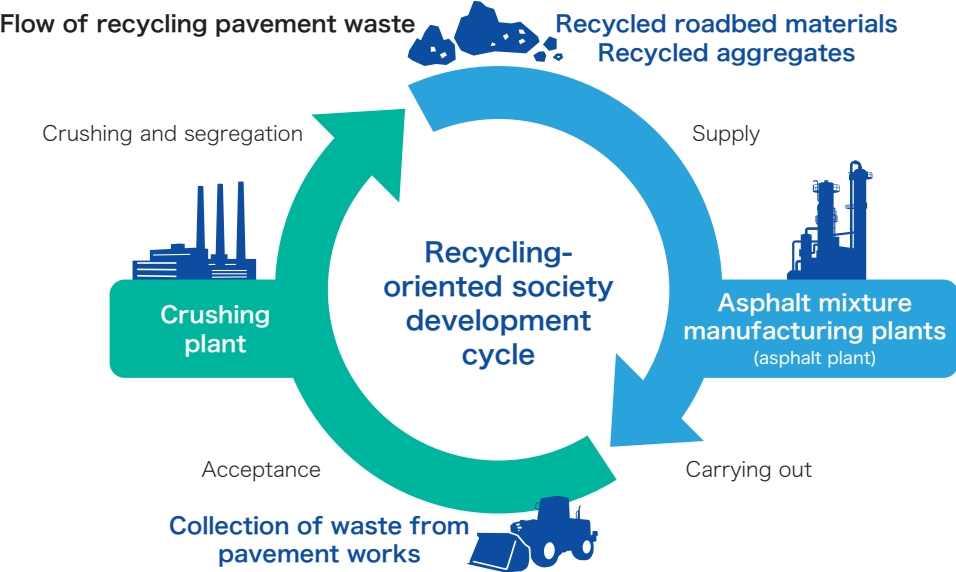


Since the 1970s, the Nikko Group has been pursuing the development of plants capable of recycling construction and road waste materials for reducing the environmental burden, thus contributing towards improving resource productivity and establishing a recycling-oriented society. We are also actively pursuing new initiatives for minimizing industrial waste such as resource recycling of cement sludge and development of camping gear using the residual steel generated in the manufacturing process of plants and other products.

1 Recycling of asphalt waste

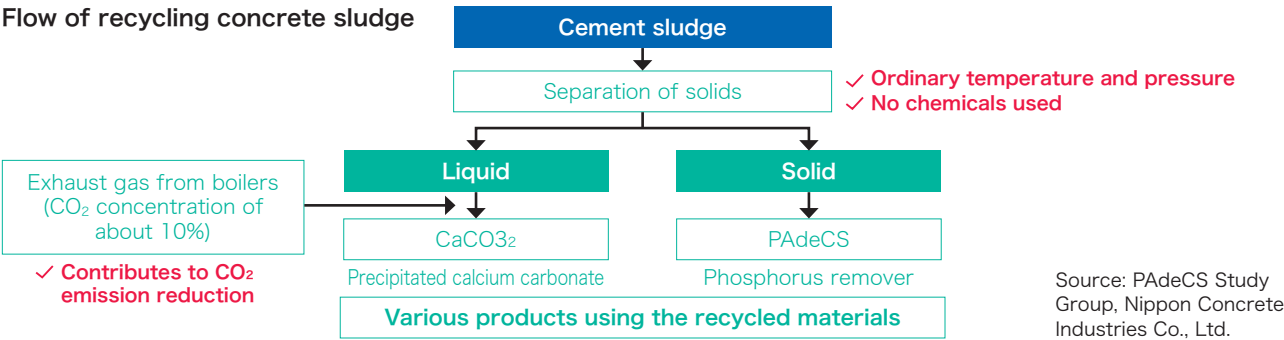
To advance the recycling of asphalt and concrete waste materials, Nikko in the 1970s commercialized asphalt plants that handled resource recycling. Since then, we have been continuously improving the products, and as a result, have been recycling almost all of the asphalt waste generated. Currently, about 75% of the asphalt mixtures used for paving roads are recycled mixtures mixed with asphalt waste.



