# INTEGRATED REPORT 2022



DAIDO STEEL GROUP Beyond the Special

# **Daido Steel Way**

The Daido Steel Group aims to enhance corporate value by practicing the Daido Steel Way (corporate philosophy structure), which systematizes its vision and the basis of its actions.



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#### Editorial Policy

As a reporting tool to explain its efforts to contribute to sustainable development from a long-term perspective based on ESG, Daido Steel Co., Ltd. initially published an Environmental Report, which was replaced in 2006 with the CSR Report, and then in 2020 with the Daido Steel Sustainability Report. From 2021, we have enhanced our report coverage with an Integrated Report that can comprehensively communicate the Company's value creation process, strategies, and materiality progress for realizing an increase in corporate value in the medium to long term, as well as the Company's initiatives in general, with further enhancement made in 2022.

We expect the readers of this report to be the Company's stakeholders (customers, local communities, shareholders/investors, suppliers, employees, etc., all persons related in company business), public institutions, media, and educational institutions, etc. The scope of this report covers Daido Steel Co., Ltd. and its group companies, and mainly contains information related to "strategy" and "sustainability" from a long-term perspective.

# We will provide "value that goes beyond the special" and carve out a new path to the future as a leading specialty steel company

Specialty steel refers to steel that possesses special properties. By recycling scrap iron and breathing new life into it, the steel is reborn into new products. The Group also contributes to reducing weight, increasing strength, enhancing corrosion resistance, and expanding the life of products. As our products are used in harsh environments that normal steel cannot withstand, the Group supports the development of people's lifestyles and society. By providing "value that goes beyond the special," the Daido Steel Group contributes to the realization of "a green society" through co-creation with all stakeholders and aims to enhance sustainable corporate value.

#### **Reporting Period**

April 1, 2021 to March 31, 2022 (includes some fiscal 2022 activities and past results)

#### **Referenced Guidelines**

GRI "Sustainability Reporting Standards" IIRC "International Integrated Reporting Framework" Ministry of the Environment "Environmental Reporting Guidelines 2018"

#### Publication Date

September 2022 (last published in November 2021)

## **Business Direction for Corporate Value Enhancement**

Looking toward carbon neutrality in 2050, the Group aims for a 2030 vision to "Pursue high-performance specialty steel and contribute to 'realization of a green society.'" In the 2023 Medium-Term Management Plan, the Group has designated boosting earning power and ESG management promotion as important initiatives. We will further strengthen our relationship with stakeholders and make efforts to realize our vision together.



# **Carbon Neutral Post-SDGs**

2050

## Strategy Aimed at Enhancing Medium- and Long-Term Corporate Value

### **Boost earning power**

Daido Steel is making efforts to achieve high added value and executing three actions to expand profit.

Pursuit of

Profitability

Boost

earning power

#### 1. Expand the business in growth areas

We focus on research and development of new materials in fields expected to see large growth coincide with revolutionary changes, such as mobility and energy, etc., in order to realize carbon neutrality. We will implement testing machines that allow the evaluation of materials based on new application environment and aim to achieve practical use of the new materials.

Growth areas			Semiconductors	Green energy	
Initiatives	Development and expansion of products to meet new demand, such as magnets and sensors		Expansion of special melting and difficult-to- process products by manufacturing technology improvements	Supply of competitive products and high cleanliness steel	
Applications	e-Axle gear reducers Motors		Semiconductor manufacturing equipment	Hydrogen/ ammonia-related manufacturing	Bio-mass-related manufacturing
Materials to develop and expand sales	Steel material for gears Magnets and soft magnetic materials		Stainless steels, superalloys	Stainless steels, superalloys	Stainless steels, superalloys
Testing equipment High peripheral speed testing equipment: Operational in 2022 Under operation		Gas erosion testing equipment: Implemented in 2022	Embrittlement testing equipment: Operational in 2022	Corrosion testing equipment: Under operation	

#### 2. Strengthen business agility

In order to strengthen resilience against external environmental changes and expand the presence of existing businesses, the Company is making efforts to improve production efficiency, reduce costs, and improve labor productivity through various investments.

Calas	Secure appropriate margins
Sales	Portfolio reform (expand high income products)
	Secure production flexibility (improve production efficiency, diversification of raw material)
Manufacturing	Strengthen production capabilities of high performance materials and difficult-to-process materials
	Pursue cost reduction (concentrate manufacturing sites, improve yield, laborsaving)
Damaganal	Optimal allocation and optimization of personnel
Personnel	Laborsaving through DX and RPA promotion

#### 3. Expand further overseas business

Aim to expand sales of high-performance stainless steel, superalloys, and tools steel overseas, primarily in East Asia market. Taking advantage of the acquisition of all equity in TimkenSteel's subsidiary in China in July 2021, Daido Steel aims to further deepen collaborative relationships with TimkenSteel, improve the portfolio by expanding volume of high-performance products, tap into new areas, such as growth markets in China and India, and create mainstay products out of growth products such as superalloys. Also, the Company is expanding the overseas sales channels with the Shibukawa Plant as a production hub and constructing a strong supply chain. We will make efforts to further expand the supply chain, including entering new areas

In order to contribute to realization of a green society, it is crucial to push the "2023 Medium-Term Management Plan" forward, which is centered on boosting earning power and ESG management promotion.

### ESG management promotion

As the environment grows increasingly uncertain, we are enhancing our ability to respond to risks caused by environmental changes by strengthening ESG promotion.

#### E: Endorsement of TCFD recommendations

Pursuit of

Sustainability

**ESG** management

promotion

Daido Steel considers the response to climate change as one of the important management issues in order to realize the management philosophy of "pursuing the potential of materials to support our future." As part of this, we enacted the "Daido Carbon Neutral Challenge" and took on initiatives aimed at reducing CO<sub>2</sub> emissions by 50% by fiscal 2030 (compared to fiscal 2013) and achieving carbon neutrality by 2050. In November 2021, Daido Steel announced an endorsement of the TCFD recommendations and disclosed information in June 2022. Based on the TCFD recommendations, we will further strengthen governance, clarify strategies, and clearly explain the risks and opportunities that climate change brings to our business as we make efforts to further enhance information transmission and disclosure.

#### ESG: Creation of supplier partnership system

G: Strengthen governance structure As of April 1, 2022, Daido Steel changed the name of the "CSR Committee" to the "Sustainability Committee" and established a "Sustainability Promotion Section" in the Corporate Planning Department on the same date. Following the approval of the General Meeting of Shareholders in June 2022, the Company transitioned to a company with an Audit & Supervisory Committee to further strengthen the auditing function across the entire business and further enhance corporate governance.

ESG: Participation in various initiatives and endorsement of partnerships To boost cooperation with stakeholders, Daido Steel has endorsed the TCFD recommendations and the "GX League Basic Concept" by the Ministry of Economy, Trade and Industry regarding climate change, the Company participates in the "30 by 30 Alliance for Biodiversity" administered by the Ministry of the Environment regarding biodiversity, and the "Challenge to 30% by 2030" by the Japan Keidanren regarding the advancement of women. Also, on the global stage, the Company signed the "2022 Sustainability Charter" of the World Steel Association, which the Company belongs to as a member with its commitment to the practice of sustainability management and reporting initiatives fitting the Charter.



Ministry of Economy, Trade and Industry "GX League Basic Concept"

#### ESG: Communication with stakeholders

The Company identifies stakeholders according to the chart on the right and is striving to improve management and business execution through communication

As an organization that manages the relationship with all stakeholders, the Corporate Communication Section was established under the Corporate Planning Department.

In order to strengthen the coordination with suppliers in fields of resources, equipment, and materials used in factory equipment, Daido Steel began a new partnership system, "DSP: Daido Supplier Partnership," along with 200 major suppliers. We will promote responsiveness to SDGs and enhancement of cost competitiveness by streamlining information sharing to promptly respond to market environment changes. We will also construct a win-win relationship by responding to business partner requests.





Japan Keidanren "Challenge to 30% by 2030"





Administrative office: Ministry of the Environment "30 by 30'

World Steel Association Sustainability Charter

Stakeholder	Communication example		
Customers	Customer satisfaction survey		
Local communities	Cleaning activities, firefly viewing parties, etc.		
Shareholders and investors	IR reporting meeting, ESG reporting meeting		
Business partners	Partners meeting		
Employees	Interviews, work satisfaction surveys, labor-management discussions		

With proud of our specialty steel, we will achieve value creation that goes beyond the special along with all our stakeholders



### Aim to "realize a green society" by co-creation with stakeholders

For the sustainable operation of our company, I think the most important factor in the materials industry in particular is "trust." We must be sincere all the time to gain this trust. It is natural for a company to aim to boost profits. However, that is simply a tool. The objective of company management should be to create something using this profit. We can contribute to our goal of "realizing a green society" through co-creation with our stakeholders. It is important to gain trust from not only customers, but also all stakeholders, such as local communities, shareholders/investors, business partners, and employees. This is why we manage daily operations while keeping in mind that the most important factor is to act sincerely.

For example, when I began my career in sales, I learned from a senior colleague that I shouldn't do anything that I cannot tell others. Can I tell others what I do? This was my standard for decision-making. This varies by person as everyone has a different perspective of ethics, which forms common sense. Therefore, I make efforts to ensure that my perspective does not stray from the societal norm, and it is critical to understand how I can expand my perspective to a higher level. In order to achieve this, we must carry out a process of each

employee expressing their thoughts and diving into discussion so we can reach an awareness that captures societal sentiment. Based on our long-term slogan to be "a nail that sticks out,"

### Personnel training and diversity

Along with this corporate culture, we consider the training of professional personnel to be important. Because we want to deepen the specialty of personnel who can work as key persons in management, we have not conducted personnel transfers as often the past three to four years. In the past, we would transfer personnel based on their number of years of experience. We have shifted away from deciding transfers based on years to rather making decisions based on an awareness of the individual's specialty and strengths. In the development of professional personnel, it is important to be aware of personnel who are fixated on their own specialties and possess a mindset that does not accept changes in the world. A mindset that is not only not afraid of change, but that changes along with it can be the driving force behind boosting we have maintained a corporate culture where it is easy to express one's opinions. In their areas of specialty, we have asked employees to speak freely and foster a corporate culture that increases the opportunities to utilize such opinions.



earning power. Therefore, personnel in the position of general managers and higher should possess this mindset in particular. Currently, we have made some progress in developing professional personnel. However, there is a gap between the generations with many and few personnel, so one issue has been to increase the experience of generations with fewer personnel.

The Company considers diversity an issue and has prioritized increasing the number of female hired and employee retention rate in particular. We must establish, for example, a comfortable working environment for women to solve this issue. We believe that improving workstyles and promoting diversity can benefit not only female but also male employees and may lead to securing and retaining personnel.

