

SUMITOMO OSAKA CEMENT

CSR Report 2018



PHILOSOPHY

We aim to be a business group that helps preserve the global environment and contributes to the sustainment and ongoing development of a prosperous society through tireless technological innovation and wide-ranging business activities.

ENVIRONMENTAL PHILOSOPHY

Striving for harmony between the natural environment and its business activities, the Sumitomo Osaka Cement Group is contributing to the creation of a prosperous society and environmental preservation through the pursuit of production, power generation and logistics defined by minimal environmental impact.

CODE OF CONDUCT

1. We will engage in sound business practices by placing prime importance on integrity.
2. We will act ethically and comply with all laws and regulations.
3. We will provide products and services that respond to the trust and expectations of customers and society.
4. We will respond flexibly to changing times and conduct business efficiently as means of enhancing our corporate value.
5. We will create safe and vibrant working environments where human rights are fully respected.
6. We will value and respect all employees.

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About the Cover

[Left side] Tsushima Leopard Cat
Tsushima, in Japan's Nagasaki Prefecture, is an abundant natural environment. The endangered Tsushima Leopard Cat inhabits a forest there owned by Sumitomo Osaka Cement. In cooperation with local residents, we conduct activities that protect the natural environment.

Photo credit: Noted wildlife photographer Makoto Kawaguchi

[Lower side] Chionanthus retusus (olive tree family)

A tall, deciduous tree that grows only in select habitats even in Japan; those found in nature are designated as a protected species by national and local governments. The copse of these trees found in Waniura, an area in Uetsushima Town (Tsushima City, Nagasaki Prefecture), is particularly well known. Other names for the tree include "Nanjamonia" as well as "Umiterashi" (Sea shine), for the way the tree's white petals appear to shine as they float on the sea.



Editorial Policy

This report is published as an accessible tool for conveying information regarding the corporate social responsibility (CSR) efforts of the Sumitomo Osaka Cement Group to stakeholders. To promote deeper understanding of the Company's CSR initiatives, the 2018 edition offers a detailed look at specific environmental, social and governance-related data. Particularly regarding safety, a point of focus for the Company, we spotlight activities taking place in this field at our main business sites. We remain committed to promoting a recycling-based society, and will fulfill our duty to develop and explain our corporate activities to this end.

Reference Guidelines

GRI Standards

"Environmental Accounting Guidelines, 2005 ed." From Ministry of the Environment (Japan)

"Environmental Accounting Guidelines, 2012 ed." From Ministry of the Environment (Japan)

Reporting Scope

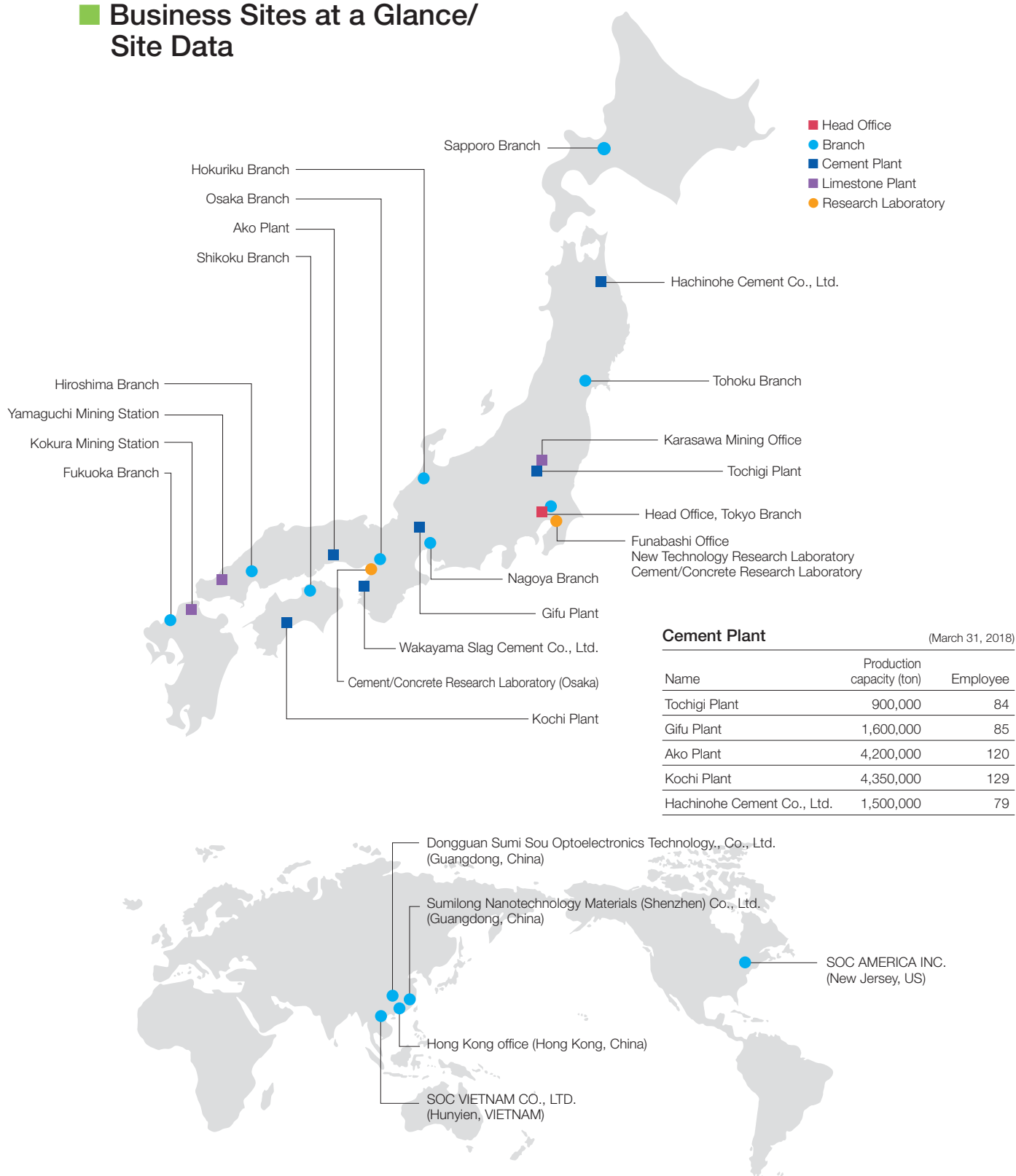
● Reporting period: April 1, 2017 to March 31, 2018

● Reporting entities: Sumitomo Osaka Cement Co., Ltd. and Group companies

Sumitomo Osaka Cement Group Businesses

Anchored by the Cement business, the Sumitomo Osaka Cement Group is developing a variety of enterprises, including the Mineral Resources, Cement-Related Products, Optoelectronics, Advanced Materials and Battery Materials businesses. As part of the Cement business, the Group collects industrial waste and byproducts, building a recycling-based society while sustaining and contributing to the ongoing development of a more prosperous one.

Business Sites at a Glance/ Site Data



Business Fields

Cement-related Business



Cement

Business Overview

This business encompasses the manufacture and sale of assorted cements and cement-related solidification materials, contributing to social infrastructure development through sophisticated technological capabilities and extensive quality control. This business also proactively contributes to realization of a recycling-based society through efforts to expand its collection of recyclable materials and other actions.

Products and Services

Assorted cements, cement-related solidification materials, supply of electrical power, recycling and ready-mixed concrete



Mineral Resources

Business Overview

Leveraging one of the largest scales of high-quality and abundant resources in Japan, Sumitomo Osaka Cement supplies limestone used as an industrial resource in a wide range of fields, including steelmaking, chemistry and cement. Demand for high-purity limestone is high, with the product shipped not only in Japan but exported to markets across Asia.

Products and Services

Limestone, aggregate, calcium carbonate, dolomite, silica powder



Cement-Related Products

Business Overview

This business encompasses the manufacture and sale of concrete repairing and reinforcing materials for concrete structures. Combining years of experience with technological capabilities, Sumitomo Osaka Cement supports the maintenance and repair of social infrastructure.

Products and Services

Repairing and reinforcing materials for concrete structures, materials for remediating heavy metal pollution, cathodic protection for concrete structures (ELGARD SYSTEM), artificial marine reefs

High-Performance Product Business



Optoelectronics

Business Overview

Taking advantage of cutting-edge optical communications technology, Sumitomo Osaka Cement is involved mainly in the development, manufacture and sale of LN modulators, a critical component for optical communications systems.

Products and Services

Optical communications components and optical measuring equipment



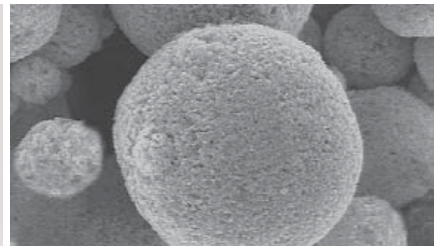
Advanced Materials

Business Overview

Leveraging skills in proprietary nanoparticle manufacturing technology, Sumitomo Osaka Cement pursues the development, manufacture and sale of functional materials such as cosmetics materials, paints and coatings, and antibacterial agents. In addition, our ceramics that utilize special functional particles have been adopted for use in semiconductor manufacturing equipment and other applications.

Products and Services

Ceramics products, nanoparticle materials



Battery Materials

Business Overview

Applying proprietary nanoparticle manufacturing technology, Sumitomo Osaka Cement is involved in the development, manufacture and sale of cathode materials for lithium-ion batteries.

Products and Services

Cathode materials for rechargeable batteries



Other

Operations here include real estate leasing of Group-owned idle land, information processing services and electrical equipment work.



Research Laboratory

The Cement/Concrete Research Laboratory and New Technology Research Laboratory are involved, respectively, in a wide range of R&D targeting the Cement-related Business and High-Performance Product Business.

Sumitomo Osaka Cement Group Strategies

Fiscal 2017-2019 Medium-term Management Plan

Under the “Fiscal 2017-2019 Medium-term Management Plan” drafted in 2017, Sumitomo Osaka Cement established an approach for the future, along with the formulation of a basic policy for realizing that approach. Numerical targets for the final year of the plan, the year ending March 31, 2020, include net sales of ¥270,000 million and ¥30,000 million in ordinary income.

Approach for the Future

We are aiming to become a corporate group on a steady growth trajectory, by expanding our presence in the markets of both the Cement-related Business and High-Performance Product Business.

Basic Policy

Our basic policy is to implement our growth strategy steadfastly, positioning this medium-term management plan as the best opportunity for growth.

Numerical Targets (Final Fiscal year)

Net sales	¥270,000 million
Ordinary income	¥30,000 million
ROA (Ordinary income/Total assets)	9%
ROE (Return on equity)	10%

Capital Expenditures

As per the basic policy of the Medium-term Management Plan, Sumitomo Osaka Cement is investing aggressively in line with growth strategies for the Cement-related Products and High-Performance Product businesses.

Greater product range at service stations

Work was completed on a new silo at Onahama Service Station in Fukushima Prefecture in July 2017 (holding capacity of 12,000 tons). The inside of this silo is compartmentalized, making storage possible for a number of different types of cements, including specialty products. By providing a greater range of product lineup, we will meet demand for work at the Fukushima Daiichi Nuclear Power Plant and infrastructure development projects taking part in the area.



Onahama Service Station
(Iwaki City, Fukushima Prefecture)

Coal transportation using our own ship

The Group built its own dedicated bulk coal carrier vessel (14,500 ton capacity) for use at its plants in order to improve transportation efficiency. In April 2018, the vessel inaugurated a route between Russia and the Ako Plant. Looking ahead, the vessel will transport coal to coastal plants as the Sumitomo Osaka Group's mainstay bulk coal carrier.



Bulk coal carrier SOC GLORY

Investment in increased production in High-Performance Product Business

Completed construction of additional manufacturing facilities for (LN modulators) optical communications components

In September 2017, work was completed on additional manufacturing facilities at Dongguan Sumi Sou Optoelectronics Technology, Co., Ltd. (Dongguan City, Guangdong Province, China), a manufacturing subsidiary of the Optoelectronics business. As a result, the company commenced production of 100G LN modulators, which have one of the highest transmission speeds in the world, to complement its existing production of 10G and 40G LN modulators. This will position the company to fulfill rapidly growing demand in optical communications markets around the world.



Dongguan Sumi Sou
(Dongguan City, Guangdong Province, China)

Completion of work on additional manufacturing facilities for semiconductor manufacturing equipment components (ESC)

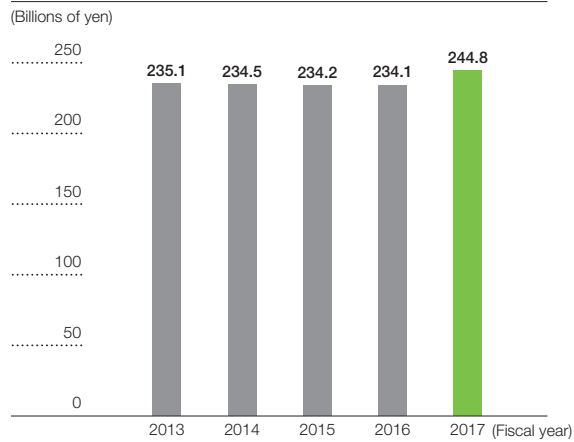
In September 2017, in the Advanced Materials business we completed work on additional manufacturing facilities for ESC (electrostatic chucks) widely adopted as mainstay components of semiconductor manufacturing equipment because of their high purity, high heat conductivity, high voltage holding, and high durability as they are made from super high purity ultra fine SiC particles. This addition will enable us to supply products closely in tune with customer needs in a timely manner and accommodate growing demand for semiconductor manufacturing equipment.



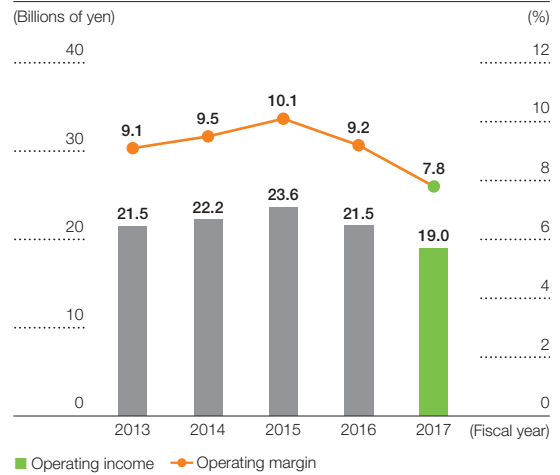
New building
(Ichikawa Office, Chiba Prefecture)

Financial and Non-financial Highlights (Consolidated)

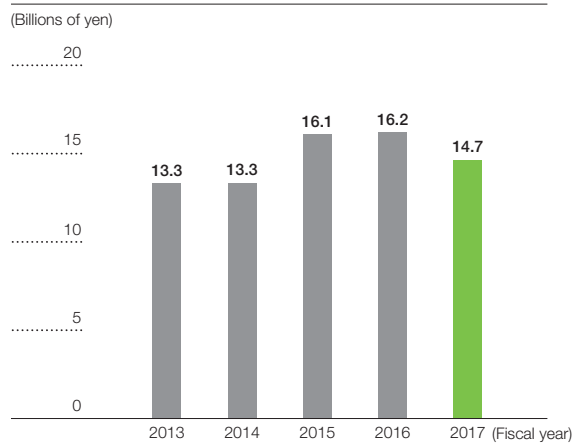
Net sales



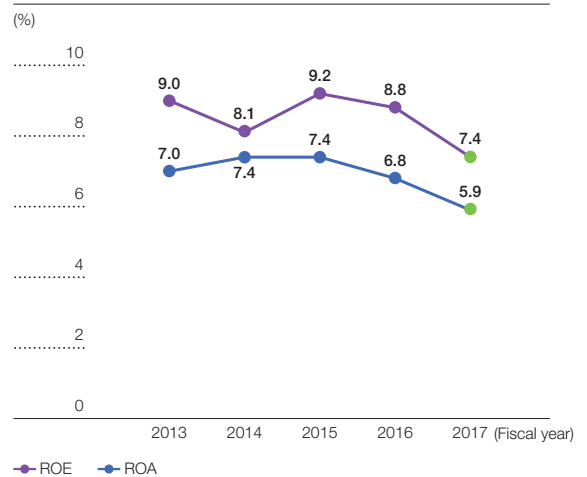
Operating income and Operating margin



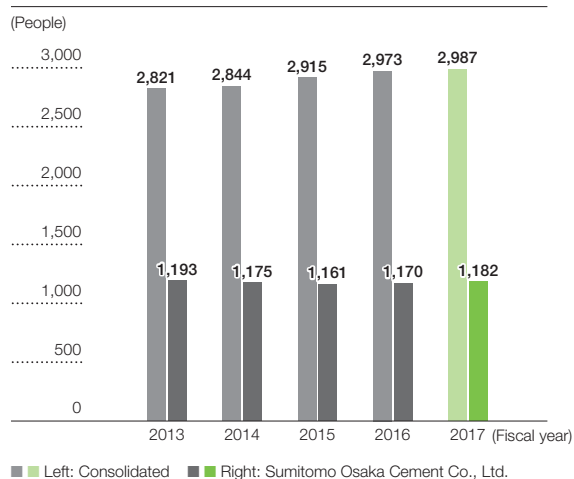
Profit attributable to owners of parent



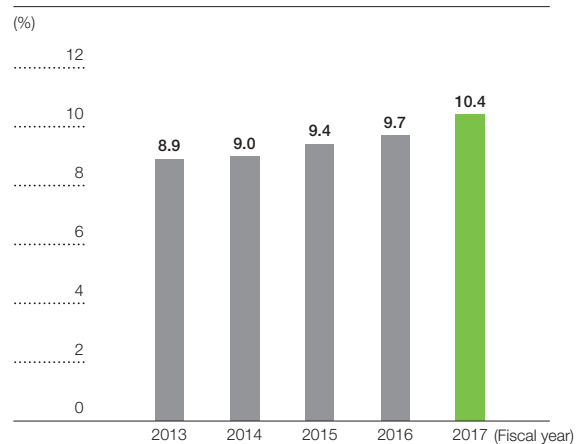
ROE/ROA*



Employee



Ratio of women (Sumitomo Osaka Cement Co., Ltd.)



