visit to the Kawasaki Plant

Strengthening a Culture of “Safety Prioritization”

Safety is not something that can be granted from others; it is up to each individual to determine his or her own way forward and adopt safe practices in order to strengthen a culture of “safety prioritization.” At Nippon Shokubai, we consider it necessary that all our employees adopt safe practices in their organizational initiatives and personal behavior.

Himeji Plant

Exercises Promoting Thorough Adoption of Safety Measures

In keeping with the slogan, “Changing the awareness and actions of each individual by taking our Safety Oath to heart,” each department is adopting targets and policies and devising a safety action slogan for each rank. We are engaging in active communication between ranks that includes the setting of targets and action slogans and are evaluating the results of our implementation effort.

Kawasaki Plant

Verifying Safety Implementation

Each employee uses a checklist to verify the implementation of the basic safety actions by the person (group) in charge and confirms the strengths and weaknesses of an individual or person in charge in a collaborative fashion. Moreover, action targets are adopted for the individual or person in charge and the improvement status of all employees is verified semiannually. In this way, we are enhancing safety communication within our Group and raising awareness of individual activities.

Ensuring Implementation of Risk Assessments

We are focused on strengthening our safety measures by addressing both tangible and intangible aspects.

On the tangible side, in compliance with the revised management standards, we have strengthened safety measures related to all storage tanks for reactive substances in the Company and are extending these measures throughout the Group.

Regarding the intangible aspect, we are managing change by planning to upgrade the skills of our safety engineers, who provide instruction with a focus on safety.

In fiscal 2015, we attended a human resources development seminar for Keiyo Rinkai as well as a Safety Engineering Seminar. We also held networking events for our safety engineers in both our Himeji and Kawasaki plants. In the future, we will continue to plan and implement skills upgrades for our safety engineers, as this will contribute to more effective change management.

HAZOP exists as a method to minimize risks in plants. With the goal of upgrading the skills of working-level officials, we provided training in HAZOP practices under the guidance of an outside lecturer. To reflect the opinions of the participants and fulfill the content of the training, we will continue to enhance HAZOP training in the future while enriching the content of HAZOP practices.



Training in HAZOP practices

Safety Competency Improvement Initiatives

In fiscal 2013, we conducted a self-evaluation of our Company’s “culture of safety prioritization” using the Safety Culture Assessment Checklist of the Safety Competency Center. We have since developed a planned approach to addressing all issues that have been identified. In fiscal 2016, we will conduct another evaluation using the Safety Culture Assessment Checklist as we strive to further improve our safety competency.

Definitions

HAZOP (Hazard and Operability Study)

A safety evaluation method for systematically evaluating the adequacy of safeguards in plants and eliminating latent risks in plants through comprehensive detection.

Safety Competency Center

The Japan Society for Safety Engineering established this third-party safety organization in April 2013 to disseminate the safety competency evaluation system throughout industry.

Enhancement of Safety Education and Training

In order to strengthen skills and abilities related to safe operation, we are fulfilling the requirements for training-related risk management at our chemical plants.

Continuing an initiative launched in fiscal 2014 at both our Himeji and Kawasaki Plants, we invited a lecturer from the Sanyo Association for Advancement of Science & Technology for training sessions related to risk management. These sessions were intended mainly for employees at the rank of foreman and above. A total of 120 employees attended at both plants.

We believe that training in risk management at chemical plants is also advisable for our R&D Division, which carries the responsibility for product development. So, in fiscal 2015 we began holding the same session for our R&D Division, with 30 employees in attendance.

The opinions of the participants encouraged us to continue holding these sessions in the future with the intention of improving knowledge of safe operation and increasing safety awareness.



Disaster preparedness training session for chemical plants using case histories

We generally use the term “know-how” to describe the knowledge and information we acquire along with procedures and tips for a particular task. But there is always a rationale for, and a background to, this knowledge. We call this information “know-why.” At our Himeji and Kawasaki Plants, we collect and compile this information and are promoting its application in both tradition training and on-the-job training.

Verifying Our Safety Management Practices

Under the theme, “implementing measures to prevent accident recurrence,” we continued the workplace-wide management inspections we introduced in fiscal 2013 and 2014. In fiscal 2015, our Himeji Plant underwent safety audits that the head office began implementing in fiscal 2014. We are continually improving our process safety and disaster prevention initiatives.

Responsible Care Activities

Process Safety and Disaster Prevention Initiatives

Promotion of Voluntary Safety Initiatives

High-Pressure Gas Safety Certified Plants

The Ministry of Economy, Trade and Industry has certified the Chidori Plant and Ukishima Plant at our Kawasaki Plant as "Certified Completion Inspector and Certified Safety Inspector" for high-pressure gas. A recertification inspection is conducted every five years.

According to the terms of our safety management regulations, both plants undergo audits by our head office, with the managing executive officer in charge of the Responsible Care Division as the audit chairman. This audit evaluates whether the operational status of the high-pressure gas safety management system and the inspection management organization are functioning exactly as intended.

Earthquake Preparedness

Following the Great East Japan Earthquake of 2011, we reviewed our earthquake preparedness from both tangible and intangible aspects in order to prepare for a future massive earthquake and tsunami and are adopting the necessary measures in a planned manner.

Moreover, regarding the existing measures that are in place to improve the seismic resistance of high-pressure gas facilities, we confirmed that all spherical reservoirs with steel tube bracing as well as the tank towers considered part of our high-pressure gas facilities should adhere to seismic design and meet the seismic standards for reporting to the relevant authorities. As for our piping facilities, we are now assessing their seismic resistance.

Commendations

At the 30th Kanto High-Pressure Gas Safety Convention, our Kawasaki Plant received the "Commendation of the Manager of the Kanto Tohoku Industrial Safety and Inspection Department" for being the office with the best disaster preparedness.



Commendation of the Manager of the Kanto Tohoku Industrial Safety and Inspection Department

In addition, at the 33rd Safety Promotion Meeting of the Japan Petrochemical Industry Association, the efforts and accomplishments of the many Kawasaki Plant employees to secure safety over many years were highly evaluated and awarded a safety commendation.



Commendation at the Safety Promotion Meeting of the Japan Petrochemical Industry Association

Implementation of Various Emergency Drills

Having established emergency response systems at each plant, we systematically conduct various types of emergency drills every year.