### Accelerate initiatives toward carbon neutrality and circular economy

As a company supplying specialty steel, carbon neutrality and circular economy are two important fields for us to contribute to realizing a green society.

Regarding carbon neutrality, we are making efforts to reduce CO<sub>2</sub> emissions by 50% by 2030 (compared to fiscal 2013) and realize carbon neutrality by 2050, goals established in the "Daido Carbon Neutral Challenge."

Regarding Scope 1 and 2, in the operation of factories we expanded the usage of high efficiency combustion technology and other existing energy saving technology, boosted the percentage of  $CO_2$  free power usage in the Nagoya area from 10% in fiscal 2021 to 20% in fiscal 2022, began operation of a solar power generation plant from September 2022 in Shibukawa Plant, and adopted other measures to reduce  $CO_2$  emissions. From now, we will focus on reducing Scope 2 emissions, such as increasing the percentage of  $CO_2$  free power usage 10% each year.

Regarding Scope 3, we will focus on high-performance products that support development of mobility and advancement of semiconductors as well as the development of stainless steel and superalloys for manufacturing equipment of green energy, such as hydrogen, ammonia, and bio-mass. We will also contribute through the reduction of CO<sub>2</sub> emissions from customers and consumers. Going forward, we will also reduce  $CO_2$  emissions of purchased goods through co-creation with suppliers.

In order to accelerate these efforts, Daido Steel declared an endorsement of TCFD recommendations in November 2021 and began information disclosure in June 2022. Further, in March 2022, the Company endorsed the GX League Basic Concept by the Ministry of Economy, Trade and Industry and will participate in the discussions of detailed plans. While many standards and rules for carbon neutrality are being formulated, we plan to discuss with stakeholders as we search for a path forward.

Regarding the circular economy, Daido Steel recycles scrap iron as a main raw material and significantly contributes to the cycle of resources, including iron and nickel. In order to maximize this effect, we believe it is extremely important to properly collect and classify scrap iron in each grade and maximize the recycling rate. We are engaged in capital expenditures to realize this. We must also make efforts to recycle rare earth elements that can only be mined in certain countries and regions to reduce the risk of relying on these areas. Daido Steel will keep a close eye on the global circumstances while grasping the resource cycle from a multifaceted perspective and making efforts for the resource cycle.



Regarding DX (Digital Transformation), Daido Steel is making various investments in manufacturing, such as introducing operation visualization and remote management systems at the Chita Second Plant. The Company currently conducts surveys to categorize types of specialty steel based on the perspective of skilled workers. In the future, we believe that it will be necessary to introduce analysis equipment to take the place of this, and to develop methods using Al to lead to optimal solutions for customer needs. Currently, when customers request some new properties on specialty steel, we decide how to respond based on in-house data and the knowledge and experience of employees relevant to the data. Creativity based

Reduce CO<sub>2</sub> emissions by 50% compared to FY2013

Toward 2050

Toward 2030

Aim to achieve carbon neutrality

in line with the development of decarbonization technologies and infrastructure

**Carbon Neutral Challenge** 

**Daido Carbon Neutral Challenge** 

-Pursuing the potential of materials to support our future-



on employee knowledge will continue to be necessary while it will become increasingly important for human abilities and digital capabilities to complement one another.

Boosting productivity of corporate operations is more important than even manufacturing and development. Furthermore, the number of issues that need a companywide approach has been increasing due to the development of regulations and guidelines accompanying heightened expectations for companies to solve social issues. We believe it is necessary to achieve this by increasing productivity through DX and optimizing organizational structure without increasing personnel.

### Future of specialty steel and business portfolio transformation

The properties required of specialty steel have changed along with the evolution of the automobile. For example, if through DX automobiles are completely guaranteed not to crash, they only need to have the durability to hold the weight of passengers and goods, and withstand any acceleration/ deceleration, cornering, or vibrations that may occur. In this case, the characteristics required of components that comprise the automobile will also change. In that sense, materials manufacturers will need to provide materials that can respond to structural changes in automobiles. With the progress of DX, there may be an acceleration in replacing the real with the metaverse and a spreading attitude that the minimum acceptable quantity would only be needed for real items. Even under these circumstances, the world that requires real items, such as heavy industries, will continue to exist and there will still be possibilities for specialty steels.

Our current portfolio has a high percentage of products for the automobile industry. However, looking toward 2030 and beyond, we must further deepen the discussion on how to change this. Our missions are to respond to the electrification and autonomous operation of automobiles, and develop and supply high-performance materials that are required for the green energy business, energy efficiency improvements, and compliance with strengthened environmental regulations. As such, we need to greatly increase the percentage of our nonautomobile business.

On the other hand, Daido Steel and Japanese companies as a whole can still make improvements in our response to global standards. For example, we developed materials for airplane jet engines that boast top global property. However, our materials are still not used by many overseas engine manufacturers because they don't have experience using our developed materials. In order to solve this issue, while looking closely at social circumstances we will not only further deepen our communication with overseas customers so that we don't overlook business opportunities, we will also adopt a strategy to take the lead in development with a team of Japanese customers.

### Pride in specialty steel and "value creation that goes beyond the special"

When I became in charge of sales at an automobile company, I remember a senior colleague often telling me that the "competitiveness of automobiles is dependent on our specialty steel." That means "Go sell with that level of pride." This colleague was telling me not to forget my pride in delivering specialty steel that met various customer expectations, such as making components lighter and smaller, or durable enough to withstand high output, in addition to QCD (Quality, Cost, Delivery).

There are various factors in specialty steel, including hardness and tensile strength. I believe that it is important to discuss with the customer after properly understanding what this means to the customer and what merits it can give to the customer's product so that you can achieve co-creation with the customer rather than pushing ahead with one's own ideas. Through this communication, we hope to achieve "value creation that goes beyond the special" and surpass customer expectations.



# DAIDO STEEL GROUP Beyond the Special

In 2016, on the occasion of the 100th anniversary of the company founding, the Daido Steel Group established a Group logo for the first time in its 100 year history to achieve a sense of unity. The Daido Steel Group also established the slogan "Beyond the Special" to express our desire to be a Group in which each employee provides "value that goes beyond the special" to continue to passionately support people and society.

Also, in the steel industry, CO<sub>2</sub> emissions from electric furnaces are on the lower end. We believe it is our mission to master the electric furnace process to realize a green society. We will earnestly face changes in the global environment and society, as well as remain faithful to commitments to various stakeholders, including customers, local communities, shareholders/investors, business partners, and employees, etc. In order to continue to be a company needed in society for many years, we will proceed without halting the evolution of sustainability management. We ask for the continued support of all stakeholders.

## **106-Year History of Daido Steel and** Its Relationship with Society

Throughout its long history, steel has continued to support a wide range of industrial fields. Even in our current era, where the structure of industry is on the cusp of a tremendous transformation, steel has great latent potential. As a high-performance material in the development of the IT field and electrification technologies, steel, and the electric smelting process using steel scrap, are expected to be gentle on the environment, which is the ultimate recycling scheme. Daido Steel Co., Ltd.'s history began in the early 1900s, a time of intense focus on building social infrastructure, when Momosuke Fukuzawa, an early proponent of the important role of electricity, started an electric steel manufacturing operation to make effective use of electric power. Subsequently, the Company overcame numerous difficulties, such as adverse business environments and the adoption of new technologies, amid a stream of various events including two world wars, Japan's post-war recovery and high economic growth period, the oil crisis, the global financial crisis of 2008, and the Great East Japan Earthquake. We learned lessons from all of these events, honed our technologies, and contributed to the development of society.

Today, the role that society requires the Company to play is expanding significantly, including aspects such as contributing to the global environment. Daido Steel will provide products and solutions that contribute to sustainable global growth as a leading company in the specialty steel sector. We will also step up our initiatives for achieving SDGs by pursuing environmentally friendly manufacturing processes.

### Net sales (FY1971 - FY2021)

Merger of three companie (Daido Steel Co., Ltd., Japan Special Steel Co., Ltd. Tokushu Seiko, Ltd.)

Land and the second

Change of fiscal year-end (June 30 to March 31)

### Foundation 1916-1951

Sar A. IT.

#### Growth stages

#### The Potential of Electric Arc Furnace Steelmaking Emerges as a Strategy for Utilizing Hydropower Resources

As Momosuke Fukuzawa promoted the development of the Kiso River as an electricity source, he commercialized an electric arc furnace steelmaking operation using electric power, giving birth to the Company's specialty steelmaking predecessor, Electric Steel Manufacturing Co., Ltd.

The Company started by manufacturing alloyed steel and forged steel products, as well as electric arc furnaces, and expanded through munitions. As the end of the war arrived, the Company's survival depended on changing to meet private-sector demand.



One of the Company's precious assets: a 1.5 ton L-type arc furnace (Certified as "Heritage of Industrial Modernization" by the Ministry of Economy, Trade and Industry)

#### Social conditions

 Introduction of industry promotion
 Introduction of modern industry • Two v

### Development 1952-1963

#### Anticipating the New Era, a Decision to Build the Chita Plant

On the cusp of Japan's period of high economic growth, having repositioned itself to meet private-sector demand, the Company pinned its future on the construction of the Chita Plant. Through the streamlining of facilities, the Company strengthened its production framework and enhanced its management, meeting growth in demand for specialty steel driven by motorization.



Began operation of the Chita Plant in October 1962

### Integration 1964-1982

#### Merger of Three Companies to Create One of the World's Largest Dedicated Specialty Steel Manufacturers

The 1964 Tokyo Olympics and the openings of the Meishin Expressway and the Tokaido Shinkansen helped to expand demand for specialty steel. However, the specialty steel industry suffered under the impact of the second oil crisis.

Daido Steel, Japan Special Steel, and Tokushu Seiko merged to create a new Daido Steel, as the Company embarked on a new journey as one of the world's largest dedicated specialty steel manufacturers



In September 1976, Daido Steel, Japan Special Steel, and Tokushu Seiko merged, forming a new Daido Steel

 Japan's high economic growth Two oil crises

### Advancement 1983-2004

1971

1980

#### Strengthening Competitive Capabilities and Expanding Globally

Eyeing the global market, the Company took steps to further strengthen its competitive capabilities in terms of quality, cost, and lead time, using proprietary technologies such as the No. 2 continuous caster (No. 2 CC) at the Chita Plant. We developed new products and actively worked to expand new businesses, establishing overseas offices and promoting our global expansion



round cross section continuous caster (No. 2 CC) in 1992

• Plaza Accord

### Challenge 2005-2016

1990

\* Consolidated from fiscal 1984

Amid a rapidly changing economic environment, the Company continued to shift its emphasis from quantity to quality, returning its focus to creating products and developing people through "Daido Monozukuri Kaikaku" (DMK) activities. By strengthening Group management and

building stronger internal and external collaboration, the Group worked together as one to step boldly into the new century.