Interview: President Fukuichi Sekine Sits Down with Ms. Ayako Sonoda



Ayako Sonoda

Profile

Born 1963, Hyogo Prefecture, Japan
B.A. in Sociology, Konan University
Following a stint at advertising agency
Recruit Visual Co., Ltd. (now Jupiter Visual
Communications Co., Ltd.), founded and
became representative director of Cre-en
Inc. in August 1988.

In her work to help bring about a
healthier, happier world, Ms. Sonoda
encourages communication that brings
companies and the public together through
the production of environmental and
sustainability reports—key sources for
disclosure of corporate environmental
information. She has been involved to date
in the production of environmental and CSR
reports for dozens of companies.

Fukuichi Sekine

President

Sumitomo Osaka Cement Group initiatives to solve social issues

In June 2018, we invited in Ms. Ayako Sonoda, president of CSR consulting firm Cre-en Inc., a company dedicated to realizing a sustainable society, for a one-on-one interview with Sumitomo Osaka Cement Group President Fukuichi Sekine about the Company's approach to balancing social contribution and business growth.

The Root of Business is Kindness to People

Sonoda: I once heard your favorite book is Inazo Nitobe's Bushido; what part in particular do you find most intriguing?

Sekine: Nitobe's talks about the "7 Virtues"* of bushido; of these, the one that resonated most with me is "benevolence," or more specifically, "being merciful to others." Businesses, too, must have at their root the notion of being kind to human beings. When interacting with people, and that includes customers, local residents and employees, nothing is more important than being truly kind and truly understanding of another's pain.

*The "7 Virtues" of bushido are morality, courage, benevolence, respect, honesty, honor and loyalty.

Sonoda: The company's founding spirit is also important to keep in mind.

Sekine: The spirit of the Sumitomo Family, captured by a commitment to "placing prime importance on integrity" and "never pursuing easy gains or acting imprudently," is still alive and well at our company some 400 years later. I am convinced that CSR and the Sustainable Development Goals (SDGs), even though the language is different, are essentially embodiments of the Sumitomo spirit. Furthermore, while our Company has a 110-year history, its roots lie in Iwaki Cement of Fukushima. Given that connection, I have a powerful desire to assist somehow in Fukushima's revitalization.

Reminding the Public of What the Existence of Cement Means

Sonoda: You are a Chairman of the Japan Cement Association. What is your vision for the industry's future?

Sekine: Cement has been in Japan now for roughly 140 years. While cement isn't flashy, it has been there supporting our lives past and present. In Japan, where natural disasters strike so frequently, cement is essential for erosion and flood control. Furthermore, in the more than 50 years since the last Tokyo Olympics, the Metropolitan Expressway and other transportation infrastructure has aged considerably. On top of that, both sewage treatment and environmental infrastructure are still in a fragile state. The cement industry actually has a significant role to play here. I would argue that the industry needs to convey the very real meaning of its existence to a wider audience.

Sonoda: The Japanese government is also enacting its "Plan for National Resilience." What is your sense of the kind of progress made on the plan so far?

Sekine: There's a great deal of work still ahead. Putting Japan's investment in public works 20 years ago at 100, the current level is only at 47. Over the past two decades, public works investment in the UK and the US has nearly doubled; the only developed country where this is declining is Japan. Putting unnecessary "bridges to nowhere" projects aside, breaking ground nonstop on truly vital projects is imperative.

Japan is a country where natural disasters happen frequently. Take earthquakes, for example. For most of the Pacific Ocean region, there is a more than 20% chance that a magnitude 6 or stronger tremor will strike over the next 30 years. And then there is rain. While the world experiences



roughly 800 millimeters of average rainfall per year, the volume of rain in Japan is almost twice that. That rain then flows torrentially down the Japan Alps and other 3,000-meter-class mountains. No matter what you do, that will trigger flooding and landslides. The main protection against that is mountain forests, which only become good forests after planting, brush cutting and other deliberate steps are taken to cultivate them. However, since the price of lumber has become so cheap in recent years, owners have stopped taking proper care of their forests. Mountain forests that lack such care have weak root systems, making it easier for a landslide to wash away trees. This is why erosion and flood control are essential for protecting Japan's land and its people. The landslides that struck Hiroshima in 2014 also prompted the Ministry of Land, Infrastructure, Transport and Tourism to prepare a landslide hazard map of 530,000 locations in Japan. The cement industry, too, needs to do its part in building erosion-control dams and other vital construction.

Sonoda: Would you say then that Japan's cement technology could also play a major role in disaster prevention and transportation infrastructure worldwide?

Sekine: Japan's cement technology is a world-class standard, and I think there are lots of opportunities for an active role in river dikes, runways and other sites where strength is a must. Most roads in Japan are paved in asphalt, with concrete pavement accounting for just 5%. Looking ahead, it is important that government entities perform a comparative analysis based on the application to ensure they use the most appropriate materials.

Among concrete pavement, there is a product called "1 DAY PAVE" (a style of concrete pavement for opening transportation routes faster). By dramatically shortening the time needed to dry, this product is being utilized in a wide range of settings where transportation routes have to be opened quickly. Another product is "porous concrete pavement," which contributes to safer driving on rainy days by preventing puddle formation and enabling water drainage. We also offer "high-strength concrete," a product specifically for 200-meter-class high-rise buildings in the construction sector.

As Japan's population decreases, domestic demand for cement is likely to decline overall after the 2020 Tokyo Olympics and Paralympics are complete. In response, Sumitomo Osaka Cement will move to identify demand for high-quality products that put emphasis on safety, while also looking globally to uncover new application fields. We have no

intent to alter our approach of staying focused on the Cement-related Products Business, even as we continue to grow the High-Performance Product Business. For the time being, we are bolstering our plants to ensure we have cost competitive cement for the future.

Coexistence with Communities and the Environment, and Making a Sustainable Cement Business

Sekine: Cement companies are collecting ash from garbage incinerator sites across Tokyo's 23 wards and the city of Yokohama, as well as some of the sewage sludge from those same areas. Sumitomo Osaka Cement is recycling a range of industrial waste and byproducts to use as cement raw materials and thermal energy. The 1,450°C kilns we own make it possible to burn virtually anything, and the secondary waste produced emits no dioxin or other harmful substances. Our unmatched recycling capabilities can potentially be used across a wide spectrum of applications.

Sonoda: Attention is turning to the Minami-Soma Solar Agri-Park as an example of how companies are addressing new Sustainable Development Goals (SDGs). As a site for training the next generation of human resources to spearhead Fukushima's revitalization, over 80% of the city's elementary and junior high school students have done experiential learning there. At the same time, a number of companies are involved in supporting tomato cultivation onsite and its use for corporate training.

Sekine: Our Company's origins are also in Fukushima, so I

want us to assist in its recovery. While previously we provided land for temporary housing units and other resources, we recently built a new cement storage silo in Onahama in an aim both to meet demand from revitalization efforts and to reinvigorate the region.

Sonoda: I've heard that while contributing to community building, Sumitomo Osaka Cement is working to bring about a more sustainable society. Can you offer any details here?

Sekine: Sumitomo Osaka Cement already has a biomass power generator that uses wood waste in operation at our Tochigi Plant, and we utilize biomass energy to supplement coal at our Ako and Kochi plants. In addition, our affiliate Hachinohe Biomass Power Generation Co., Ltd. began operating commercially in April 2018. The company's annual energy output is estimated to meet the yearly electric power consumption of roughly 27,000 homes. The wood chips for thermal energy production come mainly from brush clearing from mountain forests and forests adjacent to railways provided by joint investors Sumitomo Forestry Co., Ltd. and East Japan Railway Company. This initiative is encouraging a switch in energy sources, while also generating local employment opportunities.

Sonoda: Sumitomo Osaka Cement is also quite passionate about local forest creation on Mount Ibuki (Shiga Prefecture, Japan) and other places as part of its environmental protection activities. Is that accurate?

Sekine: After extracting limestone, our practice has long been to plant saplings at mines to make them greener. At mines, there is a surface layer of soil where vegetation grows. We carefully preserve this soil and the plant life, returning it to the extraction site upon completion. It's easier, of course, to just spread seeds around, but that allows invasive species to get mixed in, causing the native flora to be lost. This takes a great deal of time and effort, but it is absolutely necessary in order to safeguard the native ecosystem. Since ancient times, Mount Ibuki has been revered as the "Mountain of the Gods." As a company conducting business there, it goes without saying that we have an obligation to protect the natural beauty of the region.

Sonoda: Another important theme in global sustainability is biodiversity. I was told that Sumitomo Osaka Cement takes steps to protect endangered species.

Sekine: At one time, clay was used as the raw material for cement. Now, coal ash from thermal power generators is used instead, making the need to extract clay from mountains obsolete. At Sumitomo Osaka Cement, we have a roughly 16-hectare clay mountain that lies untouched in Tsushima (Nagasaki Prefecture). We learned that the surrounding forest is home to 70 to 100 Tsushima Leopard Cats, an endangered species. Sumitomo Osaka Cement launched programs to protect this species in 2007. To encourage population growth in field mice and other small animals that the cats eat, our employees joined forces with local children to cultivate deciduous trees and plant saplings of trees with acorns that feed the small animals. Even today, our employees across Japan support this effort through our "Vending Machine Fund."*

Sonoda: What a wonderful initiative. Not only does it protect



*A portion of sales from inhouse vending machines becomes donations, which are gifted to local government offices.

endangered species, but it serves as a model for shared creativity with the community; it even acts as future education by turning children's attention toward biodiversity. I was told Sumitomo Osaka Cement is not only protecting mountains but also the seas by promoting artificial marine reefs.

Sekine: Artificial marine reefs are indeed one of our businesses, and one that I am proud is playing a role in protecting marine resources. There is also an interesting connection here—the deciduous trees raised in Tsushima create rich soil; the nutrients from it flow into the sea, making it possible for seaweed to grow. Small fish then flock to the seaweed, where they become food for bigger fish that come. Tsushima is home to our largest such installation, a 20-meter-tall “hybrid artificial marine reef.” Fish populations have grown since its arrival, for which local fishers have expressed much gratitude. What's more, we set a rule when we built the reef to use no outside materials whatsoever. Our goal was to use local goods and create local jobs. Another point is that we did not simply sell the reef and go. We periodically conduct surveys and take video of the reef to report on its conditions. We also show these materials to other fishing cooperatives so that they can see its effectiveness for themselves. Next to Hokkaido, Nagasaki is home to Japan's largest fishing industry, so we plan to normalize and expand the installation of artificial marine reefs beyond Tsushima to Iki Island and the Goto Islands, as well.

What Kind of Company Will You be in 10 Years?

Sonoda: That kind of endeavor is one that requires a great deal of patience, doesn't it? Including long-term initiatives like the one you just discussed, what is your vision for reaching sustainable growth?

Sekine: Our recent Medium-term Management Plan is now in its second year. While the plan itself lasts for three years, I've been telling directors and managers to consider the kind of company we want Sumitomo Osaka Cement to be 10 years from now. As people, we tend over the short term to focus on what's easy, or what can deliver the results we want quickly. Things that are more difficult we tend to put off for later. What I tell the directors and managers is to identify issues and take decisive action to address them within that three years. Even if we cannot resolve them, we make things that much easier for the next generation. This will lead to a healthy, positive society where hope is alive and well. If we try, sometimes we find that even the impossible can meet with unexpected success. If we give it our all, the people to support us will appear.

Sonoda: My thought is that when promoting business while trying to solve tough social issues, one's approach five to 10 years in the future will almost certainly change.

Sekine: On a non-consolidated basis, Sumitomo Osaka Cement has a relatively small workforce of 1,182 individuals, so I get to meet all new recruits when they join. Since I have a career image in mind when we hire, I can sympathize with what our recruits are thinking. Similarly, I refuse to treat personal transfers like a haphazard patchwork. When the Human Resources Department decides on a transfer, I make a point of asking if the employee's career trajectory was



considered at least two steps ahead, as well as the depth of the reasoning behind the decision. Companies are public entities, and valuable human resources are entrusted to them. As such, companies also have a duty to provide those individuals with spaces where they can flourish.

When it comes to the advancement of women at Sumitomo Osaka Cement, the Company currently has nine female managers, and in June 2018 had the first advancement in the industry of a woman to the General Manager position. Among are latest female recruits, some are seeking to become plant managers. For a long time, the cement industry believed in the notion that “sales is a man's job”; and yet, the women who work on the frontline of sales have neatly delivered success and won strong praise from customers. After witnessing this, I am excited to see what those who follow have in store. Our Company will support the women who work here in making their dreams a reality.

Internally, we have selected what we view as important themes from among the 17 SDG goals. We will spend a year discussing and narrowing these down so that we can make an announcement next fiscal year. As we take advantage of SDGs and marshal the strength of our Group workforce to solve social issues, we hope to move with eyes to the future to helping create a more positive and healthy society.

Sonoda: The word among companies is that SDGs energize their younger employees. For someone like you striving to make a more positive and happier world, President Sekine, SDGs are a perfect fit. Thank you so much for sitting down and sharing your invaluable insights with me today.

Promotion of CSR Management

“We aim to be a business group that helps preserve the global environment and contributes to the sustainment and ongoing development of a prosperous society through tireless technological innovation and wide-ranging business activities.”

To make our Corporate Philosophy a reality, Sumitomo Osaka Cement has established a CSR Committee as a promotion framework for CSR activities across all organizations companywide, and to promote CSR activities that are fully integrated with business activities.

Basic Approach

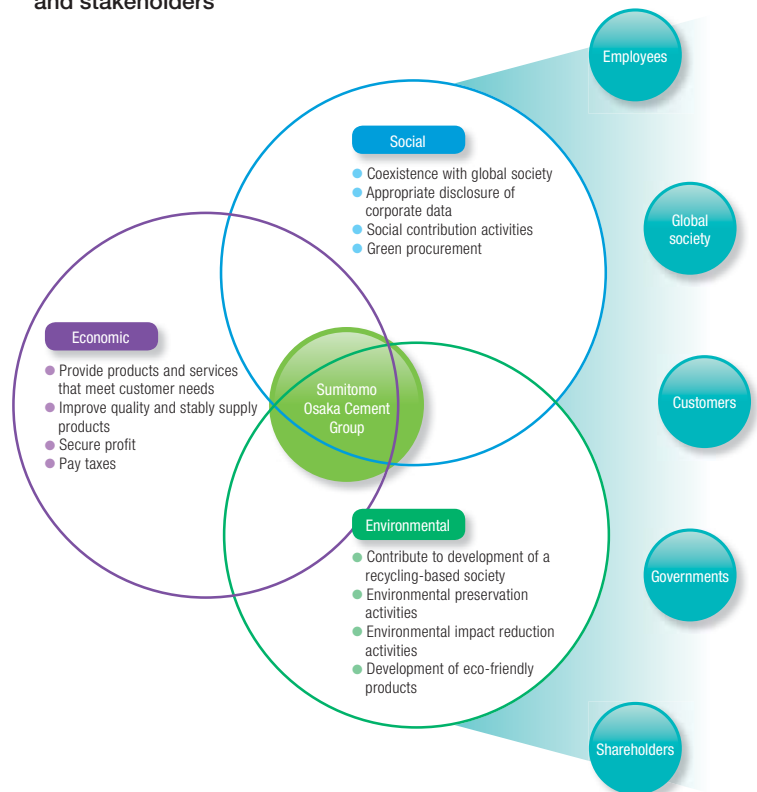
The Sumitomo Osaka Cement Group is keenly aware of the importance of ties to the public for contributing to society as a company through sound development. With economic contributions as a starting point, we view efforts to exist in harmony with local communities through environmental preservation and social contribution activities as one of our priority management issues.