At our Himeji Plant, we conducted a joint general emergency drill in collaboration with the Himeji Fire Department and the Aboshi Fire Department, while our Kawasaki Plant conducted a joint general emergency drill with the Rinko Fire Department and the local disaster prevention council.

We give thorough consideration to the problems identified in such drills so that we can review and strengthen our emergency response system as well as our education and training programs.



General emergency drill at our Himeji Plant



General emergency drill at the Chidori Plant in the Kawasaki Plant

Logistics Safety Initiatives

Our Company has commissioned Nishshoku Butsuryu Co., Ltd. to handle all our logistics operations. In order to ensure the safety and quality of our distribution tasks, they cooperate closely with the Environmental Safety and Product Quality divisions of both our Himeji and Kawasaki Plants where we work diligently to prevent distribution accidents.

We are committed to improving our ability to respond to accidents on transportation routes by periodically conducting drills at both our plants. Through this effort, we are helping to prevent accidents during product shipments while minimizing damage should an accident occur.



Disaster-response drill to address shipping EO accidents that can occur en route

Responsible Care Activities

Occupational Safety and Health Initiatives

Ensuring Continuous Improvement Through Our Occupational Safety and Health Management System

In fiscal 2003, we introduced our Occupational Safety and Health Management System (OSHMS). Using this system, we have been improving occupational health and safety by seeking to eradicate industrial accidents, reduce potential risk factors, and promote health and the creation of pleasant work environments.

Also, we are committed to achieving zero industrial accidents by systematically implementing "KY" (*kiken yochi*, or "risk prediction") campaigns, "close-call" incident (*hiyari hatto*) reporting campaigns, our "5 S" campaigns, and a variety of drills and training classes.

Risk Assessment

Since the introduction of the Occupational Safety and Health Management System, the Company has undertaken risk assessments of each workplace, reducing or eliminating the sources of risks associated with work.

Also, to align with the mandatory risk assessment of chemical substances enforced in June 2016, we are reviewing our risk assessments related to the substances we handle and are promoting further risk reduction measures.

KY Campaign

In an effort to prevent industrial accidents, we are committed to daily safety initiatives targeting work-related risks, and we remain focused on our KY risk prediction campaign. We implement group KY before work, KY for individual workers, and radio (Mobix) KY coordination between workers and the control room. We also carry out systematic KY-focused drills and training, such as KY training with case sheets and KY workshops.

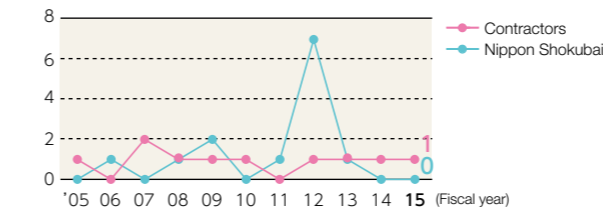
On-site Training Sessions

We hold a variety of on-site training sessions that provide operators and workers with hands-on training in skills such as valve opening and closing as well as flange disassembly and reassembly. Training also includes dealing with exposure to liquids, electrical hazards, and risks of working at height as well as demonstrations of the entanglement hazards of rotating machinery.

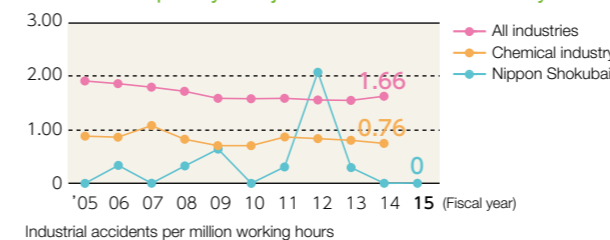
Occurrence of Industrial Accidents

In fiscal 2015, we experienced zero injuries with loss of workdays and four injuries without loss of workdays. Our contractors experienced one injury with loss of workdays and one without loss of workdays. We are focused on preventing recurrence of these incidents by providing information on thorough case studies of these industrial accidents and their countermeasures with the involvement of peer groups.

Trend in Injuries with Loss of Workdays



Trend in Frequency of Injuries with Loss of Workdays



Industrial accidents per million working hours



Gaining experience in exposure to liquids

Addressing the Asbestos Issue

Since our establishment, we have never manufactured asbestos products; however, because we used insulation and sealing materials containing asbestos, we have handled asbestos-containing products on occasion. Therefore, we are contacting employees and retirees regarding health issues and are implementing a phase-out of asbestos-containing products.

In 2006 and 2009, we sent out information about asbestos-related medical examinations to retirees, offering them an annual medical examination at our expense. To date, a total of 76 retired employees have been issued a Health Check Note. Six persons were awarded industrial accident compensation benefits under the Industrial Accident Compensation Insurance Act. Three persons were awarded special compensation benefits for bereaved families under the Act on Asbestos Health Damage Relief.

In the future, we will continue to support our retirees and employees with asbestos checkups and consultations.

Information regarding medical examinations has been posted on our website (www.shokubai.co.jp/ja/news/pdf/20090528.pdf).

Regarding substitutes for asbestos-containing products, we have adopted substitutes in cases where the asbestos was at risk of becoming airborne or wherever the potential existed for human contact with the product. As for other asbestos-containing parts, we are systematically phasing them out whenever the opportunity arises.

Chemical Safety Initiatives

Promoting Chemical Management

We have established a Chemicals Total Management Committee and have implemented a variety of initiatives to work toward our goal of zero legal and social issues related to the chemical substances contained in products. This effort applies throughout the product life cycle from the R&D stage to disposal at the end of the product service life.

We are upgrading our internal systems across the global operations of our Group in order to comply with national and international laws and regulations related to chemical products. Moreover, we are committed to providing our customers with information on relevant laws and regulations as well as product safety information.

Ensuring the Safety of New Products

We have introduced a gate system at each stage from R&D to commercialization. In order to maintain safety throughout the product life cycle that encompasses material procurement, processing, production, application, and disposal according to the terms of Responsible Care, we apply our technical expertise at each stage to determine whether to proceed to the next stage.