September 2004 Launch of the Daido Monozukuri Kaikaku (DMK) Project



### 2017 to Present

#### Manufacturing Reforms and Stronger Group Management for a New Century

August 2016 100th founding anniversary of Daido Steel

Contribute to realizing a green society by providing products and solutions that contribute to sustainable growth of society and pursuing environmentally-friendly manufacturing processes

 Post-COVID-19 Decarbonized societ

## Overview of Daido Steel Group (Displaying entered markets in orange)



The Company has five business segments which conduct wide-ranging business activities on a global scale.

#### Specialty Steel

The segment produces and sells structural steel, tool steel and others, mainly for use in automobiles and production machinery.

## High Performance Materials and Magnetic Materials

The segment manufactures and sells high-performance materials and magnetic materials used chiefly in automobiles, computers, mobile phones and consumer electronics.

The segment manufactures die forged parts such as crankshafts using specialty steel, precision cast parts for use in turbochargers, as well as engine valves, jet engine shafts, and parts for gas turbines.

### Engineering

The segment's activities include the design and manufacture of, and related after-sales services for, melting and refining equipment, vacuum carburizing furnaces, heat treatment furnaces for auto parts, environmental equipment, and machine tools.

United States 

**Specialty Steel** 

22

High Performance Materials and Magnetic Materials

## 16

#### Trading and Service

The segment conducts sales of products made by Group companies, employee benefits services, real estate and insurance services, golf course management, analytics, and sales of software to external customers.

## **Relationship of Daido Steel and Society**

The Daido Steel Group supplies society with steel-related products for a wide range of fields, such as specialty steel, high-performance magnets, and industrial furnaces.

While not often seen by the general public, these products are used in automobiles and aircraft as well as various industrial sectors, helping to support people's lives and the development of society.

### Specialty Steel

## Parts for Automobile and Industrial Equipment

#### Gear steel

Gear steel combines high strength with durability to realize smaller, lighter automobile transmissions, helping to reduce environmental impacts such as CO<sub>2</sub> emissions.

#### Parts for Automobile and Industrial Equipment

#### Soft magnetic powder for reactors

Step-up reactors increase the voltage of batteries for hybrid vehicles. The iron core is formed from soft magnetic powder developed by Daido Steel, and can store a large quantity of energy. It also reduces energy loss and helps to reduce power consumption of the battery.



# arts for Automobile and Industrial Equipment

#### Jet engine shaft alloy

High-strength shafts with excellent durability help to reduce fuel consumption and increase the power output of aircraft jet engines, supporting safe air travel.

#### ligh Performance Material and Magnetic Mate

#### Medical titanium

Titanium has excellent properties such as being lightweight, non-magnetic, and bio-compatible. We provide materials that respond to various needs in the advancing medical field

#### High Performance Materials and Magnetic Materials

#### Neodymium hot deformation processed magnet MQ3

These ring-shaped magnets combine high magnetism with corrosion resistance, helping to realize quiet, smooth movement for industrial robots and contributing to the electrification of automobiles.



1111 1111

Daido Steel is striving to reduce weight, enhance strength, enhance corrosion resistance, and lengthen life-spans of various products to contribute to the reduction of CO<sub>2</sub> emissions in the world.

#### Ultrafine stainless steel wire

Thinner\*, stronger, high-precision steel wire supports the advancement of a digital society.

\* We manufacture stainless steel wire that is 11 microns in thickness, much thinner than human hair (approximately 50-100 microns).





#### Engineering

#### Vacuum carburizing furnace "SyncroTherm®"

Makes automobile components stronger and more lightweight by heat treatment by vacuum carburizing techniques, achieves small-lot production and ultimate on-demand, and supports smart factories.



## Parts for Automobile and Industrial Equipment

#### Turbine wheel

Proprietary methods realize materials enabling thin forging and improved thermal resistance which are used for the central section of turbochargers that increase automobile fuel efficiency.



### Parts for Automobile and Industrial Equipment

#### Turbine disk

Power generator parts with high thermal strength, high corrosion resistance, and high durability contribute to improved efficiency and stable supply of electrical energy.



### High Performance Materials and Magnetic Materials



Daido Steel's Value Creation Story

## Value Creation Process

## **Pursue high-performance specialty** steel and contribute to "realizing a green society" in 2030

Since the founding in 1916, the Company has, along with the customer, continued to conduct manufacturing that contributes to innovation that society needs. Through manufacturing that maximizes the diverse management resources held by the Company, we aim to improve corporate value while progressing with ESG management that realizes a sustainable society. Daido Steel will continue to be a company that generates "value that goes beyond the special" under the banner of the slogan "Beyond the Special" to exceed stakeholder expectations.



#### Daido Steel's Value Creation Story

Discussion Between Outside Directors and Chairperson of the Board of Directors, Representative Executive Director **Raising Corporate Value of Daido Steel** 



Left to right: Chairperson Tadashi Shimao, Outside Director Mutsuko Jinbo (President at Daido University), Outside Director (Audit & Supervisory Committee Member) Kenji Matsuo (Honorary Advisor at Meiji Yasuda Life Insurance Company), Outside Director Ryoichi Yamamoto (Director at J. Front Retailing Co., Ltd.) Looking towards the increase in corporate value of the Company, Chairperson Shimao and three outside Directors had a discussion.

Looking towards the increase in corporate value of the Company, Chairperson Shimao and three outside Directors had a discussion.

# Please describe your role as an outside Director and your impression of the corporate culture of Daido Steel.

Yamamoto I am strongly aware of my position and role as an independent outside Director. Through the Board of Directors, I tend to get involved in management and business execution, but I feel that it is important to monitor management from the shareholders' perspective and position. Therefore, I say what needs to be said without conforming to management.

I was really impressed with how easy to understand the Board of Directors meeting materials are at Daido Steel. The conclusion is at the start and the reason follows it with a simple summary. However, since it is difficult to understand all of the expert topics at once, I think that it would be better to distribute them beforehand. This would allow us to take the time to read them, prepare, and have even more effective discussions.

**Matsuo** Like Director Yamamoto, I also feel that the Board of Directors meeting materials are simple and easy to understand. They are extremely important to invigorating our discussion. I think the role of monitoring is extremely important for outside Directors. I will continue to use my experience as President to urge management to carry out careful deliberations while asking whether our management strategy fits social trends or if there are aspects that are running counter. It is also important to respond to shareholder expectations, grasp the trends in sustainability compliance as brought about by the revision of the corporate governance code, and keep in mind what leads to business growth and the deepening of ESG initiatives. **Jinbo** I have worked as a researcher and am currently a president at Daido University. From the perspective of a researcher, I get the impression that researcher speed at Daido Steel is different from other industries. For example, researchers in Daido Steel are relatively slow-moving and have longer timelines compared to researchers in electronics manufacturers since those researchers are urged to produce

# Please share the issues discussed as important agenda in the Board of Directors meetings.

Shimao As our materiality, we have targeted the realization of a green society through business activities and providing products. Our main focus is on carbon neutrality. As many issues and uncertainties exist, it is extremely difficult in terms of cost to balance both financial health and the generation of innovative technology that can be implemented in society. Yamamoto I think Japanese companies traditionally are good at producing good products at a low cost. On the other hand, European and US companies tend to have the ability to price products based on the added value. Japanese companies should also learn this method. I think Daido Steel should be more aware of the added value in our products. Shimao Our company changed its thinking that profit and added value were secondary factors after 2000. This is symbolized in aircraft jet engine parts and semiconductor manufacturing equipment materials. We have now shifted toward a portfolio that increases profitability and reflects added value in price.

**Matsuo** In order to prevent global warming and a sustainable society, we must shift away from mass production to the production of high-quality and highly durable products at appropriate quantities. The High Performance Materials and Magnetic Materials segment produces high profit margin products with high added value. However, we are aiming higher.

Also, the PER 5.5x or lower and PBR 0.5x or lower evaluations

results each time. That is good, in a sense, because it is important to have a long-term perspective, particularly for the materials world.

On the other hand, in recent years, there have been cases where new overseas technology has been replaced quickly to existing one, even if a company secures market share in and outside Japan. Even the competitiveness of semiconductors, for which Japan has maintained the top market share, is declining. Based on this example, it is important for the sustainable growth of the Company to continue to constantly generate competitive products through daily research and development. The Company can utilize researchers' knowledge to produce new technology and products, including materials and motors that carry more importance in responding to environmental changes such as carbon neutrality.

from capital markets prove there are no full expectations of stable future profit growth. I think we should highlight more the growth prospects of the company and that electric furnace are better at lowering  $CO_2$  emission than blast furnaces.



#### Daido Steel's Value Creation Story

Discussion Between Outside Directors and Chairperson of the Board of Directors, Representative Executive Director



**Shimao** I do regret that I haven't been able to make external appeals in the past decade. The decline in our name value can be seen in our numbers like hiring. We have begun efforts to change our organization and be more proactive in terms of PR and information transmission.

**Matsuo** The disclosure of sustainability information has become very important to the outside. If our information disclosure is insufficient, people may think that we are not taking any action. I would also like to be more conscious of information transmission to stakeholders.

Jinbo Information disclosure is also important from a perspective of securing human resources. There has also been a trend toward DX in recent years. We are primarily recruiting students in the sciences in IT fields. As a B2B company, it may be difficult for students to know about our company. In order to secure highly skilled human resources, we must proceed with persuasive information disclosure and PR activities.

with the implementation at J. Front Retailing, but it is extremely difficult to establish job-based employment in Japan. I think Daido Steel will need to consider how to take on this challenge in the future.

Jinbo I urge the company to be conscious of proactive information gathering in the promotion of the medium-term management plan. Companies with good results, in particular overseas companies, are proactive in gathering information. For example, although you might hesitate to have an overseas business trip due to incurring expenses, attending an international forum in person may be very helpful in gaining information because you can see which sessions receive the most interest from listeners; that is something that you cannot discover by just watching the session proceed remotely. In terms of human resource development, we can expect the effect of expanding experience and networks.

It may be good to think of information gathering as an investment rather than a cost.

# What are the key points in the promotion of the medium-term management plan?

**Yamamoto** It is an issue that the company has not visualized the degree to which human resources have been secured in the succession plan to expand the business in growth areas. We have not properly verified whether we have the proper personnel to promote the strategy to realize the 2030 vision.