We put emphasis on relationships with stakeholders and society at large, proactively address economic, environmental and social problems as a member of society, and believe that earning greater trust from the public through communication is the key to enhancing our corporate value.

Promotion Framework

Sumitomo Osaka Cement has clarified the role and responsibilities of the CSR Committee, defining its organization and scope of authority. This committee is essential for raising awareness of CSR, as well as permeating and embedding it among all directors and employees of the Sumitomo Osaka Cement Group, and for building good relationships between the Group and its stakeholders.

Relationship between the Sumitomo Osaka Cement Group and stakeholders



CSR Promotion Framework Diagram

Board of Directors

CSR Committee Chair: President

Secretariat: General Affairs Dept.

Deputy Chair: General Affairs Dept. Director (responsible for CSR)

Committee members: Directors, Executive officers (Managing and above)
Directors responsible for supervision of business departments, offices, research laboratories or business sites

General Manager, Internal Audit Dept.
General Manager, General Affairs Dept.
General Manager, Legal Dept.
General Manager, Personnel Dept.
General Manager, Corporate Planning Dept.
General Manager, Administration Dept.
General Manager, Intellectual Property Dept.
General Manager, Environment Div.

Head of Secretariat: General Manager, General Affairs Dept.

All business sites and Affiliates

Materiality Specific to the Sumitomo Osaka Cement Group

The Sustainable Development Goals (SDGs) selected by the United Nations in 2015 are comprised of 17 goals and 169 targets designed to realize a better future. The wide-ranging issues addressed encompass economic, social and environmental concerns.

The Corporate Philosophy and businesses of the Sumitomo Osaka Cement Group, and the medium- to long-term perspective emphasized, are highly compatible with many SDGs, creating significant potential for implementing SDGs through the Group's core business and CSR activities.



17 GOALS TO TRANSFORM OUR WORLD

Specific Materiality

Addressing SDG-stipulated goals in a concentrated manner, beginning from materiality (priority issues), is considered the most effective approach for achieving results when making optimal use of finite management resources.

To this end, we are taking stock of and reaffirming the Group's business and CSR activities, clarifying the issues to be

addressed, and specifying which of the 17 SDG goals are most relevant for the Group. From this year, inhouse initiatives will launch in line with our roadmap, as we make the materiality (priority issues) specified an active part of future business activities.

Roadmap

All issues relevant to a company's sustainable development are identified based on international guidelines, information from stakeholders and the Company's business content. These are ranked in terms of priority following inhouse discussions, with specified priorities announced in the 2019 CSR Report.

STEP 1 | Specify Issues

Collect and identify candidate materiality

STEP 2 | Assign Priority

Perform priority rating from Company and societal perspectives

STEP 3 | Confirm Validity

Confirm validity, namely if Group priority issues are comprehensive, with the CSR Committee as the deciding body

STEP 4 | Review

List in next fiscal year's CSR Report and review annually

Environmental Management

The Sumitomo Osaka Cement Group was among the first to enact environmental measures focused on restricting the emission of dust, particulate matter, nitrogen oxides, sulfur oxides and other substances. Today, the Group is aggressively tackling global-scale environmental issues such as global warming and the restriction of fluorocarbon emissions. With zero emissions as a fundamental approach in mind, the Group is promoting the recycling of all forms of industrial waste and other materials as a business, while equally focusing attention on environmental preservation activities.

Environmental Policy

Basic Philosophy

Striving for harmony between the natural environment and its business activities, the Sumitomo Osaka Cement Group is contributing to the creation of a prosperous society and environmental preservation through the pursuit of production, power generation and logistics defined by minimal environmental impact.

Action Policy

- Leverage the environmental management system and Eco Action 21 to enhance risk reduction and environmental preservation levels, along with steps toward continuous improvement in environmental performance.
- In addition to legal and regulatory conformance, promote further voluntarily efforts to improve environmental level.
- Systematically promote energy conservation from the standpoint of helping prevent global warming.
- Strive to realize a zero-emissions society, collaborating on industrial recycling while acting to reduce the amount of such waste produced.

Environmental management system

Promotion framework

To promote environmental preservation, the Company has adopted an environmental preservation promotion framework headed by the president, with the director for the environment responsible for supervising the Environment Division.

As sub-units, the Company has set up Environmental Preservation Committees at each business site to implement various measures targeting pollution prevention and environmental preservation.

Internal environmental audits

The Internal Audit Department conducts internal environmental audits regarding the implementation status of environmental preservation as defined in the environmental preservation management regulations ^(see note), and reports its findings in order to sustain and improve the Company's environmental level.

(Note) Environmental preservation management regulations: These in-house regulations define management organizations for companywide environmental preservation, contact systems and other items for the purpose of preventing pollution and taking steps to put environmental measures in place. Environmental Preservation Committees based on these regulations are established at every plant, business office and branch to promote environment preservation activities.

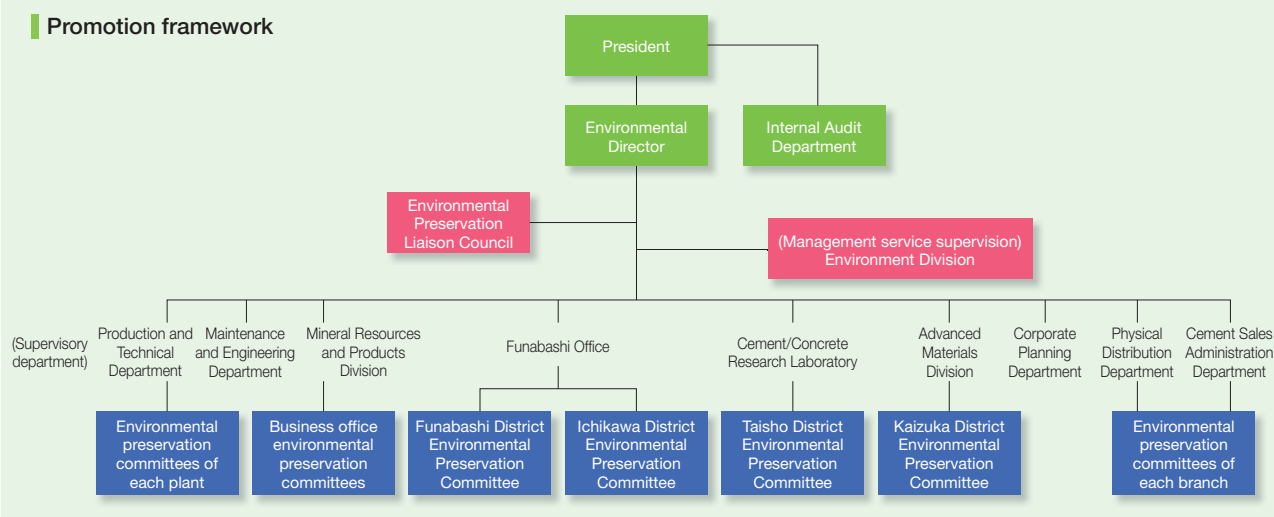
Status of environmental management system certification

The Company has acquired certification for all cement plants, the Optoelectronics Business Division, the Advanced Materials Division, and affiliates Hachinohe Cement Co., Ltd. and Sumitec Co., Ltd. Affiliate Wakayama Slag Cement Co., Ltd., meanwhile, has acquired Eco Action 21 certification.

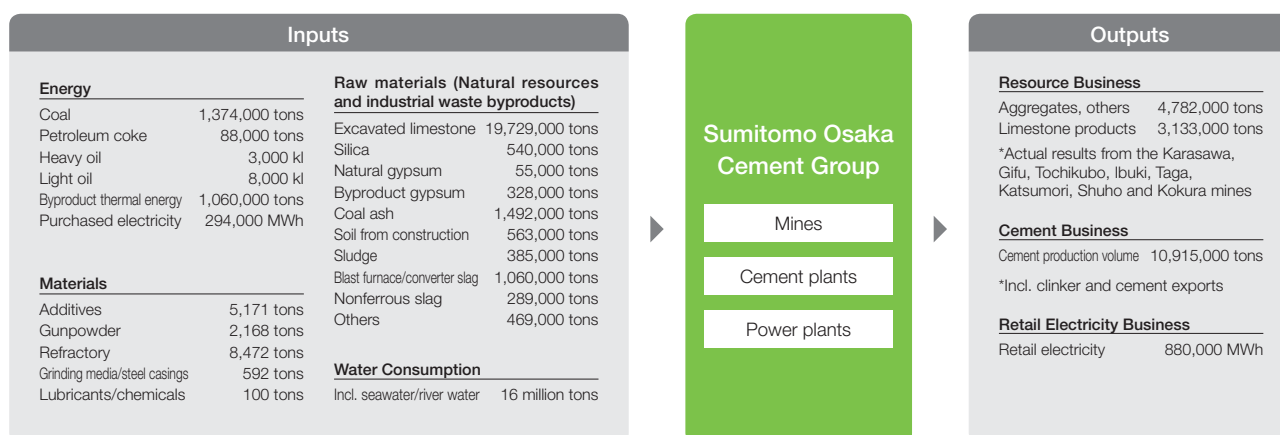
Environmental Education

Beginning with plants and business sites, where environmental risk is considered to be greatest, the Environment Division, acting as instructor, conducts environmental education that also targets relevant departments outside of cement plants.

Promotion framework



Material Balance/Energy Balance (Scope: Mines, Cement plants, Power plants)



Environmental Accounting for the Year Ended March 31, 2018

(Scope: Cement plants, Ready-mixed concrete manufacturing companies, Mineral Resources Business, Cement-Related Products Business, High-Performance Product Businesses, Research Laboratories)

Environmental Preservation Costs

(Millions of yen)

Type	Content and Outcomes of Principal Initiatives	Investments	Expenses	Subtotal
Business area costs		3,344	1,604	4,948
Pollution prevention	Maintenance, management and new installation of environmental contamination prevention equipment	1,841	93	1,934
Global environment preservation	Global warming prevention and energy conservation	784	9	792
Resource recycling	Industrial waste reduction and recycling	719	1,502	2,221
Upstream/downstream costs	Additional costs for providing environmental friendly articles	0	3	3
Environmental management activity costs	Environmental impact surveillance, environmental management system maintenance/upgrade	5	121	126
R&D costs	R&D costs for environmental preservation products, etc.	47	91	138
Social activity costs	Costs for nature protection, greening, beautification and scenery preservation/improvement	0	14	14
Environmental damage response costs	Nature restoration costs and contamination impact fees, etc., at business sites	0	90	90
Other costs	Other environmental preservation-related costs	0	50	50
Total		3,395	1,973	5,368

Identification of environmental preservation costs began from April 1, 2000.

Actual results for the year ended March 31, 2018 identified in line with the Ministry of the Environment (Japan) *Environmental Accounting Guidelines* (2005 ed.).

Data on Principal Environmental Impacts Accompanying Business Activities

(Scope: Cement plants, Power plants)

Outcomes	Environmental Impact Indices	Emissions	
		year ended March 31, 2017	year ended March 31, 2018
Air pollution	NOx	10,214 tons	14,040 tons
	SOx	1,572 tons	1,525 tons
	Particulate matter	197 tons	164 tons
Greenhouse gas emissions	CO ₂ from energy	2,752,000 tons	2,871,000 tons
Natural resource depletion prevention	Mineral resource usage basic unit	1,371kg/ton	1,137kg/ton
	Fossil energy usage basic unit	98kg/ton	99kg/ton
	Industrial waste recycling	3,270,000 tons	3,455,000 tons

Global Warming Prevention

The cement industry, which consumes energy in various ways, is taking action to help prevent global warming by reducing CO₂ emissions.

For its part, the Sumitomo Osaka Cement Group, in addition to strides in controlling its use of thermal and electrical energy, is expanding its use of wood scraps and other biomass energy, industrial waste and byproducts, such as waste plastics and similar thermal energy alternatives. The Group is also making progress in reducing its use of fossil energy.

Results from Initiatives

Principally, energy consumption related to cement manufacturing was 33.1 PJ (petajoules), an increase of 5% year on year, reflecting growth in production volume. This outcome came despite steps taken to conserve energy by boosting energy efficiency in the burning process inside cement manufacturing equipment. Efforts will continue to reduce this energy usage.

Thermal and Biomass Power Generation at Cement Plants

The Sumitomo Osaka Cement Group has adopted waste heat power generation equipment to reuse high-temperature gases emitted during the cement production process at four plants; it has also introduced thermal power generation equipment at its Tochigi, Ako and Kochi plants. The power generation equipment at the Tochigi Plant is a biomass power-generating system that uses woodchips and other biomasses as its main fuel source. At the Ako and Kochi plants, biomass energy is actively utilized as a supplemental energy to coal. These three plants have achieved a power self-sufficiency rate of 100%, with surplus power supplied to outside users.

Hachinohe Biomass Power Generation Co., Ltd., Start of Commercial Operations

Established through a joint venture with Sumitomo Forestry Co., Ltd. and East Japan Railway Company, Hachinohe Biomass Power Generation Co., Ltd. began commercial operation of its power generation facilities in April 2018. The company's annual energy output is estimated to meet the yearly electric power consumption of roughly 27,000 homes.

By using cleared trees and brush from around Aomori Prefecture and wood from forests adjacent to railways in the area, the object is to generate environmentally friendly energy. Furthermore, the company has established a resource recycling system whereby incinerator ash from the biomass power generation equipment is used as a raw material for cement manufacturing by Hachinohe Cement Co., Ltd. In this way, the new company will become a key base for clean energy creation in the community.



Hachinohe Biomass Power Generation Co., Ltd.
(Hachinohe City, Aomori Prefecture, Japan)

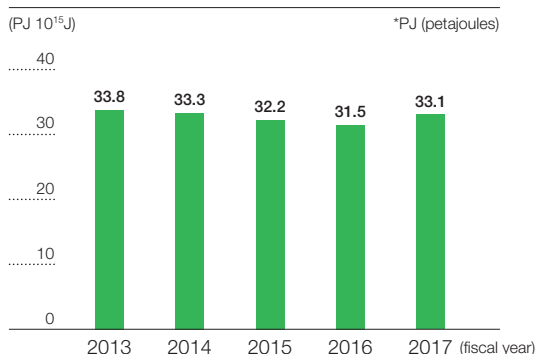
Status of Adoption of High-Efficiency Clinker Coolers

In Japan's cement industry, companies are taking steps to reduce their basic energy units by the target years ending March 31, 2021 and 2031. One component of the related action plan is to increase the adoption rate of high-efficiency clinker coolers* and other energy-saving equipment.

At present, the Sumitomo Osaka Cement Group has adopted more efficient clinker coolers in six of its eight kilns. In addition to lowering the basic energy unit from burning, the reduced volume of chilled air has also cut energy consumption by fans. Similar measures are scheduled for adoption at the remaining kilns.

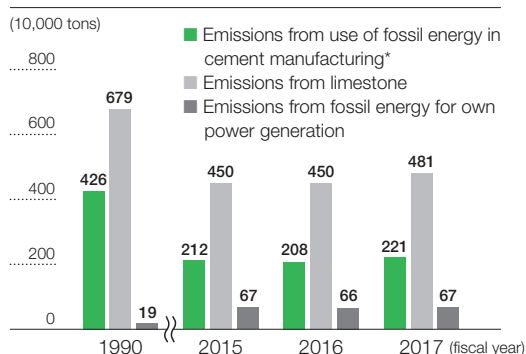
*Clinker coolers are rapid cooling systems that use cooling fans to supply chilled air to cool down high-temperature clinker burnt in cement kilns. AQC (air quenching cooler)

Total Energy Consumption Related to Cement Manufacturing



*Electrical energy evaluation method was changed from April 1, 2013. (Primary energy conversion figures changed from a power sending end to a power receiving end basis)

CO₂ Emissions from Cement Manufacturing



*Emissions from use of fossil energy in cement manufacturing include emissions from purchased electric power.

