## Overview of the Daiseki Group's Performance

Dialogue with Daiseki Technical Divisions

# Contributing to a sustainable society with technology for recycling and environmental protection

Participants in the dialogue –	
Faiticipalits in the diatogue	
Kazuya Nishita	Department Manager, Production Technology Development Department, Headquarters of Business Generalization
Tomoshige Kondo	Chief Technician, Production Technology Division, Technical Department, Nagoya Works
Yuji Hasegawa	Assistant Chief Technician, Production Technology Division, Technical Department, Nagoya Works
Tsuyoshi Tokuno	Deputy Department Manager, Production Technology Division, Production Department, Hokuriku Works
Takeshi Yatsuyama	Chief Technician, Production Technology Division, Production Department, Kyushu Works
Kazunori Isomura	Deputy Factory Manager and Deputy Department Manager, Technology Department, Kanto Works

#### Social value of Daiseki as an environmentcreating company

#### — How do you perceive the social position of Daiseki as an environment-creating company from a technical perspective?

**Nishita** Daiseki, as a leading company in the industrial waste collection and recycling industry, plays a significant role during disasters and emergencies in supporting the affected areas.

**Isomura** During the Great East Japan Earthquake, emergency vehicles from the Kanto Works were dispatched to collect wastewater and waste oil from affected plants. The joy of the people in the affected areas and our contribution to the recovery brought us great happiness. Daiseki has always been the company that promptly responds to disasters such as natural disasters, plant fires, and wastewater leaks to process waste and assist in recovery. **Hasegawa** Daiseki's business development is based on the needs of a diverse range of customers, and our customers include every manufacturing industry in Japan, so our business base is truly broad. I am proud to say that Daiseki is a behind-the-scenes force that supports industry in Japan. **Tokuno** I believe that when people get to know Daiseki, the image of the industrial waste disposal industry in general will be overturned. After all, we have neither landfills nor incineration facilities. Our policy since our founding has been to recycle various waste into resources with our own hands.

**Kondo** We turn what other companies throw away into resources. We have turned a negative into a positive through our creativity and technological capabilities. That is Daiseki's source of growth.

# Daiseki's culture of taking on challenges while making the most of failures

#### — What do you think is the driving force behind Daiseki's growth?



Overview of the Daiseki ESG Reporting Group's Performance

Environment

ESG Reporting

ESG Reporting Governance

Nishita It is thanks to Daiseki's open corporate culture that we have been able to make the impossible things in the world possible. Although I believe I am the one who has failed the most among us, the idea that failures are experiences to find new knowledge has taken root, fostering a culture where we take on challenges without fear of failure.

**Tokuno** I've experienced many situations in which failure leads to the next technology. At Daiseki, it is common not to let failures end as just failures but to use them in the next steps or in different fields.

Yatsuyama The network among works and engineers is strong. While each works develops technology suited to the local industry, we can share information and collaborate with technology beyond our works when new challenges arise. I feel a culture of enhancing each other throughout Daiseki has taken root.

# Making harmful waste harmless by combining wastes

Strengths of technologies, field, and scale

#### What are the strengths of Daiseki compared to other companies?

Yatsuyama One of Daiseki's strengths, which no other company can match, is the composite processing technology that makes waste harmless by combining wastes.

**Isomura** We are able to reduce costs and improve price competitiveness by substituting waste materials for treatment chemicals that would normally have to be purchased.

Hasegawa What is essential for practical application is quantity. While there is always an imbalance in the amount of waste delivered, Daiseki has the advantage of being able to easily coordinate and flexibly adjust production because it handles waste in large facilities with multiple locations and large volumes and varieties of waste. We can take advantage of these economies of scale.

Kondo I believe that our engineers' footwork and technical capabilities, which makes it possible to quickly rush in and solve problems at our customers' plants, are also unique to the Company.

**Tokuno** Technical capabilities in the field are also indispensable. We have the experience and skills to handle waste materials, which vary in condition and quantity each time, and to what level they need to be processed, in a lean and sound way. Daiseki is a company that has always been creating new technologies and linking them to the next generation. For example, the Hokuriku Works began recovering copper from wastewater about 20 years ago, and has since expanded its technology to other metals such as nickel.

Nishita The resource collection that started at the Hokuriku Works has since been expanded to all plants. It all started when I whimsically recovered silver from wastewater and made a silver medal, and at the chairman's suggestion, it became a resource collection project, where all works worked on recovering valuable metals from wastewater.

**Yatsuyama** In the waste oil recycling we have cultivated since our founding, we have developed technologies to blend recycled fuels to adjust the calorific value and composition according to customer needs, which is now one of our main businesses.

Hasegawa Daiseki contributes not only to resource collection but also to environmental protection. Our activated sludge treatment facilities, which purify wastewater using microorganisms, operate microorganisms with unparalleled capabilities while conducting large-scale water treatment. With a processing capacity comparable to that of government sewage treatment plants, Daiseki handles highly contaminated wastewater that customers cannot process. Both our technology and microorganisms have evolved to handle this.

### Technologies needed for Daiseki's future

#### What are the strategies needed for continued growth and development from a technical perspective?

**Kondo** Reflecting back, I think that the waste oil recycling that Daiseki established more than 50 years ago was the start of the circular economy.

**Nishita** In order to establish the circular economy as a business in the future, I think that one of our priority issues will be to research and develop technologies for "separation."

Hasegawa For example, by involving ourselves in the supply chain and production planning of manufacturing industries, we could also engage in developing materials and processes that make products easier to sort and disassemble at disposal.

Tokuno It is also essential to involve businesses with different technologies and attempt to fundamentally change the systems of manufacturing and recycling.

Yatsuyama In the Kyushu area, where I am and the semiconductor industry is thriving the content of waste changes over time. We intend to design more versatile processing facilities in anticipation of future needs.

Isomura Just as Daiseki's engineers have carried forward technology to the next stage, it is urgent to enhance the education, facilities, and work environment for the younger members who will carry on the future.

Nishita What I want to pass on to the future is Daiseki's deeply ingrained spirit of not wasting. We always seriously consider how any waste can somehow be recycled.