When talking with overseas analysts, I am often asked whether the next-generation management talent is in place to execute a medium-to-long-term strategy. In an uncertain modern society, developing management personnel with strategic thinking to drive innovation is only possible if a highly sophisticated training system is introduced. The Company should invest more in creating an HR system that can strengthen human resource development and secure diverse human resources.

**Shimao** For the development of executive officers who will lead the next generation of Daido Steel, we are carefully selecting candidates and training them with the help of external consultants. However, Company employees and members of Group companies bear many similarities, making it difficult to generate new ideas. I would also like to consider the option of training that includes interactions with outside parties.

Matsuo There has been a change in human resource

evaluation methods in recent years. To avoid being tainted by personal relationships, evaluation has shifted from a oneway review from boss to subordinate to a more multifaceted approach that takes a comprehensive assessment given by various people to create a more accurate picture. Transparency in governance is especially demanded in the selection of management personnel. There are also examples of companies that disclose the 360 degree evaluations and quantitative evaluation scores to the nomination committee. I think it is good to target optimization of HR evaluations because there are cases where the evaluation of a boss and a subordinate are different.

**Yamamoto** In overseas, HR evaluations based on academic evidence and explanations of results have become common. When considering future labor issues, it is also important to consider how to boost the careers of the employees whose tasks will be eliminated by DX. We are no longer in an era where everyone is guaranteed promotion. The approach each employee designs their career path should be changed to draw the career path with the guidance given by their boss to the subordinate. To achieve this, we should be aware of the implementation of job-based employment, which is based on the autonomous career development of employees. I struggled

# Please evaluate the transition to a company with an Audit & Supervisory Committee.





- **Matsuo** As an Audit & Supervisory Committee Member, the communication with management has increased, narrowing the distance between the members and the management team. The communication with officers in charge has also increased. The Audit & Supervisory Committee also receives reports from the Internal Audit Division each month and performs various surveys after grasping the situation. I think this will strengthen our monitoring function.
- Yamamoto I also think that this transition was a great decision as the intention of top management became clearer. I highly evaluate Daido Steel's decision to make this transition to become a company with an Audit & Supervisory Committee even though the current company structure was still allowed to exist. The company made great progress in ensuring the effectiveness of audits and other operations by having Audit & Supervisory Committee Members with voting rights on the Board of Directors that have an independent perspective. I have great expectations for this.
- **Shimao** The Company will strengthen the auditing function across the entire business and further enhance corporate governance. We will also use the feedback we received today to make improvements in areas that need to be reviewed and to enhance our corporate value.

### **Sustainability Management**

Trade-ons between contributing to the environment and society, and business model transformation through backcasting from 2030 comprise our vision of sustainability management



Tsukasa Nishimura Representative Executive Director, Executive Vice President

#### What is sustainability management?

Since the high growth period in Japan, raising profits has been prioritized for the "survival of companies." However, in recent years, fulfilling social responsibility by preserving the global environment and respecting human rights has become a prerequisite for company survival. Fulfilling social responsibility is the most important requirement for companies to survive. It is the central pillar of management for companies to grow consistently.

Understanding the framework of sustainability as preservation of the global environment (E), fulfillment of social responsibility (S), and corporate governance (G), E remains the biggest issue for the future and the survival of humankind. S is next in importance followed by G. Incorporating all three in corporate management, identifying important issues (materiality), and enhancing transparency and effectiveness are a must. At the same time, our concept of sustainability management includes transforming the business model to fit the times while looking closely at changes in the external environment in order to boost earning power. We established the Sustainability Committee in April 2022 to firm up this foundation. This committee discusses issues regarding sustainability, reports to the Board of Directors, and spreads the results of these deliberations not only inside the company, but also to the overall supply chain.

### Challenge toward carbon neutrality

As Environment (E) initiatives, it is important to address global warming and contribute to a circular economy. Reducing CO<sub>2</sub> emissions bears high costs, but the Company will not survive if we do not change our mindset to view these costs as "investment required for sustainable growth." Corporate management in ten years from now won't simply be an extension of today. The values demanded of companies will change along with the changes in the environment, including global warming. The ruler that measures the value of companies is changing. In addition to the past financial statements (earning power), a company's efforts toward ESG

management are also viewed as important. Even if there are no direct returns right now, it is important for management to care for the environment as an investment for the future and to turn the wheel in that direction.

Currently,  $CO_2$  emissions in Japan is 1.1 billion tons year, with the steel industry comprising 150 million tons of this. The emissions of Daido Steel is approximately 1 million tons of this, around 0.1% of the total emission in Japan. We view this 0.1% as an extremely high number. When considering how to reduce  $CO_2$  emissions across the entire steel industry, it is first important to note the difference between blast furnaces and electric arc furnaces. It takes two tons of CO<sub>2</sub> emissions to create one ton of iron in the blast furnace process. Electric arc furnaces are said to emit one-third of the CO<sub>2</sub> emissions of blast furnaces. While there is a high hurdle for blast furnace manufacturers to completely alter the blast furnace process itself, such as converting to hydrogen-based reduction process, the electric arc furnace process like in Daido Steel can reduce CO<sub>2</sub> emissions by a significant amount by utilizing CO<sub>2</sub>-free electricity since scrap is the main material and the bulk of CO<sub>2</sub> emissions is from Scope 2 electricity.

We can also grasp the reduction of  $CO_2$  emissions from a perspective of risks and opportunities. For risks, demand for specialty steel in automobiles, our mainstay product, may fall quicker than we can reform our business portfolio, and costs of carbon taxes may grow significantly higher for steel products that involve high  $CO_2$  emissions factor.

On the other hand, in terms of opportunity, there is a transformation in the business model through innovation that looks ahead ten years. For example, to prepare for when hydrogen becomes a major source of energy in the future, Daido Steel is making efforts to develop magnets for EV motors, which are expected to see higher demand, soft

### Cycle of iron

Daido Steel has made efforts in the cycle of water and iron to realize a circular economy, one other requirement of initiatives for the environment. Steel manufacturers such as ourselves require a large amount of cooling water because we produce much more heat than other manufacturing industries. As such, we have made efforts to recover and reuse industrial water and achieve a high rate of recycling. As a countermeasure against polluted water leaking outside the factory, we installed a drainage monitoring system, established more stringent internal rules than laws and regulations, and strengthened waste water management.

Why is the cycle of iron important? After the big bang and the creation of the universe, many elements were formed from the nuclear fusion reaction, and iron was formed at the end. In a nuclear fusion reaction, the weight of protons and neutrons in the nucleus fall gradually and change to energy (this is nuclear fusion energy). Iron, which is formed at the end, has the lightest protons and neutrons. The nuclear fusion of the big bang did not produce any element heavier than iron (elements heavier than iron were produced by the impact energy of supernova explosion). The final stop of the big bang's nuclear fusion was iron, making it the most stable element. That stability functions as an important material to support society

magnetic materials used in motor cores and for magnetic noise absorption, and specialty steel with higher hydrogen embrittlement resistance (metals becoming brittle after absorbing hydrogen). Since hydrogen has not been used much in social infrastructure until now, the embrittlement of materials due to hydrogen has not been a major issue. However, there will be an increasing need for measures against this as the use volume and environment changes. For example, it is necessary to store hydrogen in extremely high pressures and under various temperatures in hydrogen storage tanks, transport tankers, and hydrogen stations. Specialty steel with higher hydrogen embrittlement resistance is an extremely high cost material because only a few types have been certified for commercial application. Daido Steel will introduce new testing equipment, proceed with development and evaluation of materials where hydrogen can be used in various temperatures and pressure environments, and contribute to the development of necessary materials to bring hydrogen energy into society.

Despite the risks, there are also opportunities like these to utilize our technological capabilities and R&D capabilities. Swift response to risks and pursuit of opportunities through innovation will become increasingly necessary.



and is an indispensable element. One-third of the Earth is iron and there is approximately 200 billion tons of iron ore on Earth. Because approximately 2 billion tons of crude steel is produced each year, iron ore may be exhausted after 100 years. Iron ore also exists deep in the earth, but the amount that can be excavated from near the surface is much less. We must utilize scrap iron in the electric arc furnace process to always be able to tap into this precious resource. This is the ultimate future-oriented recycling process. On the other hand, the large amount of slag and dust that is a by-product of this process can be recycled as materials for roadbeds after the proper treatment, also reducing the amount that needs to be ultimately disposed. In fiscal 2021, the amount of by-product disposal was reduced to half of the levels of fiscal 2015. Sustainability Management

### Human resource development that creates value and respect for human rights

An important topic for contributions to society (S) is the development of human resources. Companies must take on challenges in new areas and create innovation. Therefore, Daido Steel will create a diverse workplace where women, foreign employees, and mid-career employees can be successful and contribute to the value creation of the company. For example, when we entered a new business for magnets, LED, and anode materials for lithium-ion batteries, we proactively hired outside human resources, and developed these mid-career employees as specialty professionals treated on equal footing with employees at existing business divisions. We will further proceed with these efforts. Regarding female employment advancement, while it is true that there are not many female managers, the Company aims to at least double this figure by 2030 and is accelerating HR structure construction to achieve this.

Also, there are complexities to the process of manufacturing specialty steel that make it completely unlike normal steel, making personnel development that supports manufacturing extremely important. Factory capabilities that construct specialty steel products according to design with high productivity and competitive costs are a large source of being able to provide customers high quality and performance products at an appropriate price. Our strong factory capabilities are demonstrated by top class safety records for the industry and a low turnover rate. These are the results of our education system that cannot be seen in other companies. We hold a one-year concentrated course at a vocational school for newly joined employees graduating from high school to acquire the mindset as a member of society and the necessary skills after being placed at a worksite. Even when there were strong demands from factories for early placement, we have continued this system for decades with a full year as the required period of education before placement.

However, occupational accidents have been on the rise recently. Young employees with only a few years of experience and operators with little experience at new worksites tend to have encountered accidents. This is due to less safety instruction from veterans. Unlike the past, veterans don't have the opportunities to completely educate unexperienced operators on each task. The level of safety education that was reached naturally in the past is now on the decline. In order to improve this situation, from fiscal 2021 Daido Steel created the "Safety Evangelist" system to position one or two retired or senior employees as instructors with the sole responsibility of educating safety to young employees.

We consider human resource development from a perspective of occupational accident prevention to be one initiative for respecting human rights. In addition to occupational accident prevention, our systematic efforts for health management, retirement age extension, and fair treatment will ultimately lead to the sustainable expansion of the company. Through these initiatives, we will achieve social responsibilities from a perspective of respecting human rights.