Resource Recycling

At the Sumitomo Osaka Cement Group, we continuously process a large volume of industrial waste, used as both raw material and thermal energy for our cement manufacturing processes. Through high-temperature burning at 1,450 degrees Celsius, dioxins and other hazardous substances are rendered harmless. Because industrial waste and byproducts processed this way are all repurposed as cement products no residual waste, making final processing at landfill unnecessary.

Social Role of Cement Recycling

Japan's cement plants collectively recycle approximately 30 million tons of waste and byproducts annually. Because cement manufacturing uses a substantial amount of energy, high CO₂ emissions from energy use have been a hallmark of the industry. Today, however, CO₂ emissions from fossil energy are declining, as large volumes of waste and byproducts replace the use of fossil energy.

Various Waste and Byproducts Used in the Cement Manufacturing Process

In addition to coal ash from thermal power plants and similar waste and byproducts from other industries, cement companies receive the same from sources close to daily life across the social spectrum, ranging from earth and wood scraps from construction, to sewage sludge, waste tires and waste plastic.

Resources That Become Auxiliary Materials for Cement

Waste White Clay

Activated white clay is used to remove colors from cooking and detergent oils. While waste white clay is difficult to dispose of after use, Sumitomo Osaka Cement utilizes it not only as effective thermal energy, but the inorganic portion that remains after incineration is also used as an alternative for clay, another needed raw material.

Dehydrated Organic Sludge

Dehydrated organic sludge from sewage sludge, food residue and other sources are used as cement raw materials and thermal energy.

Waste Plastic, Woodchips, Waste Oil, Others

Waste plastic, ASR (automotive shredder residue), woodchips, waste tires, waste and recycled oil and others are used as thermal energy sources, thereby reducing fossil energy consumption.

Coal Ash

Thermal power plants produce large amounts of coal ash, which is effectively used as a raw material for cement. With power companies and private-sector firms

operating more thermal power generation businesses across Japan, the amount of coal ash we use will rise as well.

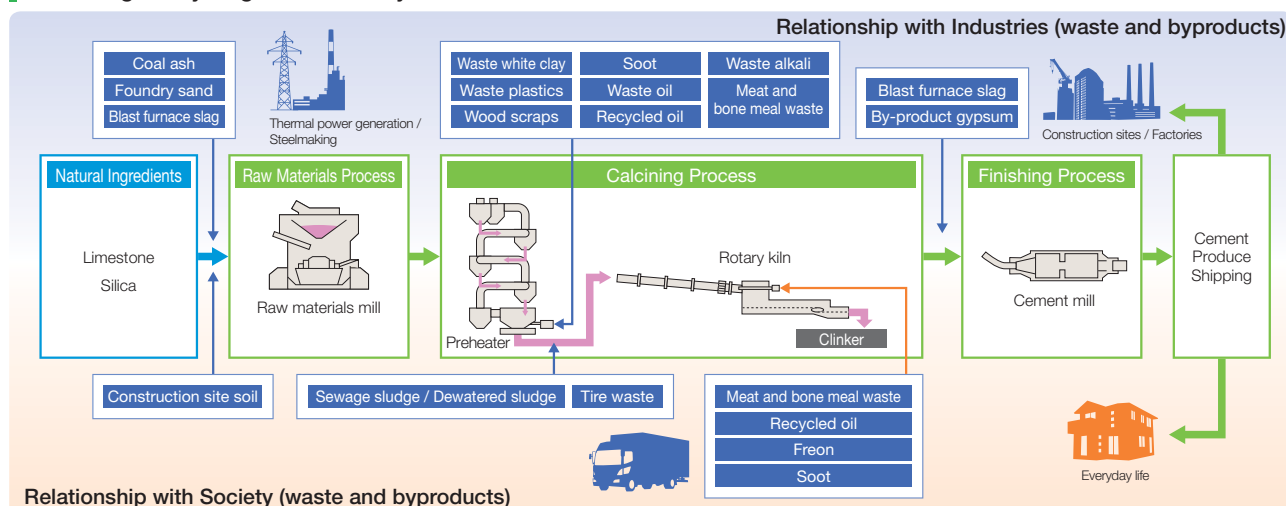
Waste Soil from Construction and Contaminated Soil

The massive volume of earth generated from construction projects is also reused as a cement raw material. Similarly, for contaminated soil in areas requiring remediation mechanisms under Japan's Soil Contamination Countermeasures Act, Sumitomo Osaka Cement and affiliates are acquiring approval for soil remediation businesses and working actively to receive such material.



ASR inserting equipment in Ako Plant

Promoting a recycling-based society



Status of Waste and Byproduct Use

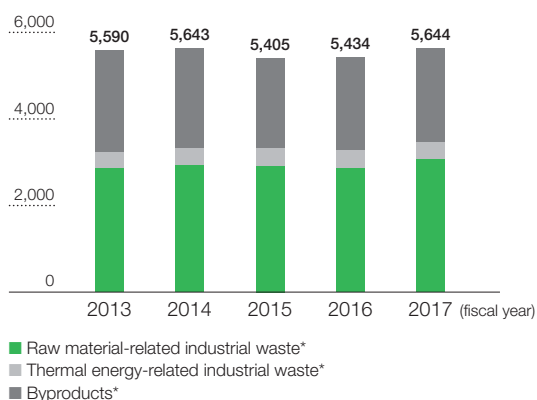
In line with an increase in cement production volume in the year ended March 31, 2018, the Company's use of waste and byproducts rose roughly 4% over the previous fiscal year to 5,640,000 tons.

(1,000 tons)

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Raw material-related industrial waste*		2,858	2,930	2,913	2,858	3,056
Thermal energy-related industrial waste*		371	383	394	412	399
Byproducts*		2,361	2,330	2,098	2,164	2,189
Subtotal		5,590	5,643	5,405	5,434	5,644
Cement production volume		10,815	10,837	10,470	10,519	10,915
Basic unit (kg/ton-cement)	Raw material-related	264	270	278	272	280
	Thermal energy-related	34	35	38	39	37
	Byproducts	218	215	200	206	201
Total (kg/ton-cement)		516	521	516	517	517

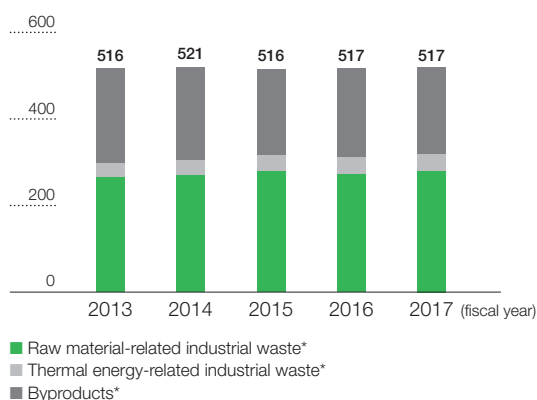
Waste and Byproduct Usage

(1,000 tons)



Basic Unit of Waste and Byproduct per Ton of Cement

(kg/ton)



*Raw material industrial waste: waste soil from construction work, sludge (water, sewage, construction), burnt husks and dust, sludge, rubble, waste acid, waste alkali, slag, others

*Thermal energy industrial waste: waste plastics, waste clay, waste oil, waste tires, wood scraps, others

*Byproducts: Incinerator slag, coal ash, byproduct gypsum, wood chips (including those for retail power generation), others

Key Points When Using Waste and Byproducts as Raw Materials or Thermal Energy for Cement

When using waste or byproducts, we perform rigorous quality control that includes checking the results of chemical composition and elution tests, sorting and choosing only materials posing no risk to the surrounding environment, health, cement quality or manufacturing processes, and determining the precise volume of material to be used.

As a result, while usage volume is increasing each year, we have had no problems in terms of quality control.

Trace Components Found in a Normal Cement Sample

(Unit: mg/kg)

	FY2013	FY2014	FY2015	FY2016	FY2017
Lead	38	39	51	49	45
Cadmium	5	5	4	4	4
All chrome	69	68	67	74	71
Hexavalent chrome	7.3	7.6	7.3	7.0	7.9

Recycling Topics

Receiving Disaster Waste at Cement Plants

Sumitomo Osaka Cement Group cement plants are receiving sites for disaster waste, a point that is contributing to community recovery and revitalization. Until 2014, the Tochigi Plant and Hachinohe Cement Co., Ltd. received and recycled debris and other waste from the Great East Japan Earthquake disaster, as well as waste from within and outside of Aomori Prefecture.

In 2015, the Tochigi Plant received disaster waste (rice and tatami mat) from Joso City in Ibaraki Prefecture after torrential rains in Japan's Kanto and Tohoku regions destroyed the Kinugawa River bank. In 2016 and 2017, wood scrap from homes destroyed in the Kumamoto Earthquake was received by the Kochi Plant in support of restoration efforts.

Cement manufactured from recycled disaster waste is shipped across Japan, including to the disaster-hit areas, for use in local revitalization work, as well as in the development of banks and other infrastructure to prevent or mitigate natural disasters. Sumitomo Osaka Cement will leverage its technical expertise honed in past disaster waste treatment to contribute to restoration and revitalization, and to stably supply cement to improve national resilience.



Disaster Waste

Installation of New Warehouse in Hachinohe City in Aomori Prefecture



Hachinohe Port Waste Warehouse of Hachinohe Cement Co., Ltd.

In 2017, Hachinohe Cement Co., Ltd. built a new warehouse at the Hachinohe Port, opting to install both a waste storeroom and equipment for sorting out foreign objects, in a move to strengthen its capacity to receive incinerator ash from ordinary waste primarily from Japan's Kanto region. Until recently, incinerator ash from ordinary waste was used following shipment via freight train and other means from the Kanto area to Aomori Prefecture. By improving the ability to sort out and eliminate foreign objects, the new warehouse has enabled both stability and the use of even more waste material.

Along with raw material and thermal energy alternatives, the Sumitomo Osaka Cement Group is committed to improving its reception rate for hard-to-treat exterior wall materials, as well as ordinary incinerator ash, ASR (automotive shredder residue) and other waste as it makes strides in recycling waste more efficiently into resources.

Reducing Environmental Impact

The Sumitomo Osaka Cement Group identifies and analyzes emissions into the atmosphere and water and waste emitted from cement production processes, steps vital to devising more effective measures to reduce environmental impact and conserve energy. Additionally, we are making progress in reducing our environmental impact by developing a variety of applicable technologies and actively utilizing waste and byproducts.

Status of Environmental Impact Reduction

In the year ended March 31, 2018, Sumitomo Osaka Cement Group cement plants produced 10,920,000 tons of cement and sold roughly 880,000 MWh of retail electrical power. The raw materials and thermal energy for these purposes totaled 17,500,000 tons. We used 5,640,000 tons of waste and byproducts from thermal power plants, other industries and local governments, thereby reducing the environmental impact tied to use of natural resources.

Preventing Water Contamination

Wastewater from the Group is principally in the form of rainwater or chilled water, and thus is not considered contaminated water subject to Japan's Water Pollution Prevention Act. Furthermore, we have dikes installed around oil tanks and similar structures to prevent oil leaks. In cases in which wastewater from a plant is released into the water, we have deposition vats and oil-water separator vats installed in commitment to preventing any water contamination.

In terms of water for use, we collect groundwater, seawater and river water, taking only the amount necessary as part of our environmental responsibility to the local community. The power plant at the Kochi Plant, in its utilization of water resources, recycles the cold water it takes and uses from the sea.

Preventing Air Pollution

As part of pollution reduction measures, the Group uses dust collectors and denitrification equipment to minimize NOx, SOx, particulate matter and other air pollutants contained in gases emitted when manufacturing cement. Because of high temperatures used, often topping roughly 1,450 degrees Celsius, cement manufacturing equipment is known for having very low concentrations of dioxins and other hazardous substances in emitted gases. While the operational scope of this equipment varies year to year, emission levels remain well below legally mandated emissions standards.

Treatment of Polychlorobiphenyl (PCB) Waste

The Group properly manages PCB waste in conformance with Japan's Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes. Furthermore, we are moving forward with the planned treatment of such waste ahead of the legally prescribed deadline.

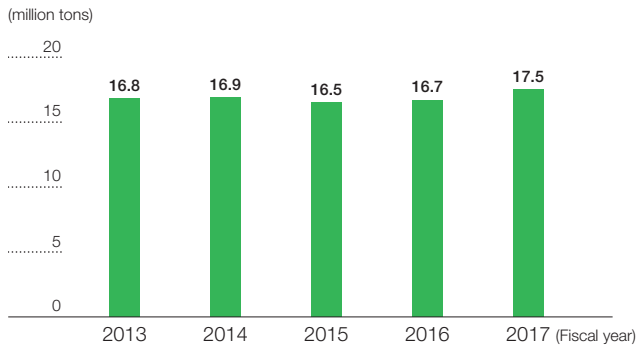
Reducing Environmental Impact at Offices

At our Head Office (Chiyoda Ward, Tokyo), employee consciousness around energy conservation since the Great East Japan Earthquake struck has improved even further, with everyone joining forces with the building management company to conserve power and water, leading to lower CO2 emissions. We are switching over office light fixtures to LED, with light levels adjusted depending on lighting needs; the habit of turning lights off frequently, meanwhile, is now well established among employees. In addition, the building manager cleans air conditioner filters and fins, and, from the control room, can adjust temperature settings on each floor based on usage.

Following a paper-based assessment and an onsite verification and assessment by the City of Tokyo, our Head Office building was put forward as a low-carbon model building with low CO2 emissions (announced in the year ended March 31, 2014). Sumitomo Osaka Cement, in cooperation with the building manager, has won strong praise for the vigorous energy conservation measures it has since taken. In the Low Carbon Benchmark, an index consisting of seven ranked categories for CO2 emissions performance, our building has the rank of A4, denoting best performance.



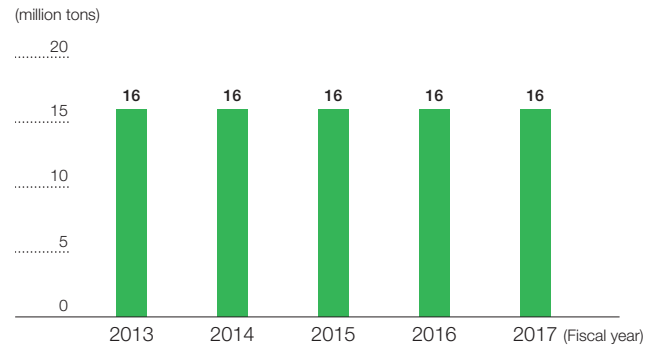
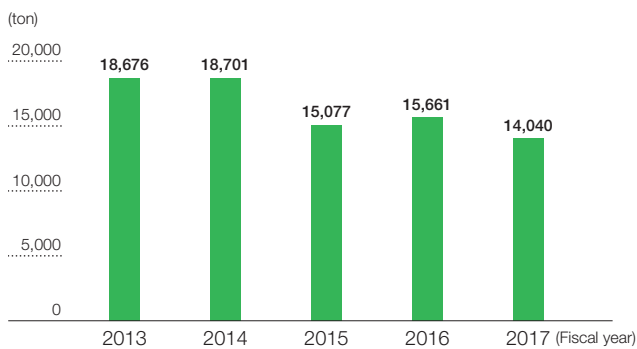
Head Office

Total Raw Material and Thermal Energy Inputs (Cement plants)

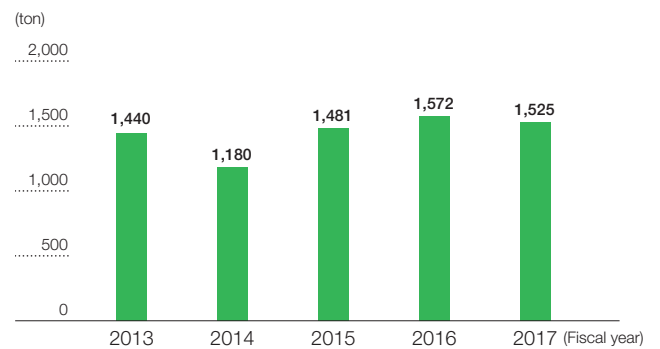
Raw materials: limestone, clay, silica, steel raw materials, gypsum, others
Thermal energy: coal, coal coke, heavy oil, others

Water Usage

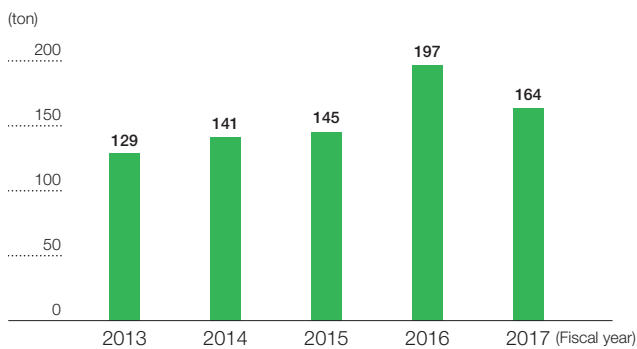
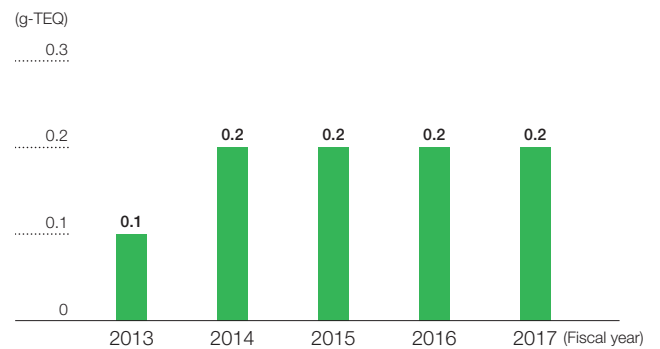
(Cement plants, Ready-mixed concrete manufacturing companies, Mineral Resources Business, Cement-Related Products Business, High-Performance Product Businesses, Research Laboratories)

**NOx* Emissions** (Cement plants)

*NOx: This refers to nitrogen oxides, which are gaseous compounds emitted from sources such as automobile exhaust and factory equipment that contribute to air pollution and photochemical smog. In Japan, emissions standards for NOx are defined under the Air Pollution Control Act based on the scale and type of the equipment.
*Past-year conversion figures have been revised in line with the Ministry of the Environment's "Environmental Reporting Guidelines."