Product Safety Initiatives

We prepare GHS-compliant SDSs, warning labels, and Yellow Cards for the logistics sector and provide information to customers while promoting training sessions for our employees. Regarding application-specific products used in pharmaceutical raw materials, pesticides, cosmetics, and food additives, our Product Safety Review Sub-committee conducts stricter checks on product safety while ensuring compliance with the Product Liability Act.

Accommodating Chemical Registration Requirements Within and Outside Japan

In collaboration with specialized institutions and our Group companies outside Japan, we are responding appropriately to laws and regulations both within and outside Japan that require us to register chemical substances. Regarding the European Union's chemical regulation known as REACH, we registered all substances subject to the two registration deadlines of November 30, 2010, and May 31, 2013. We will continue to promote such initiatives toward the upcoming May 31, 2018, registration deadline. We also intend to respond to new chemical registration regulations in South Korea and Taiwan.

Addressing Import/Export Controls

In order to ensure legal compliance regarding imports and exports, we have streamlined our process for strengthening company regulations; determining whether a product is subject to import/export restrictions; keeping our employees informed about whether a product has been subject to import/export restrictions; recording applicable items on the relevant SDS; and improving our shipping management system for coordination with our enterprise resource planning (ERP) backbone accounting system. We also conduct regular internal training on import/export management.

Green Procurement Initiatives

For substances that are regulated or highly hazardous, we have independently assigned them to two categories: "prohibited substances" and "restricted substances (handling restricted depending on product application)." We are promoting the development of green products and the procurement of raw materials with low environmental impact while determining and controlling the inclusion of such substances in our products.

Promoting a Voluntary Initiative of the JCIA

We participate in JIPS (Japan Initiative of Product Stewardship), a voluntary initiative for strengthening chemical management promoted by the Japan Chemical Industry Association, by which a chemical safety abstract is prepared and released to the public.

Establishment of a Chemical Substance Management System

We are implementing a comprehensive chemical substance management system that can respond quickly to risk assessments, the issuance of SDS, and surveys from customers querying us on the chemical content of our products. We have created and launched this system by providing centralized management of various types of information encompassing chemicals, raw materials, hazardous materials, and regulations.

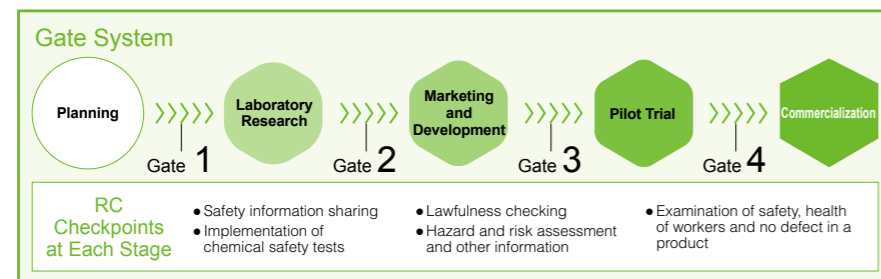
Sample SDS



Sample warning label



GHS pictographs



Definitions

GHS

An abbreviation for Globally Harmonized System of Classification and Labeling of Chemicals, GHS reflects the risks and health and environmental hazards of chemicals determined in accordance with international standards. Under this system, products containing chemical substances identified as presenting a risk or hazard are categorized according to international standards and displayed on containers and in the respective SDS. Countries around the world have also introduced this system on the recommendation of the United Nations. This system is enforced in Japan through the Industrial Safety and Health Act.

SDS (Safety Data Sheet)

The Safety Data Sheet lists a chemical's properties as well as data on its risks, applicable laws, proper handling and transportation requirements, and specific emergency response measures in a prescribed format. We compile an SDS for each of the products we manufacture and develop and are implementing a system for distributing these documents to all employees through our chemical substance management system as well as to our

Yellow Card

Carriers who transport hazardous materials and toxic substances must carry a yellow card for reporting information about their cargo to fire squads in the event of an accident. The yellow card lists a product's risks, first aid procedures in an accident, and emergency contact information. As part of its promotion of Responsible Care, the Japan Chemical Industry Association prepares and manages guidelines on the procedures for preparing a yellow card in order to strengthen first aid measures in the event of an accident.

Quality Assurance Initiatives

Promoting Quality Initiatives

Our basic policy related to quality is to provide products and services that fully satisfy our customers while earning their trust. We also strive to maintain or improve our quality levels.

Customer Satisfaction Initiatives

All our plants and all Group companies engaged in manufacturing and distribution both within and outside Japan have acquired certification of registration with ISO 9001, the international standard for quality management systems. From the product development stage through to manufacturing and delivery, we implement our quality assurance initiatives from the customer's perspective.

We are dedicated to continuous improvement of our quality management system to ensure our customers are satisfied with the stable high quality of our products and services.



Quality control meeting

Promoting Initiatives to Address Quality Issues

We respond quickly to any quality issues that arise and share information throughout the company by compiling it into a database to visualize the progress of the response. At the same time, we are preventing quality issues from occurring through company-wide distribution of case histories.

In addition, we provide appropriate support on quality issues to Group companies inside and outside Japan, conduct quality exchange meetings and quality audits, and promote quality initiatives throughout our Group. In this way, we remain proactively committed to preventing the emergence of quality issues.



Quality Exchange Meeting for Group companies (conference and factory tour)

Definitions

Risk Assessment of Chemical Substances

Chemical risk assessment entails evaluation of the risk of various hazards associated with chemical substances. Chemical manufacturers have the social responsibility to minimize the risk of chemical substances and are required to implement voluntary Responsible Care activities.

Green Procurement

This initiative responds to the national policy to promote the purchase of products and raw materials with reduced environmental impact through recycling and the like. This initiative guides companies in their purchase of raw materials and parts for products from suppliers to promote the preferential selection of products with the least environmental impact.

JIPS

To achieve the UN-mandated goal of "minimizing chemical risks to human health and the environment from manufacturing and using chemical products with the aim of achieving the targets by 2020," the chemical industry is strengthening its chemical management on a global scale. The Japan Chemical Industry Association is promoting an initiative named Japan Initiative of Product Stewardship (JIPS) in Japan. It conducts risk evaluations of chemicals, prepares safety abstracts that clearly list the results of the evaluations, and releases this information to the general public to improve public awareness.