### Our own company culture rooted in diversity and independence

The company culture of Daido Steel is symbolized by diversity and independence. From the founding in 1916 until the current name of Daido Steel established in 1976, the Company had a long history of mergers. When I joined the Company in 1981, the merger of three companies had just occurred and the different corporate cultures of Japan Special Steel, Tokushu Seiko, and Daido Steel were all mixed in the Company. Ten years later, they had completely fused together to form a unique culture for Daido Steel.

Unlike other specialty steel manufacturers, we have continued independent management without having a parent company. Without any capital safety net, we guided management and developed a strong culture of independence.

The DNA following the mergers and establishment of

Daido Steel has been passed down into today. We have fused together diverse organizations to double or triple our power. Supported by a culture that values diversity and independence, our strength lies in our ability to effectively utilize and integrate diverse human resources while increasing mid-career hires.

However, it is not easy to maintain independence. Even under harsh environments, we must maintain a strong, independent grip of management. By providing special products with value that goes beyond expectations, Daido Steel has survived for over 100 years. This challenge mindset that treasures independence and diversity in a harsh environment is unique to the Company and further highlights the corporate message of "Beyond the Special."

# Making the supply chain sustainable

Sustainability in the supply chain is a major topic. First, we must reduce the CO<sub>2</sub> emissions of the suppliers where we procure materials. CO<sub>2</sub> emissions from materials (Scope 3) are estimated at around one million tons, the same as total of Scope 1 and 2. In 2022, Daido Steel established the "Supplier Partnership System." After explaining the details of our CO<sub>2</sub> emissions reduction activities to 200 suppliers, we requested that suppliers cooperate with efforts and provide data about the amount of CO<sub>2</sub> emissions produced in the manufacturing of the materials we purchase. However, there are not many large-scale suppliers. Most are small-scale suppliers that cannot achieve CO<sub>2</sub> emissions management at the same level as the Company. Therefore, we are working together to calculate emissions and make reductions.

Also, the steel industry has been called on to perform "responsible mineral procurement." Daido Steel is responding by expanding the supply chain and checking

### Backcasting from 2030

We will always reach a dead end if we consider the tradeoffs between these activities and revenue. Sustainability management requires a mindset of trade-ons by responding to the voice of customers and other stakeholders. If we only think about the present, there will be no future in ten years. However, we are focused on management that sets a vision for 10, 15, or 20 years into the future and uses backcasting to judge what must be done to achieve these visions. We began R&D of anode materials in lithium-ion batteries over ten years ago as the Company believed it would be useful in the future. This has led to our current materials development.

In 2030 and the years beyond, how can we contribute to society? What kind of product portfolio do we need? Further, what sort of product development or investment of limited resources should we do? By pursuing these, our vision can be achieved 10 or 20 years into the future. This is the foundation for sustainability management that can achieve healthy and continuous growth. It is a long time strategy to respond to a new period that is not simply an extension of the past.



if there are any issues with the minerals from a social perspective, including forced labor and child labor of cobalt mined in Africa, or Russian nickel recently. These minerals are an essential resource in enhancing the performance of products and cannot be completely eliminated. However, we are researching how to minimize the amount used while maintaining performance and exchanging with other elements. We are incorporating responsible mineral procurement in our technology and R&D from a perspective of human rights and environmental preservation as we construct a sustainable supply chain.



### **Product/Technology Strategy**

As a source of innovation to create "value beyond the special," Daido Steel pursues R&D to solve social issues by capturing the needs of society and customers and expanding technological areas.



Tetsuya Shimizu Representative Executive Director, Executive Vice President

### R&D promotion organization

The Corporate Research & Development Center that is the core of R&D in the overall Daido Group currently has slightly over 300 personnel and is generating synergies by working closely with internal business divisions, Group companies, and external research institutions.

For the development projects of existing business divisions, we grasp the true needs of customers and are strongly conscious of appropriately responding to these demands. Because there are many projects that demand development completion within a relatively short period of time, the main method has to develop new products and technology by tapping into knowledge based on already held technological platforms.

On the other hand, regarding new products and businesses being developed for a medium-to-long-term perspective that extend technology platforms, the Company focuses on efficient R&D that proactively utilizes external partners, including universities and research institutes, instead of just internal resources.

The Company also established the Next-Generation Products Development Center in the Functional Products Business Division in June 2021 as an organization that specializes in expanding technological areas. Mainly targeting areas with a strong demand for advanced functionality and keeping an eye on the development of information and communication, and the electrification of automobiles, we are searching for, establishing, and invigorating new products and businesses along with the Corporate Research & Development Center and the business division.

After considering appropriateness, the Center selects themes from two perspectives. First, searching for products and businesses needed by customers, including latent needs customers may not be aware of themselves, by deepening communication with customers. Secondly, the identification of products and businesses expected to expand social needs longterm based on global mega-trends and social circumstances. For the former, we must build partnerships from scratch in new industries, not only relying on the automobile industry where we have had strong relationships. Daido Steel is taking on challenges each day to experience the culture and values of customers that we have never interacted with and fill those gaps.

There are approximately ten members of this Center. They are required to have a discerning judgement to grasp what is demanded of society and communication abilities with customers as they fulfil the role of connecting society and customers with the development field.

### R&D management

The Company decides on resources invested until business formation based on the type and importance of technology development themes. For example, we are working actively to realize results for important development themes that have a significant impact on the Company's management and maximize investment of internal development resources. For explorative themes taken on with a medium-to-long-term perspective, we are proactively utilizing external partners and balancing overall resources, such as investing internal resources flexibly while looking closely at feasibility.

### R&D areas and fields of contribution

R&D of the Company is split between the production process realm and the materials realm, which is comprised of specialty steel and magnetic materials. Environment and energy, aircraft/ ships, automobiles, electronics, and medical are all contributing

Specialty steel research field

In research of steel for automobiles and structures, we pursue high strength and high hardness. We are developing specialty steels for gears, high pressure common rails, engine components including fracture splitting connecting rods, and also, hydrogen embrittlement resistance steel, and super clean steel. Further, we have developed high performance specialty steel and superalloys, including high strength & high corrosion resistance Ni based superalloys and steel for die-cast molds.



Process research area In process research, the Company develops full process design technology related to melting, refining, solidification, plastic processing, machining, instrumentation, controls, and meltformation products. The Company is realizing optimal techniques that consider each process (from melting to rolling, forging, and machining) through numerical simulation technology and evaluation testing that recreates the actual full scale process. Also, we are engaged in research that aims to enhance the productivity and quality of the Manufacturing Department, such as efforts to automate the testing and inspection through Al technology.

fields. We are promoting materials development that integrates process technology and considers the customer production process while focusing on dialogues with customers.

In magnetic materials research, we are researching materials and elemental technology, such as neodymium magnets (NdFeB) by hot working process used in motors in electric vehicles (xEV) and soft magnetic powder used in boost reactors. The development of xEV is expected to grow significantly. We will continue to focus on R&D in this area.

Magnetic materials research field

Automobile Reference Reference

In the same district as Group company Daido Electronics that manufactures magnets, we have built the Nakatsugawa Advanced Magnetic Materials Development Center and concentrated research centers and manufacturing centers for magnetic materials and motors. Also, we have strengthened partnerships between industry and academia and performed R&D for next-generation motors and high performance magnet.

Nakatsugawa Advanced Magnetic Materials Development Center

#### Product/Technology Strategy



#### **Key** issues

Daido steel targets a 2030 Vision based on the below three key issues.

- 1. Realization of a green society
- 2. Co-creation with external parties
- 3. Human resources development

### 1. Realization of a green society

In efforts to reduce CO<sub>2</sub> emissions in product development, the R&D Department is in charge of components and material level products, and the Machinery Division is in charge of furnaces and equipment. The percentage of R&D expenses spent on environmental products stands at the upper 80% as we aim to realize a green society through innovation.

Please see "Technological innovation for energy transition" on page 69 for specific examples.

### 2. Co-creation with external parties

In the past, the Company held firm to the doctrine of selfsufficiency. However, as we deepened relationships with customers in industries we have not had much experience, we were made aware of our inability to respond to global trends promptly with just existing technological platforms.

As such, we have proactively entered partnerships with external parties, including universities, research institutions, and other companies, and are accelerating efforts to acquire new technology through open innovation. Currently, we have 34 partnerships with external parties, including the endowed university courses and joint research with overseas research institutions. There is a recent example about such a partnership on the right page

### 3. Human resources development

In addition to the traditional on-the-job training, Daido Steel is aiming to strengthen the training of development human resources through the following measures.

#### 1) Utilization of international exchange system

Expand perspective using the international exchange system in Japan and overseas to develop mindsets that look beyond the Company. Also, develop human resources needed to change the company by considering exchange systems with venture companies in order to give employees new experiences in a completely different culture.

2) Collaboration with universities and external institutions Aim to develop experts capable of designing cutting-edge motors from personnel who had almost no knowledge of motors by dispatching them to the Motor Research Center in Daido University, which was established as an endowment. We are also continuously developing human resources in fields beyond motors that are expected to grow in the future, such as magnetic materials.

#### 3) Al education

All staff at the Corporate Research & Development Center are learning about AI because we consider the utilization of AI to be necessary for future R&D activities. There may be differences between personnel who just learned foundational knowledge and those who are data scientists, but materials and process researchers have to at least reach the level to be able to utilize Al. Further, in order to raise materials development staff as data scientists, we will aim to raise knowledge about AI by various methods, including sending staff to university doctorate courses.



### Establishment of "Daido Steel & Tohoku University Co-creation Research Center" to strengthen collaboration between Tohoku University and Daido Steel

~Promotion of research for high-performance soft magnetic materials to realize a green society~

Tohoku University (Location: Sendai City, Miyagi prefecture; President: Hideo Ono) and Daido Steel Co., Ltd. (Location: Nagoya City, Aichi prefecture, President & CEO, Representative Executive Director: Takeshi Ishiguro) established the "Daido Steel & Tohoku University Co-creation Research Center" (hereinafter "Cocreation Research Center")\*2 on July 1, 2022 for the purpose of research on high-performance soft magnetic materials that contribute to technological innovation related to CASE\*1 for the realization of a green society. From now, under a strong industry-academia collaboration structure in which both company technicians and university researchers work hand in hand, both parties will promote and accelerate joint research from foundational research of unique technological issues to the development of new materials related to soft magnetic materials in various forms and core components of CASE-related products.

Tohoku University and Daido Steel have conducted foundational research on various high-performance materials, not only steel materials. Through cross-departmental industry-academia research at this Cocreation Research Center, both Daido Steel and Tohoku University will contribute to the realization of a green society by further accelerating research into high-performance soft magnetic materials that contribute to technological innovation of CASE-related products as well as human resource development.