SOx* Emissions (Cement plants)

*SOx: This refers to sulfur oxides, gaseous compounds that come from burning petroleum and other sulfur-rich substances. SOx is emitted from automobile exhaust and factory equipment and is a contributor to acid rain and other air pollution. As with NOx, emissions standards are set by law.

Particulate Matter Emissions (Cement plants)**Dioxin* Emissions** (Cement plants)

*Dioxins: A type of chlorinated organic compound, dioxins are defined as the collective class of substances that include PCDD, PCDF and coplanar PCB. PCDD, an impurity found in defoliant agents (2,4,5-T) used in the Vietnam War, and in pentachlorophenol, used as an herbicide and preservative, is now recognized as a particularly problematic substance.

Biodiversity

Given their use of limestone, coal and other natural resources in operations, the Sumitomo Osaka Cement Group's Cement-related Businesses by their very nature could potentially impact directly or indirectly the surrounding ecosystem. We believe that paying close attention to the environment and preserving biodiversity are essential and indispensable to sustaining our ability to operate as an enterprise.

The environmental philosophy of the Group is summarized as follows: "The Sumitomo Osaka Cement Group aims to contribute to the preservation of the global environment and create abundance in society by pursuing environmentally friendly manufacturing, power generating and distribution operations in order to maintain harmony between the environment and corporate activities." Based on this philosophy, we conduct reforestation programs around mines and production plants and develop marine products to assist ocean environment recovery among our actions for proactively contributing to the protection of biodiversity.

Regreening of Mining Sites

In 1971, we began operations designed to regreen our extraction site at the Ibuki Mine, located in Maibara City, Shiga Prefecture. This move is widely considered a pioneering example in Japan of a company taking the initiative to bring greenery back to a domestic mine.

In 1972, Sumitomo Osaka Cement signed a cooperative agreement for environmental protection with Shiga Prefecture with specific reference to mine regreening. The subsequent method for transplanting flora and fauna we established in cooperation with the Gifu University Agriculture Sciences Department is now called "the Ibuki Method." Today, 40 years have passed since we began regreening, and the location where we initially planted saplings is now home to full-grown trees. At others mines in Japan, we are using the same method in our ongoing efforts to regreen extraction and collection sites.



Ibuki Mine (Maibara City, Shiga Prefecture, Japan)



Akiyoshi Mine (Mine City, Yamaguchi Prefecture, Japan)

Corporate Forest Creation Initiatives

At the Tochigi and Kochi plants, Sumitomo Osaka Cement is contributing to forest protection through participation in corporate forest creation activities promoted by local governments.

In August 2013, the Tochigi Plant signed a forest creation agreement with Sano City. The area designated for targeted activity was named "the Team Tochigi Forest." The name symbolizes the coming together of companies, government and local citizens to promote creation of a healthy forest in Tochigi Prefecture.

At the Kochi Plant, Susaki City, where the plant is located, has defined what it dubs a "symbol forest," with wood and brush cut and cleared from the forest used for biomass energy at the plant's power generation facility. Doing so assists in forest revitalization, while also encouraging interaction with the community through the brush clearing and other experiences.



Team Tochigi Forest (Sano City, Tochigi Prefecture, Japan)



Cooperation Forest (Susaki city Kochi Prefecture, Japan)

Contributions through Business

Expansion of marine products business

In recent years, the phenomenon of sea desertification, where seaweed disappears due to the effects of global warming and other causes, has become a major environmental issue along Japan's coasts. Because of that, measures to prevent the ocean's environment is drawing attention. Sumitomo Osaka Cement is working with its subsidiary SNC Co., Ltd. to establish a marine products business mainly in Nagasaki Prefecture in an effort to preserve the ocean's environment.

Multifunctional Seaweed Cultivation Artificial Marine Reef – *K-hat Reef Beta*

K-hat Reef Beta is a multifunctional seaweed cultivation artificial marine reef that utilizes an attachable and detachable seaweed cultivation plate developed from the Company's proprietary technology. The reef functions as a “core seaweed bed,” where seaweed grown inside the reef supplies the seeds for more plants. By reviving seaweed beds, this product is also proving to be a revolutionary one for marine public works projects.



Seaweed raised inside the *K-hat Reef Beta* multifunctional seaweed cultivation artificial marine reef (submerged roughly two years)

Hybrid Artificial Marine Reef Super SK1300S

Hybrid Artificial Marine Reef Super SK1300S is a 20-meter-tall, large-scale artificial marine reef that helps prevent overfishing while multiplying marine resources. Employing a creative structure based on fish ecosystem research, this product has the leading fish-luring capability in the industry.



Hybrid Artificial Marine Reef Super SK1300S

Development of *Ebikuru House* – An Optimal Habitat for Secure Growth of Immature Lobsters

For roughly the first year of life, immature spiny lobsters have flat, translucent bodies (called phyllosoma) as they float around the Pacific Ocean. For approximately another year after their immature bodies transform into puerulus (common name: glass lobster), they live regularly in holes. During this time, spiny lobsters grow between two to 10 centimeters, and seek out holes to inhabit that perfectly fit their body size.



Ebikuru House

Jointly developed with the Japan Fisheries Research and Education Agency, *Ebikuru House* is a specialized plate for spiny lobster farming with optimal hiding spaces (best-size holes) for puerulus and immature lobsters. This product is effective when installed amid seaweed or kelp beds. Immature spiny lobsters have been confirmed living in the product when used as part of an artificial reef for lobsters, as seen in the photo.



Example of an artificial reef for lobsters using *Ebikuru House*



Immature spiny lobster confirmed living in *Ebikuru House*

Tsushima Leopard Cat Protection Activities

As part of its social contribution activities, Sumitomo Osaka Cement is hard at work reviving the natural environment to protect the Tsushima Leopard Cat.

In the Shushi District of Tsushima City (Nagasaki Prefecture), Sumitomo Osaka Cement owns a forest (approximately 16 hectares) designated for the extraction of clay, a cement raw material. With the cement industry aggressively promoting the recycling of industrial waste, recycled alternatives have emerged to replace natural clay in cement manufacturing. Consequently, the Company never extracted any clay from the forest, which was left idle. This forest, as it turns out, is the habitat of one of Japan's most endangered species, the Tsushima Leopard Cat. In 2007, Sumitomo Osaka Cement began protecting the natural environment of this forest in the Shushi District, and started taking part in collaborative protection programs.

In cooperation with local Tsushima residents, we have grown the forest substantially, clearing away brush and planting deciduous trees, which drop acorns eaten by field mice and other small creatures that are prey for the Leopard Cat. In these ways, we are promoting protection by preparing an environment from the ecosystem up that the Tsushima Leopard Cat will find welcoming.





Nature Watching Event

On June 2, 2018, Japan's Ministry of the Environment sponsored a well-attended nature watching event at the Shushi Forest that included members of the Tsushima Leopard Cat Cheerleading Squad, local elementary school pupils and parents, and many others. Guided by the staff ("Active Rangers") of the Tsushima Wildlife Conservation Center, the half-day event saw participants spread out across the Shushi Forest and wetland areas to observe nature and ecosystems. In the forest, participants encountered an abundance of vegetation, including green penny fern and mulberries, as well as bees, butterflies and other insects. In the wetland areas, participants spotted creatures that included mole crickets, young dragonflies and the Tsushima Red Frog, as well as deer tracks, providing a visceral sense of the biodiversity of Tsushima as home to a variety of flora and fauna. Tsushima Leopard Cat droppings were also discovered during the event, providing observers with confirmation of the cat's existence.



Shushi Forest Biodiversity



Making a Welcoming Environment for the Tsushima Leopard Cat

The Tsushima Leopard Cat is an extremely wary animal, so much so that few locals have ever actually seen it. For this reason, Sumitomo Osaka Cement launched activities to prepare an ecosystem for the cat, which includes boosting the population of its favorite prey, field mice, and other small animals. In 2007, we planted deciduous trees, which have since grown into a magnificent acorn-bearing forest. Until the trees reached their current height, the saplings were covered to prevent them being eaten by deer and other creatures; we also surrounded the area with netting to protect it from deer encroachment. After many years of work, it is now clear that the deer netting was effective in preparing the proper ecosystem. In areas with no netting, the deer ate low-lying vegetation, leaving behind to thrive only plants they dislike. In contrast, the forest where netting was in place is now rich in low-lying vegetation, creating an environment that also allows small creatures to hide from predators and grow. We plan to continue activities for making the Shushi Forest, with its growing population of prey, hospitable for the Leopard Cat.



Forest with deer netting (abundant growth of low-lying vegetation)



Forest without deer netting (largely eaten by deer; only vegetation deer dislike remains)



Acorn flowers



Acorns on a planted tree

Together with Employees

The Sumitomo Osaka Cement Group strives to create comfortable work environments that are safe, healthy and where it is easy to work to enable employees to perform their jobs with peace of mind. Furthermore, we aim to create organizations and worksites that remain great places to work for every employee for years to come, training human resources capable of utilizing their talents and aptitude to contribute to society as we look to build a more dynamic world.

Diversity

Promoting the Advancement of Women

As the Japanese government publicly promotes the advancement of women as part of its long-term strategy, Sumitomo Osaka Cement is backing its own sustainable development for the future by promoting initiatives that broaden spaces where women can thrive. In addition to promoting more vigorous recruitment of women than ever before, in line with a lot of measures for creating workplace environments more welcoming to women, we are putting a full range of related systems in place that allow employees to continue to work with peace of mind.

In April 2015, we installed new systems for leaves of absence and reemployment of female employees (manager-level, working nationwide) who must move to live with a spouse due to marriage or spousal job transfer.

In April 2016, we established a Diversity Group within the Human Resources Dept., with the aim of being a company women and other diverse human resources find an exciting place to work.

- (1) Make women 20% of all new general-career-track hires.
- (2) Double the number of female managers by March 31, 2021, compared to numbers registered as of March 31, 2016.

(For more information, go to <http://www.soc.co.jp/saiyou/joseikatsuyaku.html>)
(Japanese only)

Together with steps to expand opportunities for women to flourish, we are enacting training programs designed to raise awareness among employees of the rationale for diversity promotion and the status of related initiatives by the Company.

Sumitomo Osaka Cement is committed to backing efforts to help employees thrive even more, as we leverage the talents and aptitude of every employee and strive to create organizations and workplaces where it is exciting to work for years to come.

Senior Citizen Employment System

Where employing senior citizens is concerned, Sumitomo Osaka Cement views mandatory retirees as invaluable human resources possessing knowledge, technical skills and experience. Accordingly, the Company has adopted a reemployment system for passing on technological capabilities to young generations of employees. Reemployment is available to all retirees who apply and is renewable through age 65.

Employment of Persons with Disabilities

Sumitomo Osaka Cement is a proactive employer of people with disabilities. As a measure to normalize this trend within the Group, we ask detailed questions about needed accommodations during the hiring interview, then prepare the workplace environment accordingly. In this way, we give ample attention to creating work environments where employees with disabilities can shine to the greatest extent possible. We will pour energy into awareness-raising activities more than ever before to continue to encourage understanding of our policies inhouse, as we promote greater employment of people with disabilities.

Respect for Human Rights

Sumitomo Osaka Cement drafted regulations for preventing sexual harassment and the harassment of women who are on leave due to pregnancy, childbirth or childcare duties, as the Company strives to prevent any direct or indirect violation of human rights. In the year ended March 31, 2018, we conducted human rights training by occupational class for Company employees; training to prevent sexual and maternity harassment was also held at some worksites. In another move, we established a sexual and maternity harassment consultation portal, as we work hard to create positive workplaces with advice-giving frameworks in place.

Work Life Balance

Supporting Working Employees with Child and Family Care Needs

With fewer births and societal aging gaining momentum in Japan, Sumitomo Osaka Cement has established leave systems based on the Child Care and Family Care Leave Act to allow employees to work with peace of mind while balancing child and family care responsibilities. In 2008, the Company acquired the “Kurumin” mark certifying support for raising the next generation of people, in recognition of its initiatives supporting employee balancing of work and childcare needs.

In 2017, we assembled “The Balance Support Guidebook,” bringing together the Company’s relevant regulations and systems regarding support for balancing work life with child and family care needs. The guidebook is part of our drive to encourage understanding of the Company’s systems supporting work-life balance for employees, as we move forward in creating work environments with highly accessible support and systems for employees striving for balance.

In April 2018, Sumitomo Osaka Cement formulated a

General Business Owner Action Plan (the Company's fourth such action plan) pursuant to Japan's Act on Advancement of Measures to Support Raising Next-Generation Children. With this step, Sumitomo Osaka Cement has taken its creation of work environments that allow highly motivated employees to continue working, while balancing work and life for men and women alike, a step further.

Promoting Easy to Work Workplaces Built on Labor-Management Cooperation

Leveraging both a relationship of trust grown over many years and mutual understanding, Sumitomo Osaka Cement and the Sumitomo Osaka Cement Labor Union work together to solve a variety of issues. At the "Labor-Management Meeting," which brings labor and management leaders together twice yearly, labor and management share their views of the management environment and business circumstances facing the Company, building a platform for business development and determining social contribution through a labor-management partnership. As part of a push to reduce overall working hours, from April 1, 2009, labor and management have joined forces in programs calling for everyone, without exception, to return home on designated "No Overtime Days" decided by each workplace.



The "No Overtime Day" patrol is an example of labor-management cooperation

Human Resource Development

Boosting Employee Skill Levels through Education and Training Programs

Sumitomo Osaka Cement positions human resource training as one of the most important initiatives for its sustainable development. Through training by occupational class and other means, we emphasize boosting the skills to execute duties with a broad view from a medium- to long-term perspective as we take steps to develop our employees.

● Induction Training for New Employees

After joining, the Company conducts roughly two weeks of training for new hires, where they learn the mindset and knowledge necessary to work as a Sumitomo Osaka Cement employee. When touring production plants, new hires also take part in cleanup activities around the sites as community service.

● Three-Year Training Plan

To foster employees capable of considering a course of action, executing it and pursuing desired outcomes, Sumitomo Osaka Cement prepares an individualized "Three-Year Training Plan" for each new hire, enabling employee education to unfold in a more systematic fashion.

● Elective Practical Training for Young Employees

To arm young employees with the tools they need as early as possible, Sumitomo Osaka Cement has introduced an elective practical training program for employees in their first two to six years at the Company.

System Supporting Self-Taught Employees

Sumitomo Osaka Cement encourages those with a high degree of ambition to teach themselves. By using our system of scholarships for acquiring qualifications, correspondence courses and other means, many employees are devoting themselves to raising their own knowledge and awareness.

● Short-term Overseas Training System

As one avenue for developing human resources with a global perspective and able to take on internationalization, Sumitomo Osaka Cement collects applications for one-month overseas training programs, with employees sent to sites in Southeast Asia, China and India.