Halal Certification

A certification with religious relevance, granted by the relevant organizations when certain standards are satisfied, for products and services targeted at Muslim customers.

An Increasing Number of Our Products Receive Halal Certification.

We have acquired halal certification from the Japan Muslim Association for an increasing number of products on the approval of the Shariah Research Institute of Takushoku University.

Southeast Asia today, most notably Malaysia and Indonesia, is home to many Muslims, and demand has been increasing from food-related businesses for halal-certified ingredients and production processes. In 2014, in response to this situation, we acquired halal certification for our organic acids used as food additives (including succinic acid and fumaric acid). In September 2015, we acquired certification for our food-additive-grade, feed-additive-grade, and industrial-grade sodium polyacrylate. As a result, we can expect demand to continue increasing in Southeast Asia. By responding to social needs, we are providing society with greater richness and comfort across a wide range of fields.

Note: The products for which we have acquired halal certification as of April 1, 2016, are succinic acid, succinic acid disodium, fumaric acid, maleic anhydride, AQUALIC FH (a thickener), AQUALIC MH (a feed binder), and AQUALIC IH (a flocculant).



Halal certifications: sodium polyacrylate (left); organic acids (succinic acid, fumaric acid, etc.) used as food additives (right)

Production Site Reports

Himeji Plant



Kazukiyo Arakawa, Plant Manager

Plant Outline

Plant Manager: Kazukiyo Arakawa, Executive Officer
 Location: 992-1 Aza-Nishioki, Okihama, Aboshi-ku, Himeji
 Number of employees: 957 at the Himeji Plant;
 180 at research centers in the Himeji district
 Products: Acrylic acid, acrylates, maleic anhydride, superabsorbent polymers, resin modifiers, electronic information materials, De-NOx catalysts, dioxins decomposition catalysts, and other products

Fiscal 2015 Results of RC Activities

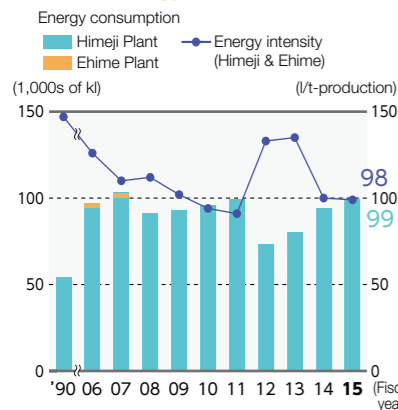
- We conducted a "Thorough Awareness of Safety Prioritization and Action" exercise. As for the safety record at our location, we registered no injuries with loss of workdays and three injuries without loss of workdays, while our contractors experienced one injury with loss of workdays and no injuries without loss of workdays.
- We planned further improvements to our safety management system.
- We reduced emissions of substances subject to the PRTR by 13% compared with the preceding fiscal year.

Looking to environmental protection, we had displayed a trend toward annual increases in emissions of substances subject to the PRTR, but our efforts to suppress emissions of the main substances enabled us to reduce emissions by 13% compared to the preceding fiscal year.

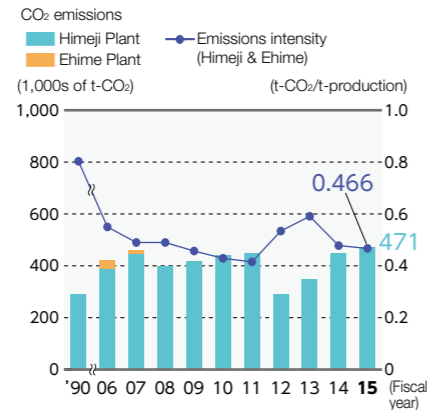
In fiscal 2015, in order to foster a safety culture and to raise awareness of safety, in reference to the above stated, each department defined goals and policies and each rank position adopted an action slogan and implemented a "Thorough Awareness of Safety Prioritization and Action" exercise.

Also, in order to plan further improvements in our safety management system, we reviewed and enhanced process risk assessments, internal audits, and change management.

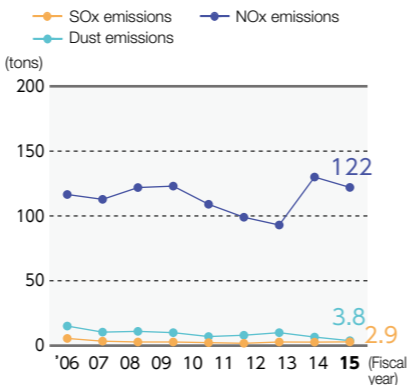
Trend in Energy Consumption



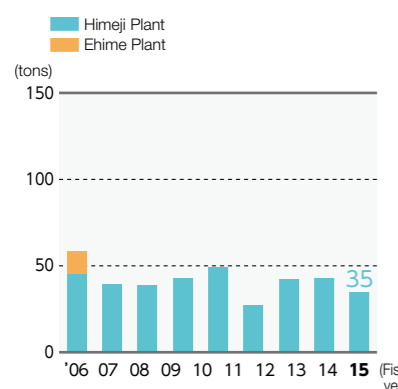
Trend in CO₂ Emissions



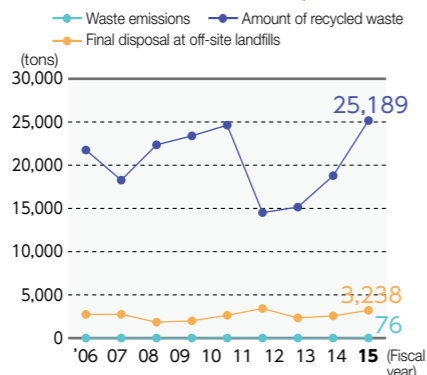
Trend in Emissions of SO_x, NO_x, and Dust



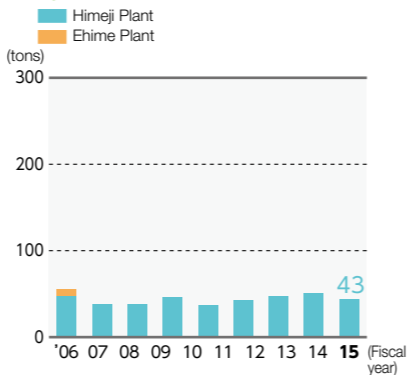
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR



As of fiscal 2007, the Ehime Plant stopped production.