#### Overview of Co-creation Research Center

1. Name	Daido Steel & Tohoku University Co-creat
2. Objective	Promotion of research of high-performan
3. Activities	Promotion of joint research themes
	Development of technicians
4. Operation system	In charge of operations: Visiting professo
	University (Daido Steel Corporate Researc
	& Development Center) Operations suppo
	Professor Satoshi Sugimoto, Graduate Sci
	Engineering, Tohoku University
5. Location	Tohoku University Research Center for Ra
	and Green Innovation
6. Time period	July 1, 2022 to June 30, 2025

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r Takahiko Iriyama, Graduate School of Engineering, Tohoku

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are Metal



Tohoku University Research Center for Rare Metal and Green Innovation

<sup>\*1:</sup> CASE: Reference to four main areas of technological innovation in the mobility industry: Connected, Autonomous, Shared & Services, Electric. \*2: Co-creation Research Center: Established in Tohoku University as a collaborative hub with the Company, it promotes diverse collaborative activities, including collaboration with university-initiated ventures, joint research planning/promotion, and human resource development by enabling cross-departmental access to university professors, knowledge, equipment, etc.

### **DX Strategy**

We will firmly establish DX that strengthens competitiveness, and can be the driver to solve major social issues



The data we can acquire through evolution of IT technology is significantly diversified and in much larger quantity. The ability to use this data is an important element in determining the competitiveness of the Company.

Also, the management environment surrounding the Company changes suddenly, including the electrification of automobiles and response to carbon neutrality. In order for the Company to grow, we must innovate the business portfolio, and boldly enhance productivity.

Under these circumstances, the Company is powerfully promoting DX because it directly links with strengthening competitiveness and business portfolio innovation and also it would be a driver that can solve major social issues, such as carbon neutrality.

Akihito Kajita Director, Managing Executive Officer

#### IT budget trends



### 1. Improving productivity of internal operations

(1) We will aim to fully utilize and improve the efficiency of tools and applications that are developed and wide-spread, in particular cloud applications, in operations that exist generally in other companies, such as main office operations and common OA operations.

#### <Current status of initiatives>

Daido Steel aims to improve the efficiency of OA-related internal operations by implementing applications such as RPA, AI-OCR, electronic contracts, and workflows. With the implementation of RPA, the Company cut down approximately 4,000 man-hours of work a year, also producing effects for workstyle reforms by reducing overtime and reducing the burden on employees when focusing on operations. Also, the Company is strengthening communications and collaboration

in and outside the company by changing the long-used e-mail and document management system into a cloudbased application and expanding the use of mobile PCs and smartphones. As a result, the ways of work at production sites have diversified and there have been many cases of improved efficiency as employees could provide support from remote locations in equipment maintenance and environmental inspection operations.

(2) In order to improve the efficiency and sophistication of production processes and equipment held by the Company, Daido Steel conducted trials, spent reasonable costs, and constructed a unique DX structure.

#### <Current status of initiatives>

Daido Steel is aiming to improve productivity and achieve operational innovation by focusing on trial and implementation of AI and IoT technology in various fields, such as visualization of operational status, optimization of equipment operations, detection of surface defects, anomaly detection, prevention and conservation, skill succession, and safety activities at production sites.



[Implementation of smart technology at Chita Second Plant] The Company developed a system that would be useful to operations management by linking and visualizing unstructured data, such as operations results acquired by existing systems, quality data, voltage, currents, images, etc. at the new production site at Chita Second Plant. The Company implemented this smart factory concept that uses many sensors. This system is planned to be expanded across the Company based on the results of this factory.

#### **DX Strategy**

#### [Promotion organization]

In the DX promotion organization, the IT Planning Department supervises the overall effort while the IT Planning Department handles projects related to OA-related and existing systems, the Corporate Research & Development Center handles projects for Al utilization, and the Advanced Manufacturing Department, including equipment technology development, handles projects to improve efficiency attached to production facilities.

The IT Committee, which is held once every three months, confirms the overall policy and discusses the promotion of major projects.



are also fostering a culture in which all employees analyze data

The policy of human resources development is as follows.

and solve problems.

#### [Employee education]

Based on a basic policy "required education for required personnel," the Company performs education and training based on the knowledge/skills required of each role as we make efforts to enhance the digital literacy of employees. We

#### (1) Employee education

Aim to raise level of data utilization across the company

#### (2) Leader development

Develop human resources who can lead in data utilization and can perform collaborations (specialty education)

#### (3) Business/management supervisor education

Provide knowledge so that employees can generate ideas to strengthen collaborations with customers and outside parties as well as innovate business divisions

#### (4) Data scientist development

Develop approximately 40 users and developers of AI technology by the end of fiscal 2022. For now, technical employees are the subject of this education, but we are considering expanding this to employees in fields of production management, sales, and main office operations.



#### [Cyber security measures]

With the progress in digital technology and promotion of workstyle innovations, the workplaces of employees are changing and the use of mobile devices are increasing. As such, cyberattacks have grown more advanced and intricate each year and security risks have become heightened. Daido Steel has made efforts in constructing information management rules and countermeasures for prevention, detection, and backups. As such, we have not confirmed any major damage inside the Group.

However, with the Russian invasion of Ukraine and the heightened risk of cyberattacks across the globe, Japanese

companies are now a target of attacks. As there are now cases of severe damage, it is necessary to take cyber security measures that aim for stronger protection. Specifically, the Company, including Group companies, has decided to implement a new security system to achieve a standard complying with the National Institute of Standards and Technology (NIST).

Furthermore, I have taken the responsibility to strengthen both systems and structure, including launching the CSIRT (Computer Security Incident Response Team) and SOC (Security Operation Center).

#### [Core systems reconstruction to realize DX]

In promotion of DX, one issue is how to renew host-related core systems used for many years. By their construction, host-related core systems are stable yet weak to flexibility and created by optimizing separate elements in design, making it difficult for them to utilize data and work together.

Core systems include a vast amount of operations logic and are, as their name suggests, the systems that support the framework for company operations. Reviewing and renewing these systems in fundamental ways can greatly enhance the operational efficiency and productivity of the company overall. Further, it will be possible to enhance added value provided to customers by changing to a structure where data

#### [To enhance digital competitiveness]

In order to promote DX in Daido Steel, it is important to create an organization in which each employee possesses the mindset for utilizing data to solve issues in business and operations. Currently, the Company is achieving success in brainstorming and attempting data utilization. We are now entering the stage of taking on even bigger challenges. We are also promoting IT infrastructure construction and internal education to visualize and utilize data. Based on this knowledge and achievements, we would like to expand the value provided to customers, improve productivity even more, and further level up data utilization to connect with solving social issues.

Themes such as "business model innovation" and "new business generation" are one fundamental achievement

### We will enhance organizational resilience to achieve data-driven management

utilization is smooth and it is easy to link with other parties, such as linking with data pulled from various sources. In terms of management, it will be possible to make decisions based on data (data-driven management), and lead to speedy and accurate management decisions.

Because the renewing of core systems requires significant time and effort, it must be considered on a separate timeline than daily DX promotion activities that focus on speedier changes. However, we have established an internal deliberation team, positioned this as an important issue to significantly promote DX, and are developing a vision and medium-to-longterm execution plan.

expected of DX. However, it is not easy for B2B company manufacturing and providing specialty steel to achieve this. In a society with advancing digitalization, innovative productivity in the manufacturing process will be enhanced, the distance in the supply chain will be shortened by cloud, and company collaborations that would have been unthinkable will come together as the business environment and competitive environment surrounding the Company is expected to change dramatically.

The Company will foster an organizational culture of data utilization, establish the IT infrastructure to support it, and increase organizational resilience by getting even slightly closer to "data-driven management."



### **Financial Strategy**

Properly support financially with growth investments to respond to business environment changes



Akihito Kajita Director, Managing Executive Officer

### Revenue recovers in a wide range of business areas in FY2021

In fiscal 2021, orders for automobile-related products recovered from the previous year, which was impacted by the COVID-19 pandemic, and semiconductor-related demand was also strong, leading to a recovery in revenue in a wide range of areas. On the other hand, raw material prices rose throughout the year due to tight supply and demand in Japan and supply constraints. Energy costs also rose significantly due to tightness in crude oil and LNG markets. As such, we engaged in activities to reduce cost of products and correct sales prices.

As a result, while we were unable to fully cover cost increases, we were able to achieve significant increases in revenue and profit year-over-year as results were supported by

#### strong demand.

In fiscal 2022, we expected energy and raw material prices to continue to increase due to the Ukraine conflict and continued fiscal 2021 efforts to reduce cost of products and correct sales prices. However, in the first half, scrap iron prices and the nickel market did not reach initial forecasts. As such, we revised forecasts upward and expect operating income to reach the level of the previous fiscal year. For the full-year, as energy costs are expected to rise, it is difficult to forecast the materials market and order trends in the second half of the fiscal year. As such, we have not changed the initial earnings forecast.

#### FY2021 results and FY2022 forecast

TT202TTESUITS and TT2022TOTECaSL (1,000 tons, ¥100 million)					
	FY2021 results			FY2022 forecast	
	1H	2H	Full-year	1H	Full-year
Sales volume of steel products	634	619	1,253	547	1,227
Net sales	2,552	2,745	5,297	2,800	6,000
Operating income	192	178	370	195	340
Ordinary income	206	186	392	200	350
Extraordinary income or loss	-4	19	15	-	-
Corporate tax, etc.	-74	-64	-138	-45	-100
Profit attributable to owners of parent	128	141	269	155	250

### Medium-Term Management Plan is mostly proceeding smoothly

In the 2023 Medium-Term Management Plan announced in June 2021, Daido Steel set business targets of ¥40 billion or more in operating income, 8.0% in ROE, 0.5 D/E ratio, ¥85 billion in total investments across three years, and 30% dividend payout ratio. Operating income and ROE have proceeded mostly according to plan. Also, we began operating at a 30% dividend payout ratio from fiscal 2021. On the other hand, D/E ratio was 0.69 in fiscal 2021. This was due to raw material prices being higher than expectations in the Medium-Term Management Plan, corresponding sales price revisions, and increased sales volume. Because these changes occurred in the same time period, a large amount of operating capital was required, leading to higher interest-bearing debt.

Our action plan is as follows: (1) Expand the business in growth areas, (2) Strengthen business agility, (3) Expand further overseas business, and (4) Promote ESG management. We must promote activities to realize our 2030 vision in each division. Several unexpected situations came about that were not expected during the development

### Review of product portfolio and pursuit of profitability

By providing a rich variation of diverse products, Daido Steel, as a specialty steel manufacturer, has carved out a unique position, different from blast furnace manufacturers and specialty manufacturers in and outside Japan. We are able to produce a rich variation of products through complex production lines. We possess the manufacturing technology to create products of various types of steel in one plant or multiple plants.