● Business English Training

At Sumitomo Osaka Cement, in advance of our global business development efforts, we have enacted inhouse language training in English to improve business English skills and support employee self-knowledge and awareness.

● Domestic Business School Enrollment System

Sumitomo Osaka Cement is sending employees to "Management Academy," a graduate school of business administration sponsored by the Japan Productivity Center. This academy is a business school for extensive management research through industry-academia collaboration and for training the human resources who will spearhead corporate transformation. The main thrust is to cultivate expert skills responsive to today's era of global competition.

Incentive Systems for Outstanding Development and Improvement

Sumitomo Osaka Cement has set up various commendation systems with the purpose of encouraging employees to tackle tough business goals, encourage consideration and improvement in duty performance, and establish a corporate culture that boosts morale and promotes facing challenges.

Safety Initiatives

The Sumitomo Osaka Cement Group is committed to creating safe, healthy and comfortable environments that employees find easy to work in so that all can perform their jobs with peace of mind.

Occupational Health and Safety Policy

The Company's policy concerning occupational health and safety is outlined below.

Train human resources who consistently prioritize safety in performance of their duties to create a corporate culture with an uncompromising commitment to safety

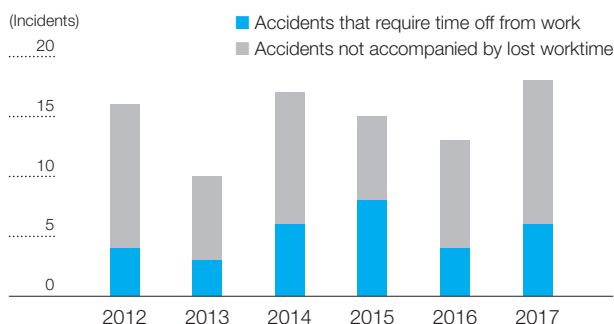
2018 Occupational Health and Safety/ Security Measure Promotion Plan

As a company with an uncompromising commitment to safety, Sumitomo Osaka Cement is targeting a goal of zero accidents. Reaffirming respect for human life, coupled with a fundamental philosophy of "safety first" and "enhancing health maintenance" in occupational health and safety activities, and backed by creation of a corporate culture with an uncompromising approach to safety, Sumitomo Osaka Cement is encouraging the formation of comfortable work environments, and instituting the points below in a bid to improve occupational health and safety standards and achieve smoother work execution, thereby contributing to enhanced productivity.

Enactment Priorities for 2018

1. Eliminate accidents
2. Extensive occupational health and safety education
3. Create an uncompromising climate for safety
4. Develop healthy, people-friendly worksites
5. Eliminate traffic accidents (accidents during commutes)
6. Organize labor accident data

Number of Accidents



Occupational Health, Safety and Security Measures Division Management System

Sumitomo Osaka Cement has established an Occupational Health, Safety and Security Measures Division covering the entire company. Through regular contact meetings centered on the division's secretariat and other actions, we are moving to further strengthen initiatives with respect to safety.

Safety Education

Sumitomo Osaka Cement is channeling energy into safety education at every level to embed a culture of safety within a greater corporate culture prioritizing worker health and safety.

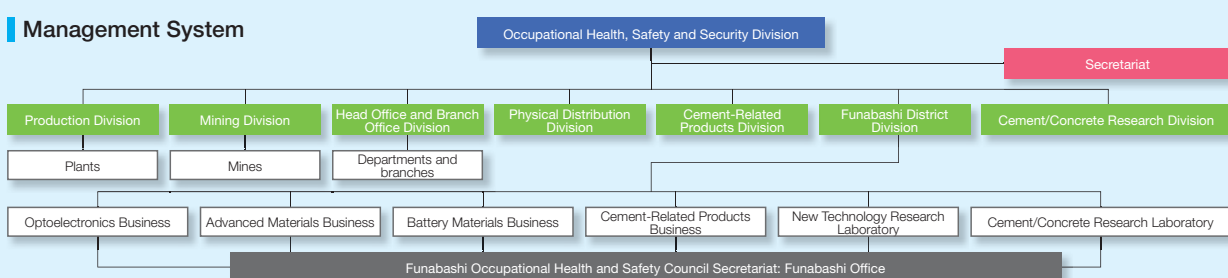
Principal Safety Education by the Occupational Health, Safety and Security Measures Division	- Business department-sponsored education - Safety education for younger employees - Managerial class education, safety education - Safety education for new hires - Safety education by occupational class
Principal Safety Education at Business Sites	- Safety keyperson training and education for partner companies - Work safety supervisor education - Foreman and team leader education - Hands-on safety education, external education
Outside Education	Foreman education

Health Management

To ensure employees are healthy as they work, Sumitomo Osaka Cement supports them in creating good health by, among other measures, assisting employees in getting the full range of regular health checkups, including health exams designated in collaboration with the health insurance association. In response to a jump in employees with mental health concerns in recent years, we now partner with specialist organizations to provide a system for expert consultation in every business area and promote options to make service utilization easier for employees.

The Company has also introduced a stress-check system as we seek to prevent mental health concerns before they occur. Through events such as lectures on occupational health by industrial health physicians and regular mental health seminars, we hope to deepen proper understanding of stress among our entire workforce, strengthening our support system for helping them build minds and bodies defined by health and vigor.

Management System



▶ Messages from Plant and Site Managers

Tochigi Plant



Ryoji Doi

General Manager, Tochigi Plant

The highest priority in plant operations should be ensuring safety. Without it, it is impossible to earn trust from customers, maintain product quality or improve on technological capabilities.

1. Occupational health and safety activity policy

At the Tochigi Plant, we work hard to eliminate accidents, having set "Working together to create a positive workplace of safety, peace of mind and zero accidents" as our 2018 occupational health and safety activity policy. The most important factor in continuing to have no accidents is a powerful will on behalf of every employee to "absolutely cause no accidents or be the cause of one." Another vital point is that managers, work supervisors and workers are all constantly thinking of ways to improve safety in their own spheres.

2. Adoption of Hands-on Safety Education

In the previous fiscal year, we installed hands-on safety education equipment and gave lessons to all Company employees and those of partner companies. By providing the opportunity to experience education and guidance in tandem, we hope to raise the safety consciousness of everyone involved.

3. Risk Assessment Implementation

We have also systematically implemented risk assessment at every workplace, identifying if unsafe conditions or actions are present and devising concrete

Occupational Health and Safety Measures

Experiential Learning through Hands-on Safety Equipment (Hands-on safety education for all Company and partner company employees)



countermeasures in order to improve work environments. In our drive to have positive and dynamic workplaces that are safe and secure, we will bring everyone on board for efforts to ensure safety.

Gifu Plant



Masayuki Kataoka

General Manager, Gifu Plant

Safety is the bedrock of plant operations and is an absolute responsibility that takes priority over anything else.

At the Gifu Plant in 2018, guided by the same safety slogan as last year of "I will cause no injury to myself or others," we started January entering what should have been a fourth consecutive year with no accidents, only to promptly have one occur. Did our long stretch with no accidents make us too complacent or conceited? Was there something that we missed? We decided to return to square one and, objectively facing everyone at the plant, added the following measures to our prior initiatives to stamp out accidents.

1. Implement Special Education for Outsiders Entering the Plant

Among those who enter the plant, we have mandated special educational training for workers arriving for the first time and those with relatively light work experience (less than two years). As a cohort, these newcomers join with the plant's safety supervisor to examine accident case studies. Only after more specific and practical hazard notification drills do these individuals then take on their assigned tasks.

2. Fully Equipped Hands-on Safety Room

To boost the effectiveness of the Hands-on Safety Room, used to raise the level of both safety awareness activities and danger foresight skills, we added items to the room's equipment and switched to a performance methodology that offers a more realistic sense of threat. We also made progress in increasing the number of staff who guide users through the experience, not only among our employees but among the safety supervision class at partner companies, as well.

Occupational Health and Safety Measures

Experiential Learning through Hands-on Safety Equipment (Guide certification for hands-on safety equipment)



3. Identifying and Improving Hazardous Work

We check extensively on a daily basis that no one is behaving illegally, like reaching for devices while driving, and push efforts to improve work procedures, including equipment improvements, in any cases discovered.

In terms of occupational health, we installed a completely separated smoking area at the plant during the last fiscal year and raised awareness about tobacco cessation. Along with putting a regular occupational health patrol into effect, we also continue to host lectures on occupational health from industrial physicians and outside speakers.

By deeply embedding these activities and making everyone working at the plant feel like part of the family, our aim is to have a safe and secure workplace by helping people empathize with one another, while at the same time feeling comfortable enough to caution each other when needed.

Ako Plant



Hideki Aoki
General Manager, Ako Plant

Based on a recognition that ensuring worker health and safety is fundamental to any corporate production activities, our policy for day-to-day occupational health and safety activities at the Ako Plant is to “create a strict culture of safety to ensure workplace health and safety.”

1. Safety Measures

We launched an experiential learning program after completing installation of hands-on safety equipment (which can simulate accident scenarios) in the previous fiscal year. In the current year, team leaders from three alternating departments and site work managers have been certified as trainers, allowing them to offer direct instruction to their own subordinates and peers. This step is making safety management much more relevant to our worksite possible.

Last fiscal year, we also conducted a questionnaire asking employees about unsafe situations around them, which resulted in input from many Company employees and those of partner companies. Right now, we are figuring out which issues to address first and appropriate measures. We are looking forward to how this process will allow everyone working at the plant to be strongly conscious of the fact that they should protect themselves and that they have the capacity to do so.

2. Occupational Health Measures

As regular activities, we enact site patrols by occupational health managers and industrial physicians, have all employees take scheduled health exams, and create

Occupational Health and Safety Measures

Experiential Learning through Hands-on Safety Equipment
(Simulating being pulled into a belt conveyer)



opportunities for those who refuse exams to hear advice from industrial physicians. We have also instituted care for mental health, offering individual consultations for supervisors and their subordinates.

Where working hours are concerned, we continuously pursue measures designed to reduce sudden malfunctions and enhance clerical work productivity and manage these issues appropriately.

Kochi Plant



Tomoya Akeshiro
General Manager, Kochi Plant

At the Kochi Plant, we have defined an occupational health and safety policy with “raise consciousness around occupational health and safety” and “promote work environment improvement” as basic policies guiding activities in this area. We also have set quality and environmental policies, aiming under our “customers first” approach to improve quality and to be a plant that cares for the global environment and can contribute to the sustainability and development of a more abundant society. In terms of safety-related initiatives, we address the three major pillars below in a bid to raise safety consciousness levels even further.

1. Further Safety Patrol Upgrade

- (1) During safety patrol, thoroughly verify points raised at the danger foresight meeting
- (2) Eliminate unexamined sources of danger
- (3) Onsite observation tour and safety education by outside consultants

2. Institute Occupational Health and Safety Education

- (1) Utilize hands-on safety equipment
- (2) Examine accident scenarios used at worksite assemblies, educate concerning work rules, etc.
- (3) Conduct safety knowledge tests
- (4) Actively hold lectures by outside speakers

3. Create a People-friendly, Healthy Workplace

- (1) Increase follow-up health exam rate for those missing earlier health checks
 - (2) Upgrade mental health care
- Keeping the workplace clean is, I believe, another

Occupational Health and Safety Measures

Experiential Learning through Hands-on Safety Equipment
(Use of safety harnesses)



fundamental not only for safety but also for preventing malfunctions. To this end, we keep our site clean and orderly by instituting workplace and nearby ditch clean-ups, and each worksite has its own designated cleaning day. Furthermore, with our occupational health and safety policy as a base, we established both related targets and plans and strive for continuous improvement in making safe and healthy environments for all workers. In this way, with a sense of mutual understanding and care, we are creating safe and secure work environments.

Hachinohe Cement Co., Ltd.



Shinichi Inoue
President, Hachinohe Cement Co., Ltd.

In 2018, Hachinohe Cement set “Everyone together putting KYM into practice to eliminate accidents” as the basic policy for occupational health and safety activities. By encouraging more sharing of sources of danger and mutual cautioning, we are looking to achieve zero accident status. Specific measures to this end are:

1. Strengthen Safety Management Framework for Resident Partner Companies

We have managers and supervisors attend workplace safety meetings to thoroughly convey information to the entire workforce of partner companies.

We select point persons for contract employees (alternate work shifts) in a bid to share information through better communication.

2. Improve Danger Perception through Hands-on Safety Education and Drills

We view the prevention of accidents involving being caught in or pulled into machinery or those involving falls from height or otherwise as priority issues, and are working vigorously to upgrade both related instructor training and hands-on tools.

3. Active Promotion of “5S” Activities

Our employees and those of partner companies are all involved in building work environments that are clean, orderly and thereby safer.

Occupational Health and Safety Measures

5S Activities

NSP Tower basement pump room maintenance



In terms of safety performance, we have had no accidents that require time off from work since July 1983, with this year set to mark a 35-year milestone. We will continue to hold tightly to this baton passed down from our senior colleagues for 35 years and will move to make worksites that are even safer.

Funabashi Office



Kazuharu Mikawa
General Manager,
Funabashi Office

The Funabashi Office oversees occupational health and safety that includes maintenance, management and preservation of facilities jointly used by the Company's Funabashi and Ichikawa District divisions.

Of these, in the Funabashi District, the Company has eight divisions and one affiliate, or over 400 registered personnel, located in the north of Funabashi City, Chiba Prefecture, Japan. This area serves as a base for the Company's R&D and High-Performance Product Business. The Ichikawa District, meanwhile, due to its coastal location has in recent years become one large logistics hub for diverse industries ranging from steel and chemicals to food products. In June 2018, an outer-loop highway opened there as well, which dramatically shortened travel time from inland to the bay and is widely expected to improve convenience. The Company has five divisions and three affiliates there, as well as bases for the High-Performance Product, Cement and environment-related businesses. While the business lines of each division and company in these districts varies substantially, the members of each district work cooperatively on improvement activities targeting shared occupational health and safety issues.

Where accident prevention activities are concerned, our priorities are preventing traffic accidents during commutes, back problems and the handling of hazardous materials, as well as preventing accidents caused by falls. Accordingly, we are hard at work encouraging extensive danger foresight and submission and awareness of close calls, with the goal of identifying latent risks and raising safety consciousness.

Furthermore, since the office is also a manufacturing site, we are creating an appropriate-response

Occupational Health and Safety Measures

Hold occupational health and safety lectures in the Funabashi District



framework should disasters or accidents occur, and last fiscal year put in place a more permanent public health nurse and a health management office as measures targeting employee health management and mental health. In collaboration with all divisions, we will continue moving to ensure and improve safety, along with activities for advancing mental and physical wellbeing.

Quality

Approach to Quality

Cement's ultimate shape comes in many different forms from major structures such as dams to various types of concrete products, so each type of cement must have an optimum performance depending on its particular situation. The Sumitomo Osaka Cement Group endeavors to ensure product stability and improve quality by meeting customer requirements and prioritize the stable supply of cement to provide security and rigorous daily management of products based on a quality control framework constructed using cement production technologies formed over many years.

Quality Control Framework

The Sumitomo Osaka Cement Group's production plants have acquired quality management system (QMS) certification in accordance with ISO 9001 (international guidelines on quality assurance), have built and maintain quality control frameworks and continue quality control activities. The five production

plants of Tochigi, Gifu, Ako, Kochi and Hachinohe Cement Co., Ltd., the Optoelectronics, Advanced Materials and Battery Materials Business in Funabashi and affiliates including Shuho Kogyo Co., Ltd. have obtained ISO 9001 certification.

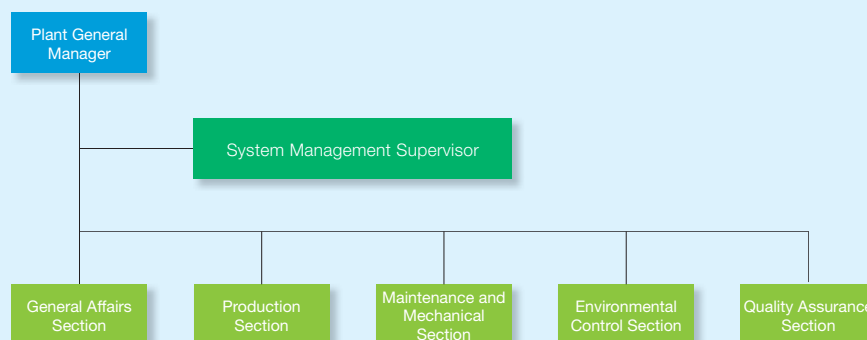
Quality Initiatives

Plants are operated with responsibilities and authority in each division according to the plant organization chart. In accordance with the flow chart at plants, quality control management of cement products follows an integrated line from receipt inspections for raw materials and thermal energy to waste materials and byproducts, and the Quality Assurance Section at each plant conducts highly precise inspections in collaboration with the Analysis Center located inside the Ako Plant.