Kawasaki Plant



Teruo Kamei, Plant Manager

Plant Outline

Plant Manager: Teruo Kamei, Executive Officer
 Location: Chidori Plant
 14-1 Chidori-cho, Kawasaki-ku, Kawasaki
 Ukishima Plant
 10-12 Ukishima-cho, Kawasaki-ku, Kawasaki
 Number of employees: 351 (including a research center)
 Products: Ethylene oxide, ethylene glycol, ethanolamine, secondary alcohol ethoxylates, polymers for concrete admixture, acrylic acid special ester, and other products

Fiscal 2015 Results of RC Activities

- In fiscal 2015, we established a training center and strengthened our training drill system.
- We systematically implemented facility-strengthening measures for increased resistance to large earthquakes in addition to evaluating seismic standards and conducting drills.
- In terms of our safety record, our contractors suffered one injury without loss of workdays.
- We continued our initiatives to reduce our energy intensity and reduce waste as well as our emissions of substances subject to the PRTR.

We established a training center in fiscal 2015 and are working to enhance our training and drills. Moreover, we strengthened our risk evaluation methods for irregular work and reviewed our change management.

In preparation for potentially large earthquakes, we are systematically strengthening our facilities, evaluating our seismic standard for high-pressure gas facilities, and providing emergency training.

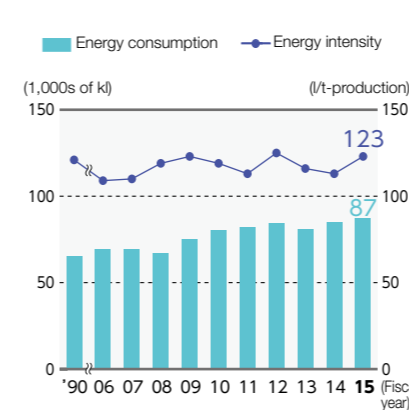
In terms of industrial accidents, we had one contractor suffering

injury without loss of workdays (heat stroke), and we took steps to strengthen our contractors' safety management.

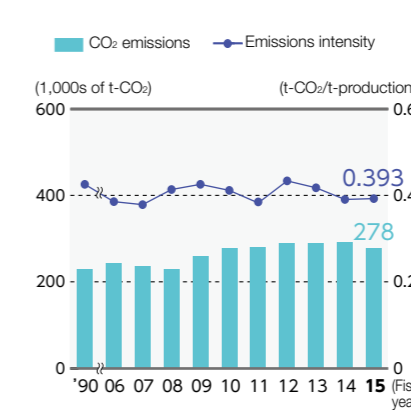
As we work towards reducing our energy intensity and minimizing emissions of substances subject to the PRTR, we are systematically making progress with facility renovations and the like.

We will continue to promote our Responsible Care initiatives with the goal of ensuring our plant remains safe and reliable.

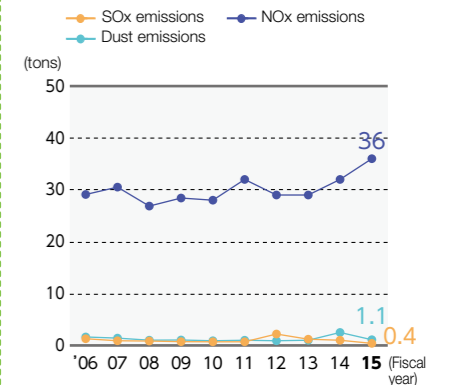
Trend in Energy Consumption



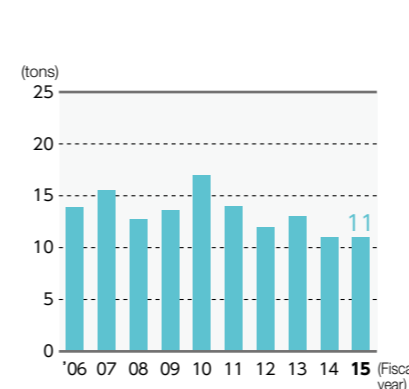
Trend in CO₂ Emissions



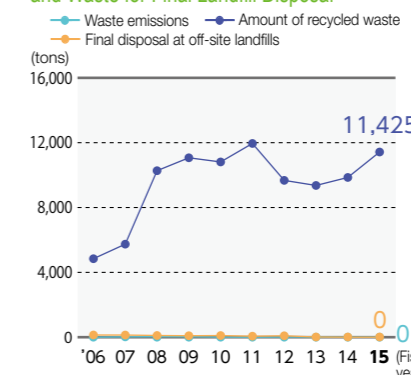
Trend in Emissions of SO_x, NO_x, and Dust



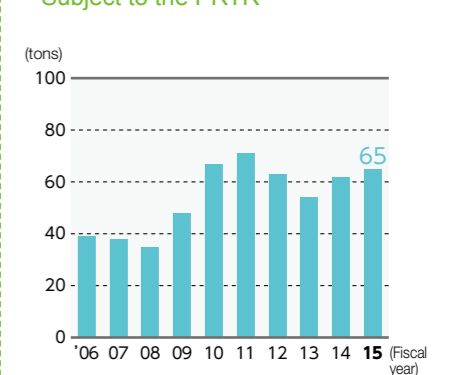
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR



In fiscal 2010, vanadium compounds were included in the PRTR.

Providing Support for Group Companies

Initiatives for Group Companies

In the interests of strengthening Group management, we are providing active support for the Responsible Care initiatives of our Group companies.

Responsible Care Interviews

At Nippon Shokubai, in order to actively promote concrete Responsible Care initiatives for Group companies both inside and outside Japan, we conduct Responsible Care interviews, and in fiscal 2015 we visited six companies in Japan and four outside the country.

In these interviews, we received reports of policies, planning, and achievements of each company's Responsible Care initiatives as well as reports on individual improvements on-site. We also provided advice and support from our Company.

In fiscal 2015, moreover, those responsible for environmental and safety issues at production sites outside Japan for acrylic acid and superabsorbent polymers gathered at the Himeji Plant, shared information, and exchanged opinions regarding environmental and safety initiatives instituted in our Company and those located outside Japan.



Responsible Care interview at Nisshoku Techno Fine Chemical Co., Ltd.