In order to create each product, we begin from upstream steel production "melting and casting," go through a multi-stage process such as heat treatment and machining, and create multiple products through shared equipment and processes. Under this backdrop, in order to manage profitability, it is extremely important that we fully grasps the costs that span hundreds of thousands of items across each product, such as costs of personnel, raw materials, energy, as well as depreciation expenses for equipment required in production processes. Because improving productivity in upstream processes contributes to reducing costs of a wide range of products, we have formed a structure that sets detailed targets and manages capital investment and initiatives to increase productivity of plants and various production lines. of the plan, including higher fuel prices due to the Ukraine conflict, the weaker yen, and ongoing reduction in automobile production. As such, there have been changes and discrepancies in the trends of demand. However, we are proceeding with business activities according to the action plan, such as focusing on strengthening production capabilities of high-performance materials and product development in growth areas.



Detailed costs grasped in this way are important to making decisions to pursue profitability of the overall company and change the product portfolio as they can be used to grasp the profitability of each product.

Methods to change the product portfolio include strengthening equipment in bottlenecks in the production process of highly profitable products, concentrating processes in efficient production facilities, and adopting production processes that minimize costs and maximize productivity. Depending on the circumstances, there are also cases of organizing production processes across multiple plants. With recent sudden and steep increases in raw material prices and energy costs, systems to grasp the increase in costs per product play an important role in grasping appropriate pricing.

On the other hand, while the Company intermittently calculates the return on invested capital (ROIC) by business division, it is difficult to use this data as the product cost structure is often interdependent. A means of logically calculating ROIC per product or business and utilizing this as an effective indicator in management decisions will be a matter to deliberate in the future.

#### **Financial Strategy**

### Investment plan and "Daido Carbon Neutral Challenge"

In the 2020 Medium-Term Management Plan, we proactively made investments that exceeded depreciation expenses, such as strengthening secondary processing capabilities, reinforcing remelting equipment, and building the Nakatsugawa Advanced Magnetic Materials Development Center in order to enhance production capabilities in strategic areas such as high-performance materials and magnetic materials. These investments are firmly linked with transforming the product portfolio and the corresponding enhancement of profitability. In the 2023 Medium-Term Management Plan, while continuing to strengthen production capabilities by eliminating bottlenecks, Daido Steel plans to invest ¥85 billion over the three years for investments that contribute to productivity improvement at mainstay plants, environmental investments that contribute to CO<sub>2</sub> emissions reduction, and personnel investments to secure and develop human resources.

Announcing the "Daido Carbon Neutral Challenge," the Company has set targets to reduce CO<sub>2</sub> emissions 50% by 2030 (compared to fiscal 2013) and achieve carbon neutrality by 2050. In Scope 1, we will expand highefficiency combustion technology and implement heat

### Improvement of balance sheet

Daido Steel is aware that balance sheet issues include the large amount of operating capital and cross-shareholdings. In terms of operating capital, while the Company has a high balance of trade receivables and inventory assets compared to sales (turnover period in months is long), the balance of trade payables is not very high. As a result, the structure requires a large sum of operating capital and the current interest-bearing debt is roughly in line with operating capital.

Because the Company produces many models of products



exhaust recovery technology. In Scope 2, we will switch to CO<sub>2</sub> free power sources.

In August 2021, the Company newly introduced the ICP (Internal Carbon Pricing) concept and began using this in calculating capital investment effects. As a result, we are further proactively making energy-saving investments as an initiative to combat climate change.

#### Investment plan from FY2021 to FY2023 (internal approval basis)



with high added value, we have a multi-staged processing production structure that requires production lead time and inventory assets. In this situation, raw material, fuel prices and product prices will rise. Further, in an environment with increasing sales volume, operating capital will increase and cash flow from operating activities will worsen, regardless of increasing revenue itself. This is one of the financial issues.

The recovery period for trade receivables is difficult to improve immediately due to long-standing business customs. However, the Company is aware of this an issue to handle

> in the medium to long term. Also, as the percentage of high added value products, which require a lot of time to produce, increase in the sales mix, the inventory asset turnover period against sales grows longer. Therefore, we are improving efficiency of production and aiming to constantly slim down inventory assets.

We made efforts to sell cross-shareholdings in fiscal 2021 as well. As of March 31, 2022, while we reduced the ratio of stockholdings to net assets (18.8%), this is still a large figure when compared to the steel sector. Cross-shareholdings are primarily shares of partners or buyers related to product development and manufacturing, or suppliers of raw materials and resources. These are held to construct a firm relationship with partners and buyers in joint development. The Company determines whether to continue holding after evaluating that purpose. We are also fully conscious of recent developments in

### Increase in long-term issuer rating

In August 2021, R&I raised the long-term issuer rating of Daido Steel from A- to A. In recent years, the Company has strongly made portfolio innovations to increase its business for high added value products, such as high-performance materials and magnetic materials. As a result, its level of profitability increased and it has enhanced its stability in financial balance, including capital to debt composition. These changes have

### Issuance of ESG bonds (transition bonds)

In recent years, the selection of investees and financers based on carbon neutrality in addition to financial matters has begun. In the future, the connection between finance and the environment is expected to grow even stronger. In order to secure stability of capital procurement under these

### Stability of financial foundation is needed for growth investments

The global industrial structure is changing dramatically as we work towards carbon neutrality. Amidst this, there is a heightened possibility that we will require more capital to make large-scale investments to respond to business environment changes, R&D for next-generation products, environmental investments, and M&A. In order to firmly support these growth investments financially, we must maintain stability of our financial foundation, including an adequate level of equity and a healthy capital debt structure. Looking at past results of the Company, we have unfortunately experienced challenging earnings results during the financial downturn and the global financial crisis. As such, we recognize that having an adequate level of equity is important in order to be resilient against economic fluctuations. We are aware of the fundamental and important role of a financial officer in maintaining financial stability

corporate governance and are making efforts to reduce crossshareholdings.

In the 2023 Medium-Term Management Plan, we targeted to reduce the amount of cross-shareholdings (excluding deemed shareholdings) to 20% or less of net assets with an aim to reduce it to 10% in the long term. Because we achieved the goal of reducing shareholdings to 20% or less of net assets, we will further reduce them with a target of 20% or less of net assets on a base that includes deemed shareholdings.

been recognized with this rating increase.

The Company will maintain a healthy financial balance and aim to maintain this rating by securing operating income of ¥30 billion, as it achieved in fiscal 2021, or even higher.





circumstances, the Company will make efforts head on for carbon neutrality, prepare methods of capital procurement linked to CO<sub>2</sub> emissions, such as ESG bonds, and open the door for more options. In the first half of fiscal 2022, the Company issued its first ESG bonds (transition bonds)

In the 2023 Medium-Term Management Plan, we raised the shareholder returns target from 20-25% dividend payout ratio to 30% and began operating under this policy from the first year of the plan, fiscal 2021. It is important to increase profits so that the amount of returns, in other words, the amounts of the dividends themselves, will continue to increase into the future.

As uncertainties grow in the business environment, it is not easy to continuously maintain an 8% ROE. Daido Steel aims to create a positive cycle whereby we will reform the product portfolio, make strategic growth investments, continuously increase profits, perform balance sheet management, improve the efficiency of production facilities, and increase the level of equity by properly controlling cross-shareholdings and inventory assets, while we also strive to increase the amount of shareholder returns.

## Financial/Non-financial Highlights

(%)

6

#### **Financial performance**





















2017 2018 2019 2020 2021 (FY)

#### Dividend payout ratio



### Non-financial performance (non-consolidated)





#### Certification of public institutions











\* Details about environmental data are disclosed on our website: https://www.daido.co.jp/en/sustainability/index.html





#### Ratio of lost-time work injuries

Daido Steel Manufacturing industry average





#### Number of employees





1.0



#### ESG-related external evaluation



## Business Strategy: Specialty Steel Business Division

### Contributing to the realization of social transformation through a wide-range of products and advanced technological capabilities

The Specialty Steel Business Division is a division that handles sales of specialty steel and high-performance specialty steel, mainstay products of the Company that comprise more than 80% of all sales. Its products are used in a wide range of fields, including automotive, industrial equipment, semiconductors, medical, and consumer-related and support people and society in the background.

In the future, this division will continue to contribute to the realization of significant social transformation, such as carbon neutrality, digital revolution, and CASE, through advanced technological capabilities, strong relationships with customers, and a wide-ranging product lineup.



Toshiaki Yamashita Director, Managing Executive Officer and General Manager, Specialty Steel Business Division

### Main steel products and applications

- Main products include specialty steel products (steel bars/wires) and high-performance specialty steel (stainless steel/superalloy bars/wires, titanium, welding material)
- Main application for specialty steel is automotive (engines/transmissions/undercarriage, etc.)
- Holds top domestic share of stainless steel and titanium bars and wires, which are used in wideranging applications, such as automotive, semiconductor, medical, and consumer-related

enerav costs

• Development of electrification of automobiles

Development of overseas local procurement

• Inflation of raw materials (scrap iron) and

Blast furnace manufacturers enter specialty

steel manufacturing by electric arc furnaces

Boost base demand

Expand sales of growth products



Specialty steel (steel bars)

Increasing demand for stainless steel for the

time being due to lower fuel expenses and

• ICT industry growth (increase in

performance materials)

semiconductor-related demand)

• Carbon neutrality developments

(increase in green energy demand)

CASE developments (gear reducer for

e-Axle increase in demand for high-

 Production by electric arc furnaces that produce less CO<sub>2</sub> emissions than blast furnaces that use scrap iron as main materials

#### • Strong relationships with Japanese OEMs

• Wide-ranging product lineup (steel for gears, high-performance SUS/superalloys)

Daido Steel specialty steel demand forecast



### Divisional basic policy and strategy

#### Specialty steel

- Achieve stable revenue by strengthening business agility
- Boost base demand
- Proactively expand sales of new products

Stainless steel, superalloy bars/wires, titanium, welding material

HV adoption

- Proactively expand sales of growth products (fully pursue in specialty steel types)
- Tap into new products (tap into fields with new demand potential)
- Further expand sales to overseas markets

### Medium-Term Management Plan progress

Daido Steel is engaged in the following measures in the 2023 Medium-Term Management Plan in order to increase the profitability of specialty steel, our mainstay product, and make high-performance specialty steel a future pillar of profit.

#### Specialty steel

1. Strengthen business agility (strengthening of earning power) Engage in price improvement activities to respond to rising costs, primarily energy costs resulting from higher crude oil and weaker ven.

