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 Optoelectric and Advanced Materials business segments based on our core technologies.

Cement/Concrete Laboratory
The Cement/Concrete 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.

Basic Policy for the 2017 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
(1) Concrete that increases productivity
In the development of high-performance concrete, we are working on developing technologies that address the needs of the construction industry. Concrete that increases productivity greatly reduces casting time by adding mineral components or specialty additives to Portland cement, which reduces construction costs and also offers the two merits of enabling quick completion of casting and strong crack resistance.

(2) Ultra-rapid hardening materials
We are also proactively working on the development of technologies for repair and reinforcement of concrete structures.

We offer a lineup of ultra-rapid hardening cement, including jet cement and mild jet cement, which deliver high strength in a short period of time. By combining this ultra-rapid hardening cement with fiber reinforcement technologies and polymer cement technologies, we developed Refre Morset SF, an ultra-rapid cross-section restoration material for repairing concrete floors. This product can be used for a range of applications, from small-scale work to large-scale projects using a mobile plant truck, resulting in the commercialization of repairing materials and methods for a wide array of applications.

These repairing materials and methods are being used to repair and reinforce social infrastructure at an early stage.

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 2017 Business Plan
“Maintain and reinforce existing businesses while expanding into peripheral businesses by strengthening cutting-edge technical prowess in core technologies and key strategic technology domains.”

1) Enhance manufacturing capabilities by reinforcing process engineering
2) Reinforce core technologies aimed at expanding peripheral business domains
3) Accelerate R&D using outside resources

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 (years ended March 31)

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 114 patent applications outside of Japan in the year ended March 31, 2017.