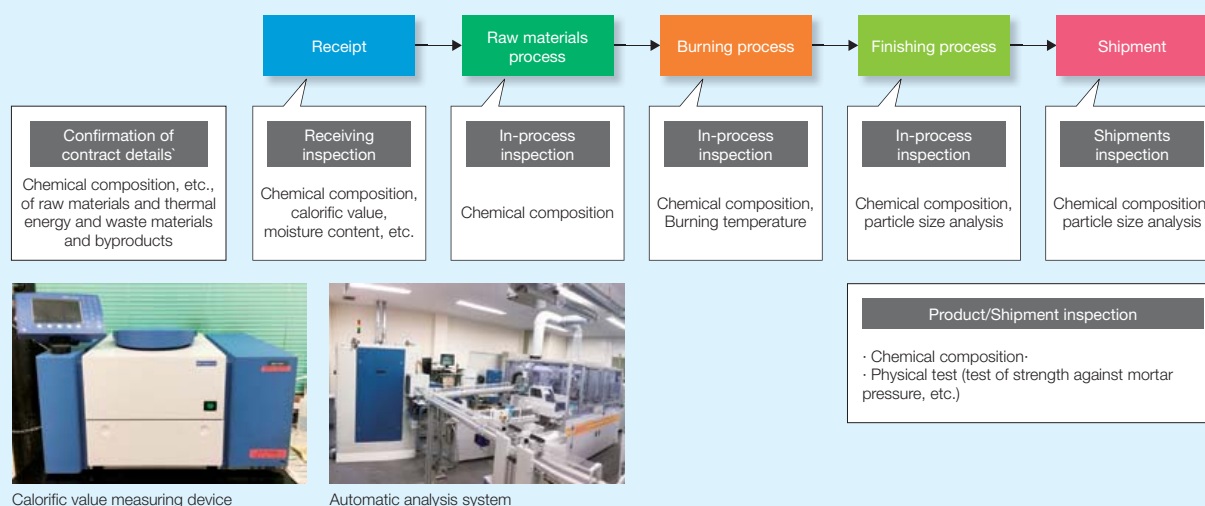
Safety data sheets listing information about particular toxic hazards in products are also provided to enable them to be used safely.

Plant Organization

The System Management Supervisor reports directly to the Plant General Manager. The System Management Supervisor is responsible for establishing and maintaining this system, raising awareness among all employees of items that customers require, and rigorously implementing quality policies in each division.



Production Flow and Quality Control at Plants

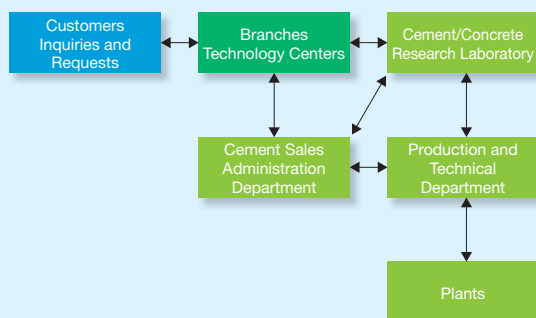


Relationship with Customers

We strive to deepen our relationships with customers in such ways as holding regular meetings among divisions to exchange information on quality control communication and response flow charts and forming a system for assured internal communication of customer information. We also utilize this system for product development and response to customer complaints.

Quality Control Information Communication and Response Flow Chart

We have built a framework capable of responding promptly and properly to inquiries and requests.



Technological Interaction with Customers

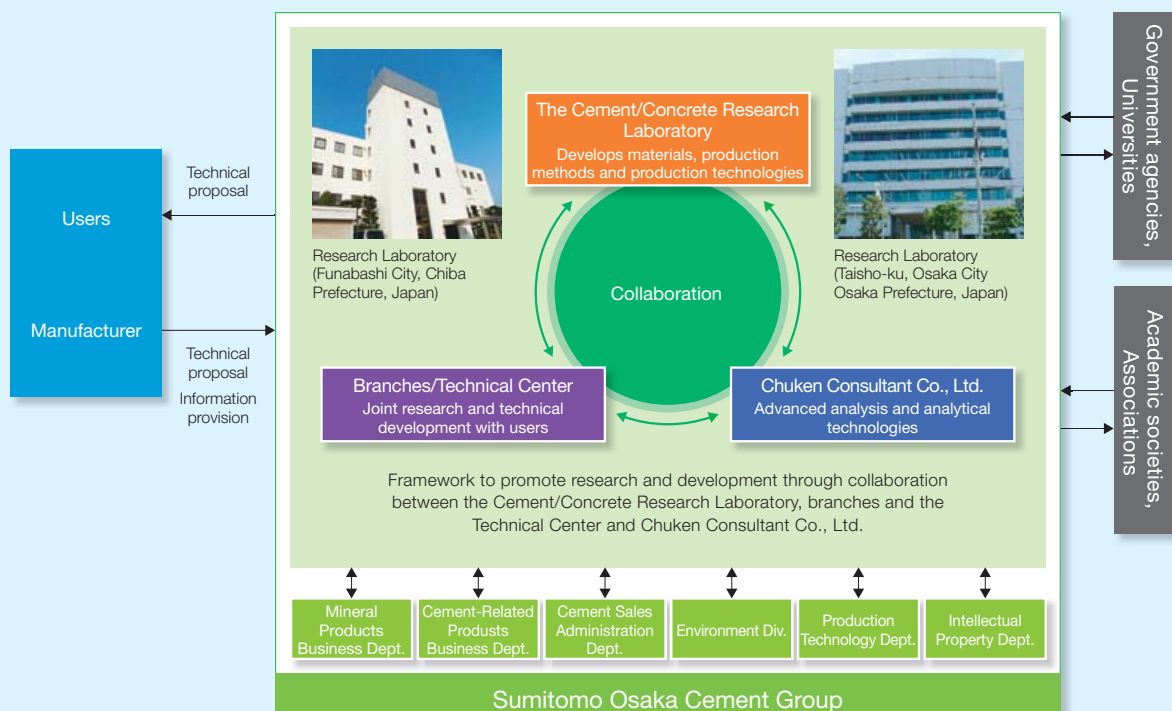
The Sumitomo Osaka Cement Group holds technical meetings and lectures in various districts, including the Sumitomo Osaka Cement Technical Report Meeting. A major feature of the Sumitomo Osaka Cement Technical Report Meeting is that it is held together with customers and enables such things as announcements from customers throughout the country on valuable research findings. Lectures and tabling of issues on the latest topics or technical trends in the concrete field also aims at strengthening technology sharing with customers.

Looking forward, we aim to further enhance technological capabilities in collaboration with customers by holding meetings such as these.

Introduction to Various Types of Technological Workshops

Needs about concrete are becoming more sophisticated, covering a wide area from basic fields through to the production and installation of special concrete and inspection, diagnosis and repair methods for existing concrete structures. To develop technicians capable of responding to these needs, each year the Sumitomo Osaka Cement Group holds the Basic Course on Concrete Techniques and Correspondence Course for Concreters and Concrete Engineer Testing, with over 10,000 people having taken these courses up until now. Screening courses are also held throughout Japan immediately before testing as a strategy for those seeking to become certified concreters or concrete engineers.

Organization Connecting to Users



Fair Trade

The Sumitomo Osaka Cement Group has stipulated the following basic policy to be a partner in creating attractive products under a concept of quality and reliability.

Basic Policy on Purchasing

Openness

We not only maintain trade relationships with business partners that have outstanding records, but also always strive to purchase from new business partners. As a result, we always disclose information related to material procurement.

Fairness

We always select business partners based on a fair and just assessment that takes a comprehensive view into account including quality, price, delivery time, stable supply, after-sales service, technological compatibility with existing facilities and business results.

Compliance with Laws and Regulations

We always obey all rules and regulations when engaging in purchase transactions and carry out duties while respecting that spirit.

Mutual Trust

We aim to build sound relationships based on trust with the people from our business partners by engaging in fair purchase transactions.

Contribution to Society

We believe it is important to contribute to society with people from our business partners by engaging in fair purchase transactions.

Disclosure

Engagement with shareholders and investors requires that they have an understanding of Sumitomo Osaka Cement Group's current situation and management plans through accurate and timely disclosures of information. It is also important for them to broadly understand our businesses. Sumitomo Osaka Cement carries out investor relations activities using a wide range of tools, including briefing sessions and facility tours.

Disclosure Policy

Basic Policy

Sumitomo Osaka Cement Co., Ltd. ("the Company", "we" or "our") discloses fair and equitable information in a timely and appropriate manner. In the course of providing accurate information to stakeholders, including our shareholders, the Company ensures that information disclosed is not boiler-plate or lacking in detail.

Disclosure Methods

The Company discloses information required for timely disclosure via TD-NET and press releases as well as on the Company homepage in a timely manner in compliance with relevant regulations such as the Financial Instruments and Exchange Act and based on the "Timely Disclosure Rules" defined by the Tokyo Stock Exchange.

For information that is not covered by the "Timely Disclosure Rules," the Company makes every effort to disclose information in a prompt and fair manner via the homepage and the media if the Company deems that the information is useful for shareholders, investors and other stakeholders.

Quiet Period

The Company provides a quiet period from approximately two weeks before the final settlement date for each fiscal quarter, in order to prevent the leakage of financial results information and to ensure fairness, during which period the Company refrains from commenting on or answering questions related to the financial results. Even during these quiet periods, however, the Company will disclose information on amendments to

forecasts of financial results or dividends in a timely manner in accordance with the rules set forth by the Tokyo Stock Exchange and other regulations.

Feedback to Management

The Company actively engages in mutual communication with capital market participants such as shareholders, investors and securities analysts. The Company appropriately and effectively relays shareholder views learned through dialogue to the senior management and Board of Directors, and reflects such views in the mid-term management plans.

Financial results briefings

We hold financial results briefings for our annual and interim results in order to foster understanding in the company's management status among institutional investors and analysts. During financial results briefings, top management explains our financial results and answers questions. In addition, we also respond to individual requests for information from securities analysts and institutional investors inside and outside of Japan. As a result, we seek to engage a broad range of investors on an ongoing basis.

Visits to plants and business sites

We host visits to plants and other business sites for institutional investors and analysts in order to promote more in-depth understanding of our operations and businesses.

Working With Local Communities

The cement industry is built upon close connections with local communities and it is essential to build good lines of communication with community residents. The Sumitomo Osaka Cement Group endeavors to promote understanding of the Group through plant tours, briefings and dialogue and deepening interaction with a variety of people.

Plant and Business Site Tours

We provide opportunities for tours to plants or mines for various stakeholders including elementary and junior high school students on field trips to those involved with municipal governments. We also create opportunities to deepen understanding among members of local communities, such as holding regular plant tours or providing introductions to the Group's activities such as recycling or environmental preservation initiatives.



Parents and children on a tour of the Ako Plant

Training at Plants

At our plants we provide internship opportunities for high school and university students to acquire specialist knowledge and technical skills, as well as to raise their occupational awareness through experience working at a local company.

We have also held cement plant tours and had operational technique training for employees from overseas.

Concrete Mixer Participates in Fire Drill

A 10-ton cement mixer belonging to Sumitomo Osaka Cement Group company Tokyo SOC Co., Ltd. took part in a fire prevention drill conducted by the Tokyo Fire Department, aiding local firefighters by supplying water for spraying. In the event of a major disaster, mixers can contribute to disaster response and help limit the effects of disaster.



A cement mixer transported water from a fire hydrant for an emergency drill (Iidabashi, Tokyo)

Participation in Community Events

For many years we have participated in community events and festivals to raise our level of communication with local communities. This enhances our everyday sense of gratitude and community activities, as well as provides a wonderful opportunity to deepen connections with communities.

Contribution to Local Communities

We actively engage in beautifying the environment by conducting environmental maintenance in the vicinity of each business site and cleaning activities within plants.



Employees engage in monthly cleaning activities in the areas between Yotsuya and Ichigaya stations near the head office in Tokyo

Acceptance of Waste Products from Local Areas and Converting General Waste Incineration Ash to Cement Raw Material

The Sumitomo Osaka Cement Group uses sewage generated in various areas as a cement raw material and thermal energy source at four plants (Tochigi, Gifu, Ako and Kochi).

At the Ako and Kochi plants, as well as at Hachinohe Cement, industrial waste materials generated from industrial activities and ordinary trash created through everyday living are used as raw materials for cement. Making incinerator ash from ordinary garbage into a cement resource not only prolongs the useful life of waste landfill sites, it leads to a reduced load on the environment and further contributes to local communities and the creation of a recycling society, so we will continue to strengthen this initiative.

R&D and IP

Under the basic philosophy of continually developing original technologies, the Sumitomo Osaka Cement Group engages in a wide range of proactive R&D activities. These range from new technology and new product development in our core cement and concrete business to the peripheral cement-related products, to R&D in the new Optoelectronic, Advanced Materials, and Battery Materials business segments based on our core technologies.

Cement/Concrete Research Laboratory

The Cement/Concrete Research Laboratory develops new technologies and products in a broad range of fields, including high-performance concrete, concrete paving technology, as well as ultra-rapid hardening materials and methods, along with materials with a lower environmental impact, among others.

Basic Policy for the Fiscal 2017-2019 Medium-term Management Plan

"Increase the earnings of the Cement-related business and enter into untapped areas by using new technologies and new products developed based closely on user needs."

- 1) Commercialize core technologies for cement and concrete
- 2) Create a series of ultra-rapid hardening repairing and reinforcing products
- 3) Develop technologies for mitigating environmental impact

New Product and New Technology Development

Low carbon high-strength concrete

As part of our development of technologies for mitigating environmental impact with the goal of lowering CO₂ emissions, we are working on the development of low carbon high-strength concrete. General low carbon concrete replaces part of the cement with additives such as blast furnace slag and fly ash; however, this mixture faced challenges such as susceptibility to neutralization. This new form of concrete forms an extremely fine organization, which results in sufficient resistance to neutralization, low exothermicity, and low shrinkage.

Dry shot method

We are also actively developing technologies for repairing and reinforcing concrete structures. Our proprietary Refre Dry Shot Method involves mixing an air compressed powdered spray material with mixing water (containing polymer emulsion) in the special dedicated nozzle for spray-on applications. Compared to wet applications, this method provides major improvements in dust and splashback generation as well as long-distance pumpability (up to 300 meters), improving work efficiency and significantly improving the work environment.

New Technology Research Laboratory

The New Technology Research Laboratory works to usher in innovations in the energy, environment, information communication and electronics domains. It focuses on the development of optoelectronics devices and equipment with

an eye on optical ICT as well as the development of semiconductor manufacturing equipment components, energy storage and generation equipment components, and various functional materials with an eye on nanoparticle material technology. The work that takes place at the New Technology Research Laboratory underpins the Optoelectronics, Advanced Materials and Battery Materials businesses.

R&D Policy for the Fiscal 2018 Business Plan

"Promote core research that accelerates development of technologies and products aimed at continual business growth and that results in value creation"

- 1) Promote speedy research and development
- 2) Shift to high efficiency production processes through reinforced engineering functions
- 3) Promote the development of core technologies for new value creation

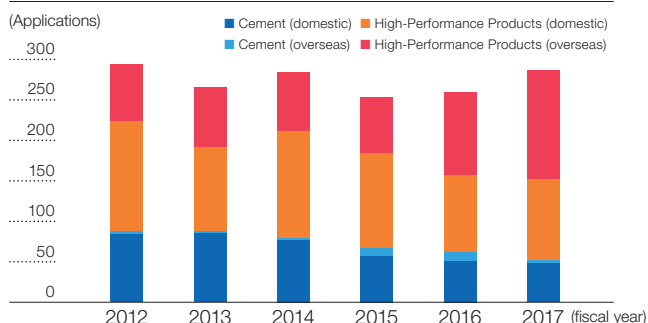
Intellectual Properties

Intellectual properties underpin both the Cement-related business and High-Performance Product business from the standpoint of IP management.

Basic Policy on IP for the Medium-Term Management Plan

Following the basic policy of reinforcing competencies key to our growth strategy in terms of IP under coordinated business and development strategies, we will aim to build a competitive patent portfolio to protect our businesses from various angles, including our core technologies and applied technologies.