Responsible Care interview at Nisshoku Chemical Industry (Zhangjiagang) Co., Ltd. (China)

Environmental and Safety Audits

We conduct environmental and safety audits at our Group companies in Japan in order to strengthen our environmental safety management system.

In these audits, we confirmed compliance with legal requirements such as the terms of the Industrial Safety and Health Act and Fire Service Act as well as regulatory compliance related to safety and the environment. We also determined whether the PDCA cycle had been incorporated through the implementation of management systems related to safety and the environment.

From the results of the audits, we identified cases with room for improvement and requested that improvements be addressed.

Through these audits, we are taking steps to improve the Responsible Care initiatives of domestic group companies.



Environmental and safety audit in progress at Nippon Chemicals Co., Ltd.

Reciprocal Responsible Care Audits

We implement reciprocal audits at our Group companies in Japan twice annually for the purpose of improving the awareness and knowledge of those in charge of Responsible Care.

In fiscal 2015, Nippon Nyukazai Co., Ltd. and Nippon Polymer Ind. Co., Ltd. were the subject companies identified for reciprocal audits. They reported their work on Responsible Care initiatives as well as their individual improvements achieved.

During these reciprocal audits, cause analysis and strategic planning are undertaken for any industrial accidents that might occur in our Company and in our Group companies in Japan. This is done with a focus on human factors, material factors, and management factors. Following a reciprocal introduction of a string of analysis results, the companies share information with the involvement of peer groups.



Reciprocal audit at Nippon Nyukazai

Initiatives of Group Companies

Group Companies in Japan

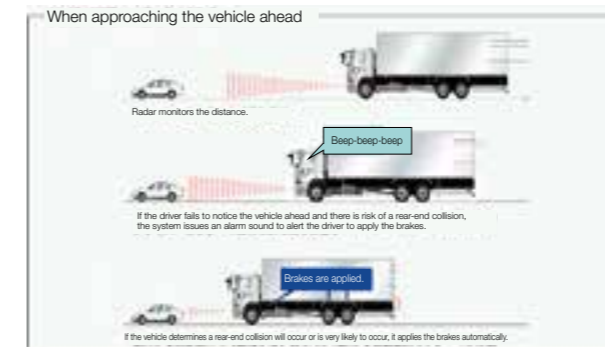
Nisshoku Butsuryu Co., Ltd.

Principal business	Logistics of chemicals
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The Nisshoku Butsuryu Group continues to sharpen its focus on environmental protection, distribution safety, and distribution quality. At the same time, it aims to become an even better logistics company that warrants the full confidence of shippers and customers alike for implementing a management system according to ISO international standards. The following are examples of its initiatives.

- Proactively pursuing a commitment to safety management (transportation safety management) as a truck transport company and introducing a combination of digital tachometers, GPS units, and drive recorders (comprising an advanced driving information system known as *Mimamorikun*), lane-departure warning devices, and supplemental rear-view cameras. The introduction of these safety devices follows risk evaluations supporting energy-efficient driving methods, safe driving, and accident response.
- Since the preceding fiscal year, we have introduced vehicles mounted with pre-collision warning systems* as part of our effort to prevent accidents.
- Systematically conducting voluntary checks of tankers in an effort to prevent leakage during transport.

* Pre-collision warning system (Since November 2014, this feature has gradually become mandatory.)



CHUGOKU KAKO CO., LTD.

Principal business	Manufacture and sale of adhesive-processed products and fine sphere particles
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In fiscal 2015, Chugoku Kako sought to enhance its process safety and disaster prevention initiatives and reviewed its emergency measures structure. It also conducted plant-wide general emergency drills. These have revealed issues in the organization such as a lack of experience in water-discharge fire-fighting drills, so the company is introducing initiatives for next year as part of its improvement plan. Moreover, following the company's deployment of AEDs in its plants, basic life-saving certification classes were held. As for occupational safety initiatives, the company adopted a theme for each month such as "close-call" (*hiyari hatto*) strengthening month. Through that initiative, the company is increasing its safety awareness. In the future, they will continue to implement Responsible Care initiatives and aim to become a company that has earned the trust of its local communities.



New employees undergo training in the use of fire extinguishers

NIPPON NYUKAZAI CO., LTD.

Principal business	Manufacture and sale of surfactant and other chemicals
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As an occupational safety initiative for the second year of its 3rd Medium-term Responsible Care Plan (fiscal 2014–2016), Nippon Nyukazai implemented risk assessments related to dangerous work during emergencies.

In the area of environmental protection, the company reduced its energy intensity by opening cogeneration systems at both the Kashima and Kawasaki Plants and is continuing to reduce waste intensity by improving its washing methods during product switchovers.

In terms of process safety and disaster prevention, following many years of achievements in promoting accident prevention awareness and safety management of hazardous materials, the Kawasaki Plant was commended by the Kanagawa Association for Safety of Hazardous Materials.

In the future, the company will strive to ensure safe operation while further enhancing and promoting its Responsible Care initiatives.



Commendation by Kanagawa Association for Safety of Hazardous Materials
Mr. Eiichi Sato, Manager of the Kawasaki Plant (third from right)

Interview



Reducing utility costs by introducing a CGS

Yusuke Sasaki
Engineering Department
Production Division
NIPPON NYUKAZAI CO., LTD.

As part of the utility cost reduction strategy of the Kawasaki Plant, we introduced a cogeneration system (with 390 kW of generation capacity and 0.3 t/h of generated steam) utilizing the gas engine method in January 2016.

By operating this system on weekdays between 08:00 and 22:00 throughout the year, we reduced our costs for purchased electricity and steam and are expected to achieve a total cost reduction of approximately 20 million yen for the full year.

In the future, we intend to work on energy saving and increased efficiency in order to create a better factory.

Group Companies in Japan

NIPPOH CHEMICALS CO., LTD.

Principal business	Manufacture and sale of iodine, intermediates for API and agro-chemicals, photo/electro chemicals, and flame retardants
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In fiscal 2015, Nippon Chemicals worked to foster a safety culture with the stated goal of absolutely zero industrial accidents. Specifically, their goal is to raise awareness of safety. In this regard, they made posters bearing safety slogans submitted by all employees and posted them in all workplaces. The company also established a facility on the premises to provide experience in exposure to liquids and took steps to confirm basic operations through error simulation.