2 Recycling of cement sludge

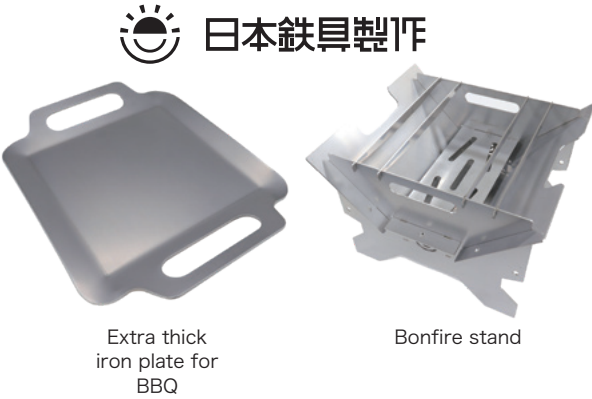
Cement sludge comes from residual concrete and returned concrete generated during the manufacture of ready-mixed concrete and secondary concrete products. Cement sludge requires specific processes, such as dewatering and drying, before being disposed of as industrial waste. Japan produces about 3.5 million tons of cement sludge every year, and the disposal cost is 5,000 yen to 10,000 yen per ton. When cement sludge is separated into liquid and solid, precipitated calcium carbonate (CaCO₃) is extracted from the liquid and phosphorus remover (PAdeCS) is extracted from the solid portion. Various products use precipitated calcium carbonate as a

raw material: pharmaceuticals, paper, cosmetics, ferrite, condensers, optical glass, coatings, rubber, and plastics. Phosphorus remover is also expected to have many applications: rock phosphate substitute, neutralizer, night soil treatment agent, deodorizer, antiseptic, heavy metal remover, and water-bloom suppressant. Precipitated calcium carbonate absorbs CO₂ in the refining process that could reduce CO₂. Nikko will contribute to technology development for recycling cement sludge and its practical applications by closely working with the ready-mixed concrete, secondary concrete products, and cement industries.



3 Effective use of residual steel generated in the manufacturing process of plants and other products

We launched Nihon Tetsugu Seisaku, a camping gear brand for BBQ plates, bonfire stands, etc., for effectively reusing the residual steel generated in the manufacturing process of plants and other products. We are working to enhance the product lineup. As a "made-in-Akashi" brand, where everything from the material processing to the packaging of the products are carried out at the Akashi head office factory, it is also registered as a hometown tax return gift of the city of Akashi.



Early restoration from intensifying disasters

To recover from intensifying natural disasters, such as large typhoons, severe rainstorms, and earthquakes, we start with a quick recovery work of the Group's damaged plants. In recent years, it has rained a lot unexpectedly around the country, frequently causing torrential damages. Natural disasters, including large-scale typhoons, large earthquakes such as the Nankai Trough and Tokyo Metropolitan near-field earthquakes, and the resultant tsunamis and volcanic eruptions, are anticipated. The disaster risks facing Japan is moving into a new stage. As the top manufacturer of asphalt and

concrete plants, Nikko Group strives to ensure early recovery from disasters by closely collaborating with customers so as to fulfill its supply responsibility.

	Number of disaster sites (locations)
FY 2021	72
FY 2020	62
FY 2019	52
FY 2018	53
FY 2017	46

Co-existence with local communities

Our Head Office is located in Akashi City, Hyogo Prefecture—the place our factory was located when the company was established. The Nikko Business Foundation has been offering scholarships that do not require repayment since 1989 to domestic and overseas students enrolled in universities and institutes of technology offering a five-year program specializing in technology/engineering in Hyogo Prefecture and to students from Hyogo Prefecture studying outside the prefecture. Furthermore, the Foundation provides research grants to researchers who conduct research on technology development

in the research laboratories of the universities and technology/engineering colleges in Hyogo Prefecture and to researchers who reside in Hyogo Prefecture and work for universities outside the prefecture. The recipients of these grants are not obligated in any way to join the Nikko Group or to provide the results of their research to the Group. It incorporates the strong feeling of the Nikko Group "to contribute to the development of the local economy and communities by providing assistance for human resource development and technological innovations."

[Number of scholarships and grants offered so far (cumulative from FY 1989 to FY 2021)]

Number of scholarships awarded: 139
Number of research grants awarded: 195

[New scholarships and research grants awarded in FY 2021]

Number of scholarships awarded: Two
• Kobe City College of Technology
• Kansai Gakuin University

Number of research grants awarded: Two
• Kobe City College of Technology
(Research theme: High-speed crystal thin-film fabrication of magnetic garnet using organometallic decomposition by baking with ammonia flame)
• Kobe City College of Technology
(Research theme: Development of combined non-destructive probing method of exfoliated concrete through deep learning)