Changes in total number of patent applications



We are working to increase patent applications and establishment of patent rights in the United States, China, and Korea, among other countries, following the globalization of our operations, especially in the High-Performance Product business segment. We filed a total of 139 patent applications outside of Japan in the fiscal year 2017.

Development of Heavy Metal Pollution Solution MAGICAL FIX[®]

The Sumitomo Osaka Cement Group is involved in the development of measures against heavy metal pollution to reduce elution of heavy metals and other materials containing contaminated soil and industrial waste objects.

In recent years, the extrication and removal method has been a frequently used processing method for heavy metal soil contamination, and this is then processed for use in managed landfill or for cement raw materials. However, this raises concerns from an environmental perspective due to the risks involved in transporting contaminated soil or the energy consumption and carbon dioxide emissions that accompany excavation and transport of soil.

The local insoluble method is a way to deal with contaminated soil without moving it from its original location. The local insoluble method is a technique that requires adding and mixing insoluble materials with the contaminated soil to harden it to ensure that it does not dissolve into the surrounding soil, groundwater or anywhere else. Processing costs are comparatively cheap and there is no need to use additional cleaner soil, so expectations of this method are also high from the aspect of reducing the burden on the environment.

The Cement/Concrete Research Laboratory developed MAGICAL FIX[®], a heavy metal pollution solution, based on the knowledge it had acquired over many years of research, and launched this on the market in 2012. The feature of MAGICAL FIX[®] is that it physically and chemically attaches itself to heavy metals and the like and remains insoluble over a long period. In 2014, we obtained technical qualifications from the Society of Materials Science, Japan, under its technological certification for solid ground improvements systems, and were also awarded with the society's technology award for that year. The society rated MAGICAL FIX[®] as a highly effective measure against heavy metal pollution in solid ground or groundwater, as well as for the superior reliability of the type of technology. In 2015, it was also registered in the New Technology Information System (NETIS), the Ministry of Land, Infrastructure, Transport and Tourism's database of new technologies.

Looking forward, during construction of large-scale tunnels for expressways or trains, greater outbreaks of naturally occurring soil contamination or excavation shears (rock) are projected. In 2015, we newly developed MAGICAL FIX[®]-N Type as a low-cost, environmentally friendly material that improved the neutralizing qualities of pH in insoluble soil.

In the future, we expect that MAGICAL FIX[®] will expand to new uses such as being recycled with ash generated at power plants or in incinerators.



MAGICAL FIX[®]



MAGICAL FIX[®] being spread using the adsorption method

Corporate Governance

Basic Policy

We believe that corporate governance is a structure for proper decision-making by corporate management, and that the objective of corporate governance is to constantly enhance our corporate value by increasing management efficiency, and by securing soundness and transparency in business activities. The Sumitomo Osaka Cement Group, therefore, recognizes the fulfillment of this aim as our most important management issue.

Moreover, we have formulated the Sumitomo Osaka Cement Corporate Governance Policy to promote sustainable growth and enhanced medium- to long-term corporate value for our Group.

Status of Meeting Bodies and Internal Control System

Board of Directors and executive officers

The Board of Directors consists of eight Directors, including two Outside Directors and convenes meetings at least once monthly to make decisions regarding material matters affecting management and to receive reports on the status of business operations. We have also introduced the executive officer system in order to separate management decision making and supervision from actual execution and to raise management efficiencies by reinforcing each function, speeding up decision making and clarifying authority and accountability.

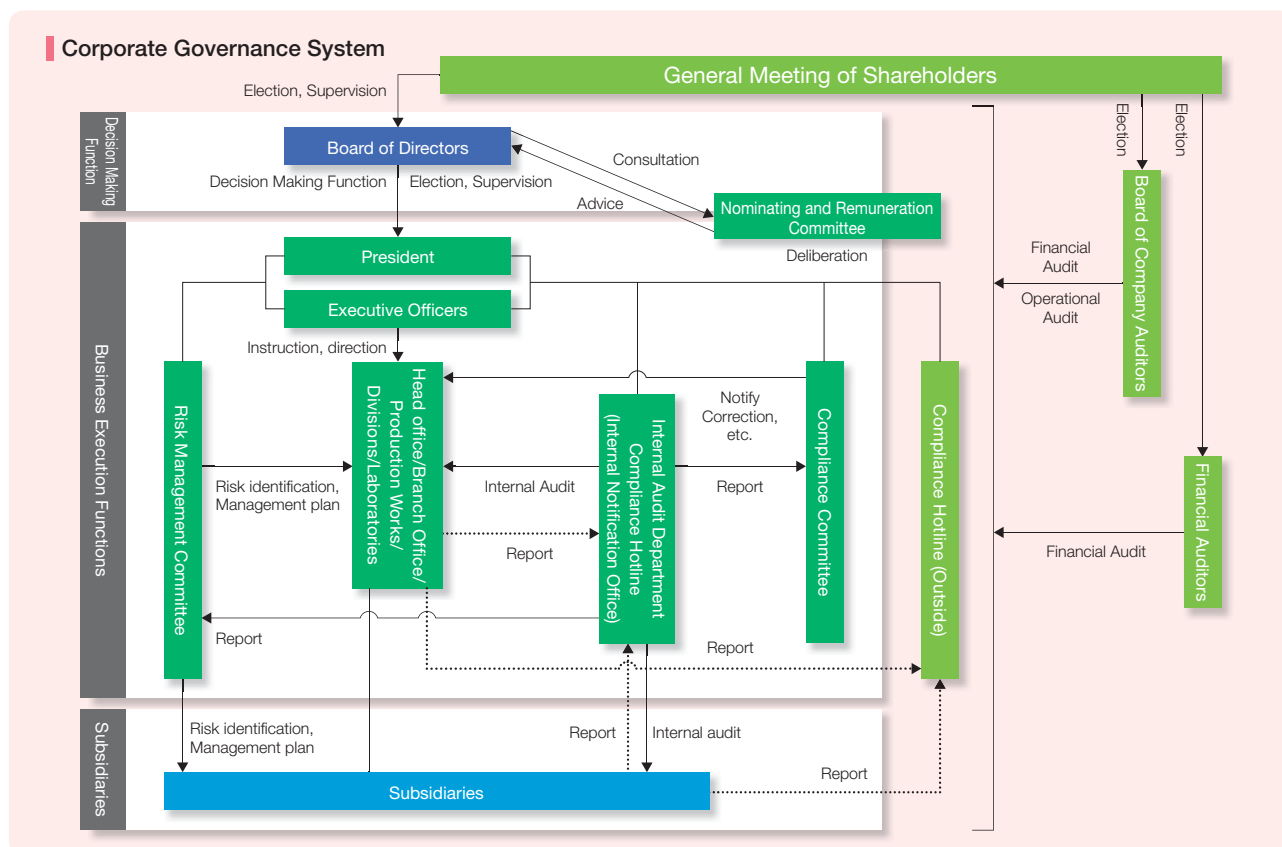
Board of Company Auditors

The Board of Company Auditors consists of five company auditors, three of whom are outside company auditors. Company auditors take part in Board of Corporate Auditor meetings convened at least once monthly, as well as attend other important company meetings, including meetings of the Board of Directors.

Nominating and Remuneration Committee

The Nomination and Remuneration Committee was established on January 1, 2018 as an advisory body to the Board of Directors. The committee deliberates on the remuneration of directors and executive committee members, taking into account their performance from the standpoint of the validity of remuneration standards and objectivity and transparency. The committee also decides on personnel issues related to directors and executive committee members, taking into account their performance from the standpoint of the validity of remuneration standards and the objectivity and transparency.

The president is the chair of the committee, which shall be comprised of at least two members nominated by outside directors, decide on policies regarding personnel and remuneration for directors and executive committee members and report on its decisions.



Risk management

Risk Management Structure

We have established the Risk Management Committee, chaired by the President, in order to identify, evaluate and respond to risks facing the entire Group. Additionally, we have formulated the Regulations of the Risk Management Committee in order to clarify the roles and responsibilities of the committee.

The Risk Management Committee prepares an action plan for risk management every fiscal year and monitors its progress. Audits on the status of risk management are carried out by the Internal Audit Department, with the results reported to the Risk Management Committee.

The Risk Management Committee takes appropriate action, when necessary, based on the results, and reports the results of audits to the Board of Directors and Company Auditors.

Fiscal 2017 Initiatives

A mock drill to test initial responses by the head office disaster response task force to an earthquake occurring in Tokyo Bay was carried out, envisaging damage to the head office and business sites in the Tokyo metropolitan area.



Business continuity planning during training at the head office disaster response task force

Main Activities in Fiscal 2017

April: Rank-based risk management training

November: Head office evacuation drill

Head office disaster response task force training (information collection and collation)

December: Joint meeting and lecture for risk management supervisors from each department, business location and affiliated company

March: Head office disaster response task force training (initial response test)

Information security

Basic policy on the protection of personal information

Following the basic principles of Japan's Act on the Protection of Personal Information, we consider the appropriate handling of personal information to be an important management task,

and as such, we have established our own basic policy. We determine policies and the in-house organizational structure for the protection of personal information in accordance with this basic policy.

Policy on the Protection of Personal Information

(1) Acquisition

Sumitomo Osaka Cement obtains personal information using legal and fair means.

(2) Use

Sumitomo Osaka Cement shall use personal information within the scope of the purpose of use indicated when the information is obtained wherever necessary for its business operations.

(3) Provision to third parties

Sumitomo Osaka Cement shall never provide personal information to third parties without the prior consent of the individual, except instances prescribed by laws and ordinances.

(4) Management

1. Sumitomo Osaka Cement shall manage the personal information in its possession in a secure manner while maintaining its accuracy.
2. Sumitomo Osaka Cement shall take appropriate information security measures to prevent the loss, destruction, modification or divulgence of the personal information in its possession.
3. Sumitomo Osaka Cement shall never divulge personal information caused by taking it offsite or transmitting it.

(5) Disclosure, revision, suspension of use, and deletion, etc.

Sumitomo Osaka Cement shall respond promptly when an individual requests that his/her own personal information in the company's possession be disclosed, revised, suspended from being used, or deleted.

Organizational structure for protecting personal information

(1) Personal Information Protection Manager

Sumitomo Osaka Cement shall appoint a Personal Information Protection Manager who will promote and ensure thorough protection of personal information.

(2) Making it known to all executives and employees

Sumitomo Osaka Cement shall make the protection and appropriate handling of personal information known to all executives and employees

(3) Establishment of regulations, etc.

Sumitomo Osaka Cement, in order to implement this policy, shall establish company regulations on the protection of personal information and ensure that all of its executives and employees are familiar with and execute the regulations to promote the protection of personal information.

Compliance

Compliance Promotion System

We have established the Compliance Committee chaired by the President to establish, spread and elevate the compliance awareness of all executives and employees of the Sumitomo Osaka Cement Group, including executive officers, contract employees and temporary employees. Also, we have formulated the Regulations of the Compliance Committee in order to clarify the roles and responsibilities of the committee.

Compliance Committee

The Compliance Committee creates a compliance action plan every fiscal year and monitors its progress. Compliance audits are carried out by the Internal Audit Department mentioned below, with the results reported to the Compliance Committee. The Compliance Committee takes appropriate action, when necessary, based on the results, and reports the results of audits to the Board of Directors and Company Auditors.

Compliance Promotion Framework

Each department in Sumitomo Osaka Cement appoints its own compliance officer and compliance supervisor.

● Compliance Officer

Each department head shall be the compliance officer responsible for management and supervision of compliance within the department.

● Compliance Supervisor

The compliance officer appoints the compliance supervisor, who shall convey information to the Compliance Committee secretariat and disseminate information related to compliance to each department.

Furthermore, Group companies shall also establish a promotional framework similar to that of Sumitomo Osaka Cement.

The Sumitomo Osaka Cement Group has also established the Compliance Hotline, a system that receives reports from any employee or executive, investigates the report and decides on any corrective measures to be taken. Information on the system is disseminated through the Company via the intranet and efforts are being made to make it easier to use. It is being expanded to include consultations on all suspicions as well as acts that violate laws, ordinances, or internal regulations, or run the risk of doing so.

Internal Audit Dept.

The Sumitomo Osaka Cement Group has established an Internal Audit Dept. for the purpose of conducting internal audits.

Details of Activities

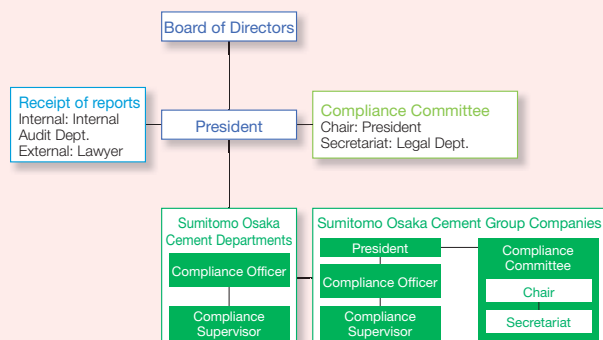
Compliance Manual

We produced the Compliance Manual as a specific guideline for rigorous compliance, disclosing it via the intranet, adding and changing when needed and striving to making it known.

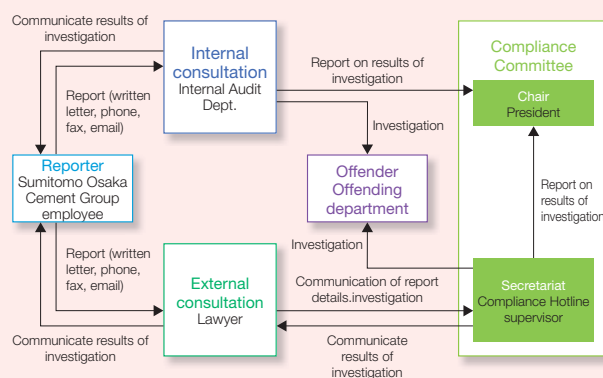
Raising Employees' Awareness

The Compliance Committee Secretariat conducts training and legal consultations about compliance while visiting each department or Group company. A Top Management Seminar for our executive management and the top leadership of each Group company, and a Compliance Supervisor Meeting for compliance supervisors are also held. Furthermore, e-learning is also conducted for our directors and employees, where they can watch a video on compliance. Rank-based training also includes education on compliance, and we are advancing the dissemination and establishment of compliance awareness.

Overview of Compliance Promotion Framework



Compliance Hotline System Flowchart



Company Information (as of March 31, 2018)

Company	Sumitomo Osaka Cement Co., Ltd.
Established	November 29, 1907
Head Office	6-28 Rokubancho, Chiyoda-ku, Tokyo 102-8465, Japan Telephone number +81-3-5211-4500
Employees	2,987

Primary Group Companies

Name	Sector
Hachinohe Cement Co., Ltd.	Cement manufacturing
Wakayama Slag Cement Co., Ltd.	Blast furnace cement manufacturing
SOC Logistics Co., Ltd.	Coastal shipping services
SOC Marine Co., Ltd.	Ship leasing and cargo handling services
Taiyo Holdings Co., Ltd.	Holding company
Taiyo Kisen Co., Ltd.	Ship leasing
Izumi Unyu Co., Ltd.	Truck transport of specified cargoes
Sumice Kenzai Co., Ltd.	Cement and ready-mixed concrete wholesaling
Tokai Sumice Co., Ltd.	Cement and ready-mixed concrete wholesaling
Kitaura SOC Co., Ltd.	Cement and ready-mixed concrete wholesaling
Izumi Industry Ltd.	Crushed rock wholesaling and contract manufacturing of cement
Tokyo SOC Co., Ltd.	Ready-mixed concrete manufacturing
SOC Engineering Co., Ltd.	Equipment and facility installation
Chuken Consultant Co., Ltd.	Construction consulting
Shuho Kogyo Co., Ltd.	Limestone excavation and sales
Shiga Kosan Co., Ltd.	Limestone excavation and sales
Estec Co., Ltd.	Civil engineering
SNC Co., Ltd.	Concrete product manufacturing and civil engineering
Kurimoto Concrete Industries Co., Ltd.	Manufacture and sales of hume pipes and other concrete products
Sumitec Co., Ltd.	Optical communications equipment and digital equipment manufacturing
Cap Co., Ltd.	Real estate leasing, construction material sales, and non-life insurance agency operations
Sumitomo Cement Computer Systems Co., Ltd.	Information services
Chiyoda Engineering Co., Ltd.	Construction of electrical facilities
SOC VIETNAM CO., LTD.	Rechargeable battery cathode materials manufacturing

 SUMITOMO OSAKA CEMENT CO., LTD.

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