Unfortunately, the company experienced an injury without loss of workdays from a cut in July, but the results of various safety initiatives are starting to show that the strengthening is taking effect. The company will continue to promote Responsible Care initiatives with the participation of all employees.



Training in exposure to liquids



"My safety slogan" poster

Tokyo Fine Chemical CO., LTD.

Principal business	Manufacture and sale of stabilizers of vinyl chloride resins, antifreeze, antiseptics, and antifouling agents
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In fiscal 2015, Tokyo Fine Chemical implemented Responsible Care initiatives under the corporate credo of "safety takes priority over production" with a policy of establishing a safe and effective production system.

As a result, the company achieved zero industrial accidents. In the area of environmental protection, the company achieved notable results, reducing energy consumption, greenhouse gas emissions, and waste. However, in the area of occupational health and safety, the company posted one injury without loss of workdays. Thus, it again set out to identify hazard factors, evaluated risks, and took steps to implement improvements from both a facility and management perspective.

Also, as a part of the "5 S" initiative, the company reviewed its walking zone, which the employees maintain on the premises.

In the future, the company intends to promote its Responsible Care initiatives and strive for operational safety while aiming to strengthen and enhance its activities.



Maintenance of walking zone

NISSHOKU TECHNO FINE CHEMICAL CO., LTD.

Principal business	Manufacture and sale of (meth)acrylic acid derivatives and photo/electro chemicals
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Nisshoku Techno Fine Chemical's environmental protection initiatives have been focused on waste generation, energy efficiency, and emissions of substances subject to the PRTR. Their goal is to reduce emissions intensity to their respective fiscal 2014 levels. However, waste increased in line with increased production following facilities expansion, while the energy intensity increased as well. Reductions were achieved, however, in terms of emissions intensity of substances subject to the PRTR.

In the area of occupational health and safety, the company experienced two injuries without loss of workdays. Continued risk assessments through reviews of work processes and by utilizing "KY" risk prediction and "HH" close-call incident reporting served to clarify risks, however.

Regarding process safety and disaster prevention initiatives, in addition to the annual general emergency drill, the company implements an emergency drill at each worksite for polymerizable monomer tanks for acrylic acid and is striving to increase their emergency response capability.

Regarding voluntary improvements, in addition to their overall initiatives such as cleanup, the company is developing improvement initiatives that include safety activities.



General emergency drill

NIPPON POLYMER IND. Co., Ltd.

Principal business	Manufacture and sale of acrylic resins
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Every year since fiscal 2013, Nippon Polymer Ind. has been implementing joint disaster prevention drills with the local municipal fire department as a process safety and disaster prevention initiative. In fiscal 2015, the company implemented a joint drill with the Aboshi Fire Department and the Nippon Shokubai Himeji Plant in-house fire brigade and engaged in an active exchange of opinions at the review meeting.

Looking to waste reduction, the company was able to greatly reduce the amount of waste sludge it generated by changing the chemicals used in wastewater treatment and by adopting other improvements.

Furthermore, the company focused on traffic safety on the company grounds, updating rules and implementing pedestrian zone markings on the main road on company premises. The company also re-painted white lines and other road markings that had become difficult to see.



Joint emergency drill with Aboshi Fire Department



Re-painting of road markings

Group Companies Outside Japan

PT. NIPPON SHOKUBAI INDONESIA

Principal business	Manufacture and sale of acrylic acid, acrylic esters, and superabsorbent polymers
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In addition to receiving the Green Industry Award from the Indonesian Ministry of Industry for the third time, PT. Nippon Shokubai Indonesia was presented with the Energy Efficiency Award from the Indonesian Ministry of Energy and Mineral Resources. Moreover, the company received the Gold Award from the Indonesian organization for the promotion of Responsible Care.

In order to continue promoting environmental and safety initiatives, the company is striving to increase its energy efficiency through its ISO 50001 energy management system and is committed to strengthening the following measures:

- providing thorough operator education and training in three essential factors: regulation compliance, reporting and confirmation;
- promoting "pointing and calling," "reply instruction," and "real-time KY;" and
- providing emergency response teams with more effective training in emergency stabilizer injection drills and the like.



Training in emergency stabilizer injection drill

NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD. (China)

Principal business	Development, manufacture and sale of superabsorbent polymers and polymers for concrete admixture
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After collecting improvement suggestions based on close-call (*hiyari hatto*) experiences since June 2015, Nisshoku Chemical Industry received 42 safety suggestions within the year. The employees submitting the best and the most suggestions received commendations.

In September, the company underwent a safety audit conducted by the Chinese government and received a number of improvement instructions. The company's license was renewed after all issues were addressed and improvements were completed and reported.

The company conducted emergency response drills together with the regional fire department and emergency response centers twice during the year and took steps to improve its employees' response capabilities in the event of an emergency.



Disaster response drill

Interview



Anggit T. Wicaksono
SAP Production Technical
PT. NIPPON SHOKUBAI INDONESIA

We reduced our electricity consumption by 400 MWh/y.

We upgraded the pump in our cooling facility in 2015. As a result, we were able to reduce the number of pumps in use from two pumps to one, thereby reducing our electricity consumption by 400 MWh/y.

We are now considering the adoption of additional energy-efficiency initiatives in the future.

Interview

We introduced a polymerization inhibitor safety system.

Ji Xinyu
Production/Technology Manager
NISSHOKU
CHEMICAL INDUSTRY
(ZHANGJIAGANG) CO., LTD.



In 2014, we introduced a procedural manual (work standard for emergency polymerization inhibitor injection) as a polymerization inhibitor safety measure. In addition, in 2015 we introduced safety measures for all corresponding facilities including external acrylic acid tanks in accordance with Nippon Shokubai's safety measures. We also provided all production workers with training in emergency reporting to each department and in emergency polymerization inhibitor injection. We believe that, with this training, employees will be able to respond appropriately in an emergency and prevent a resulting disaster.

In the future, by complying with the procedural manual, performing periodic maintenance on safety devices, and providing training twice a year, the company is confident it can ensure normal administration of its safety system.

Initiatives of Group Companies

Group Companies Outside Japan

Nippon Shokubai America Industries, Inc.

On January 1, 2016, NA Industries, Inc. was renamed Nippon Shokubai America Industries, Inc.

Principal business	Manufacture and sale of superabsorbent polymers, polymers for concrete admixture, water soluble polymers, and acrylic emulsions
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With the principal objective of reconfirming the role and responsibilities of each employee in the event of a disaster, the company conducts a variety large and small disaster drills.

Moreover, in collaboration with a neighboring chemical company, it has assembled a joint emergency response team that conducts regular fire, life-saving, and chemical leakage drills.

The company's Houston (Texas) Plant held its first quality safety slogan contest. The Chattanooga (Tennessee) Plant is proud of having established a record of five consecutive years of "No Lost Time Accidents."



Fire-fighting drill by the joint emergency response team

NIPPON SHOKUBAI EUROPE N.V. (Belgium)

Principal business	Manufacture and sale of superabsorbent polymers
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In collaboration with adjacent chemical companies in the region, the company conducts annual unannounced general emergency response drills. In 2015, the company took the lead in conducting this drill. This time again, the self-defense fire brigade arrived on the scene immediately, with the municipal fire brigade from the city of Antwerp arriving to assist with the joint fire and life-saving drill. The results of the drill were then analyzed during a review of the emergency response strategy.

The company also developed a dedicated emergency communications system linking the neighboring chemical companies. As a result, in the event of an emergency at one of the member companies, the neighboring companies can be contacted swiftly to initiate a more effective joint response.



Fire-fighting drill by the joint emergency response team

SINO-JAPAN CHEMICAL CO., LTD. (Taiwan)

Principal business	Manufacture and sale of surfactant and other chemicals
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Continuing with efforts to obtain certifications of registration with ISO 14001 and OHSAS 18001/TOSHMS, in June 2015 the company passed an audit conducted by the Ministry of Labor regarding "Operation Directions for the Performance Recognition of the Occupational Safety and Health Management Systems of Business Entities." In the future, the company will continue to strictly manage health and safety in the workplace.

To strengthen employee health and safety awareness and on-site operational capabilities, the company trained 21 in-house lecturers. This brings to 331 the number of employees who have undergone training under these lecturers.

Regarding environmental protection events, the company participated in a government-led training course on joint preventive handling and management of toxic chemical substances; moreover, the company received the "Award of Excellence" from the Environmental Protection Administration in November 2015.



"Award of Excellence" received from the Environmental Protection Administration



Training session with in-house lecturer focusing on safe operation of facilities

SINGAPORE ACRYLIC PTE LTD

Principal business	Manufacture and sale of crude acrylic acid
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In 2015, Singapore Acrylic unfortunately experienced two injuries with loss of workdays. In addition to implementing measures to prevent a recurrence, the company trained workers anew on risk assessment and the methods for conducting risk prediction work as well as a compliance obligation to wear protective gear.

The company has also actively participated in a variety of safety initiatives implemented by SMAG (an organization comprising four neighboring companies). These include fire-fighting drills conducted jointly with the Singapore fire department and toxic gas leak response drills.

Furthermore, the company is taking steps to increase worker awareness of safety issues by conducting training and drills on the importance of implementing safety initiatives on a routine basis.



Joint emergency drill

About This CSR Report

Editorial Policy

Nippon Shokubai began publishing its Environmental Report in fiscal 2002. In fiscal 2005, information on corporate social responsibility (CSR) was included, at which time this publication was renamed the "Environmental and Social Report." In fiscal 2006, we established our CSR Management Committee and reported on our CSR initiatives in order to improve our CSR implementation structure. We also appended the subtitle, "Our Commitment to CSR."

Beginning with the 2015 issue, we further expanded the content related to corporate social responsibility and renamed the publication the "CSR Report."

◆ We have focused on increasing both the readability and ease of understanding for the benefit of our stakeholders.

◆ Since fiscal 2005, we have been including the results of an objective third-party evaluation of our Responsible Care initiative undertaken by the Japan Chemical Industry Association.

◆ We prepared this report with reference to the "Environmental Reporting Guidelines" (Fiscal 2012 Version) of Japan's Ministry of the Environment and the "Sustainability Reporting Guidelines" (Version 4) of the Global Reporting Initiative.

CSR is a corporate initiative through which businesses take responsibility for the impact of their operations and contribute to sustainable growth in harmony with society and the environment. It encompasses the overall concept of corporate management and seeks to enhance the trust of the company's various stakeholders.

Scope of This Report Organization

NIPPON SHOKUBAI CO., LTD.

Osaka Office, Tokyo Office
Himeji Plant, Kawasaki Plant
Himeji Research Center
Suita Research Center
Tsukuba Research Center

(Unless otherwise stated, all data on business performance refers solely to Nippon Shokubai Co., Ltd.)

Group Companies in Japan

NIPPOH CHEMICALS CO., LTD., Tokyo Fine Chemical CO., LTD.,
CHUGOKU KAKO CO., LTD., NIPPON POLYMER IND. Co., Ltd.,
NISSHOKU TECHNO FINE CHEMICAL CO., LTD.,
NIPPON NYUKAZAI CO., LTD., Nisshoku Butsuruyu Co., Ltd.

Nippon Polyester has been excluded from the scope of this report following Nippon Shokubai's divestment of that company's shares.

Group Companies Outside Japan

Nippon Shokubai America Industries, Inc.
PT. NIPPON SHOKUBAI INDONESIA
NIPPON SHOKUBAI EUROPE N.V.
SINGAPORE ACRYLIC PTE LTD
NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.
SINO-JAPAN CHEMICAL CO., LTD

Reporting period: April 1, 2015–March 31, 2016

Publication date: October 2016

Scheduled publication date of next issue: October 2017

This publication is a translation of the Japanese-language edition originally published in June 2016. In the event of any discrepancies in content or differences in interpretation, the Japanese-language version shall prevail.

Third-Party Review

The Japan Chemical Industry Association (JCIA) issued the "Independent Verification – Opinions" for our CSR Report 2016 (Japanese edition) in Japanese as below. It expresses verification on rationality and accuracy, and informed opinions of chemical industry specialists on the contents related to our RC activities and the characteristics of our report.



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