Because energy costs are expected to increase, we are aiming to fortify the specialty steel business by making across-the-board cost cuts and achieving "reproducible price standards" by revising sales prices, including applying surcharge systems.

#### Energy costs trend at Chita Plant



#### Stainless steel/superalloy bars/wires, titanium, welding material

- 1. Proactively expand sales of growth products (fully pursue in specialty steel types)
- We are increasing our presence in and outside Japan in the field of semiconductor manufacturing equipment by responding to demand changes through strengthening capabilities.
- In HDD-related, we have formed a rich lineup for RoHS directives to respond to firm demand corresponding with rising needs for memory capacity increases.

### Sustainability topics

In recent years, companies have begun to take challenges toward decarbonization on a global scale as each industry has started initiatives for carbon neutrality. Under these circumstances, customers have begun to ask for changes, such as shifting away from hardening parts by fossil fuels and toward high frequency hardening using renewable energy. Others have begun to raise voice that they want to increase the usage ratio of steel materials with low carbon emissions and electric arc furnace materials. Overseas, primarily in automotive and oil & gas-related fields, movements have begun to procure "green steel," require carbon neutrality from suppliers, and request submission of CO<sub>2</sub> emissions volume data. In addition to reducing CO<sub>2</sub> emissions from our process of manufacturing specialty steel, we believe that the use of our specialty steel products, such as high cleanliness steel for marine wind power production, hydrogen embrittlement resistance steel for hydrogen-related power, and steel for gears in e-Axle gear reducers can contribute to realizing carbon neutrality. We are focused on development and sales of products that can lead to carbon neutrality. While continuing to extract needs of customers, we will propose seeds as a materials manufacturer.

#### 2. Boost base demand

Looking ahead to lower future demand as a result of electrification, we will increase base demand by constructing relationships with new customers and expanding share through the expansion of target regions for existing customers. In the future, we will further aim to boost demand.

#### 3. Proactively expand sales of new products

In growth areas of electric automobiles and energy-related, we are strengthening marketing, gathering supply chain information, establishing procurement policies, and performing product development for customers as we will firmly complement future demand.

- 2. Tap into new products (new demand potential areas)
- We are aiming to expand share in hydrogen-related fields by considering joint efforts with pipe makers and selecting hydrogen embrittlement resistance steel.
- For medical titanium, we aim to tap into demand through new product development for medical equipment and expand sales through quality differentiation for biological products.

#### 3. Further expand sales to overseas markets

- We are tapping into new demand by launching a Group company in China (DAIDO STEEL MATERIALS TECHNOLOGY SHANGHAI).
- We are expanding sales of high-strength invar wires in and outside Japan under a backdrop of growing need for high capacity electric wires.

#### Business Strategy: Fabricated Materials & Tool Steel Business Division

### Contribute to realizing a sustainable society by supporting industry through stable supply of high-performance materials

The Fabricated Materials & Tool Steel Business Division manages products in two areas (fabricated materials and tool steel) with different waves of demand. Daido Steel has set the product target area as a "global, super high grade, and niche" and transformed the product portfolio.

By responding to high-performance needs of overall society ahead of others, these pioneering initiatives led to the creation of a highly profitable and stable profit foundation.

We will continue to respond to social needs by developing and providing high grade products, utilize a wealth of overseas personnel, and expand overseas business based on partnerships with leading companies as we contribute to the realization of a sustainable society.



Yuji Kamiya Managing Executive Officer and General Manager, Fabricated Materials & Tool Steel Business Division

### Main steel products and applications

- Main handled steel products are high-performance fabricated materials and tool steel
- Fabricated materials are high-performance materials excelling in heat and corrosion resistance, used in aircraft jet engine shafts, ship diesel engine valves, and semiconductor manufacturing equipment
- Tool steel is a high-performance mold steel, used in automotive die-cast molds, press molds, and plastic molds.



#### Strengths

- World-leading manufacturing capacity for ultra-high-quality products (25t VIM/ Remelting)
- Quality attested by certification from the four main global aircraft engine manufacturers
- Has human resources to address promising markets and varied customer base in Japan and overseas
- Two product lines with different patterns of demand help stabilize business profit
- Declining demand for molds in Japan following reduced demand for internal combustion engines
- tollowing reduced demand for internal combustion engines
   (combustion engines

   Recovery in supply capacity of European/
   ql
- U.S. mills

  Soaring raw material and energy costs
- Concerns about effect of geopolitical factors on stable procurement of minerals
   Reversal of forex rates
- Intensifying focus on environment (decarbonization, shifts to EV, digital society) leading to rising demand for high-
- quality steel
  Insufficient supply capacity of European/ U.S. mills (Daido Steel using niche products to stimulate demand)
- Growing demand in the Asian region
- Take advantage of cheaper yen to expand overseas sales

### Divisional basic policy and strategy

#### Expand the business in growth areas

- Capture semiconductor manufacturing equipment demand
- Develop superalloys
- Develop mold steel for new EV-related demand
- Strengthen business agility
   Portfolio reform (expand high-margin products)
- Strengthen production capacity for highperformance materials and difficult-to-
- process materialsImprove yields and reduce lead times
- Expand further overseas business
- Address global standards (further efforts to acquire and establish certification)
- Build supply chain to supplement growth areas and acquire new customers
- Broaden product lineup, strengthen cost competitiveness
- Strengthen overseas solution structure (facilities/personnel)

### Medium-Term Management Plan progress

Demand for high-performance alloys corresponding with the increase in the environmental awareness and stronger regulations is an opportunity for the value of Daido Steel products to once again gain attention for their high quality and diverse functionality. Efforts for product portfolio transformation looking ahead to social changes and increased demand in aircrafts and semiconductors in the COVID-19 pandemic led to the Fabricated Materials & Tool Steel Business Division achieving the targets sales in the medium-term management plan.

#### Expand the business in growth areas

- We are making efforts to develop and sell growth products in areas important for the next term, including semiconductor manufacturing equipment and hydrogen compressor components.
- Sales are growing swiftly as demand for Daido Steel's highly heat resistant exhaust diesel engine valves for ship buildings was bolstered by the strengthening of environmental restrictions related to ships.
- In fiscal 2021, we decided to make investments for expanding production of vacuum arc re-melting furnaces that are essential to manufacturing highperformance materials (plan to launch in June 2023).
- Viewing structural changes of EV adoption and needs for lightweight technology as an opportunity, we will proactively accelerate product development and expand sales of tool steel.

- By transforming the product portfolio to ultra-high-performance/high-profitability businesses, such as aircraft jet engine shafts and ship diesel engine valves, we can capture special demand overseas and orders from new customers. Through successful deliveries, we will raise presence to potential users and lead to further demand.
- We developed a system to centrally manage the status of each plant inventory of superalloys to respond to delivery periods requested of customers.
- In both fabricated materials and tool steel, we are promoting efforts to limit raw materials expenses, which continue to fluctuate dramatically, and recover disposed products to recycle, which may reduce CO<sub>2</sub>.
- Centered on the Shibukawa Plant, we are making efforts to enhance the forging capabilities for high-performance materials and difficult-to-process materials. We are proceeding with the reorganization of cross-company production capabilities and manufacturing productivity enhancements to respond to the rising demand for specialty steel in recent years.

"Human resource" in Daido Steel has enabled this transformation in our portfolio and the expansion in our sales. We believe it is only thanks to the human resources capabilities we have developed, implemented and improved that we have been able to faithfully grasp the requirements of society over the past decades. This is the fruit of our honest approach and our response to the trust placed in us by customers, local communities and other stakeholders, and it is essential that we continue to refine these human resources capabilities going forward.

### Sustainability topics

#### Ship diesel engine valves

Outstanding resistance to heat and corrosion leads to improved engine efficiency and contributes to  $\mathsf{CO}_2$  emissions reductions





#### Strengthen business agility

#### Expand further overseas business

- We acquired more certifications from users, primarily overseas. We will increase our presence and encourage penetration into the universal supply chain.
- The Company is expanding the overseas sales channels with the Shibukawa Plant as a production hub and constructing a strong supply chain. We will make efforts to further expand the supply chain, including entering new areas.
- In fiscal 2021, we newly opened the Joint Venture Planning & Management Section and strengthened links with overseas sales hubs.
- In the future, we will aim to proactively enhance sales hubs in regions where growth is expected and strengthen sales functions of tool steel by increasing added value services, such as heat treatment, etc.

#### Recycling of high-quality steel scrap

Expanding our efforts to recover products scrapped by customers to reduce  $CO_2$  emissions, while helping to bring about a circular economy



Scrap heavy industry gas turbine bolts

Scrap molds for hot forging

## Business Strategy: Functional Products Business Division

### Using specialized functions to build a tomorrow for Daido Steel

The Functional Products Business Division was set up in fiscal 2021 with the core mission of expanding business in growth areas in line with the 2023 Medium-Term Management Plan by focusing on product lines provided with functions such as magnetism and thermal expansion, for which growth in demand is expected following the electrification of automobiles and industrial equipment.

The Division consists of the various product departments of steel strip, metal powder, and electronic materials, together with the Next-Generation Products Development Center, which is tasked with the creation of new products and businesses.





#### Main products/applications for each product department

#### Steel Strip Department

- Functional materials such as heat-resistant materials used for metal seals in existing internal combustion engines, soft magnetic materials, resistive materials, and sealing metals
- Automotive gaskets, current and other sensors, electromagnetic compatibility (EMC) products

#### Metal Powder Department

- Corrosion resistance materials for internal combustion engines, soft magnetic powder for xEV
- Automotive engine parts, step-up devices, cutting tools, molds

#### **Electronic Materials Department**

- Point light source LEDs, sputtering target materials for high-performance thin films
- Light emitters for servo motor encoders used in air-conditioners, industrial robots and other applications, light emitters for photoelectric sensors, high-performance thin films for semiconductors, LCD displays, and cutting tools

Intensifying competition caused by declining

- Unrivalled technology base in specialty steel, including a variety of production facilities
- Robust sales network centered on automobiles and heavy industry
- demand for specialty steel in Japan • Rising raw material and energy costs
- Closing of the technological gap by manufacturers and emerging countries

### Divisional basic policy and strategy

#### Opening up new markets by taking a long-term view

Our basic policy is to contribute to a sustainable society by adopting a long-term perspective that focuses on business growth 10 or 20 years into the future, and the "2023 Medium-Term Management Plan" was formulated as a milestone on this journey. We will take on the challenge of new markets and new areas of business, including strengthening relationships with customers in industries that are new to us.

### Medium-Term Management Plan progress

Due to rising demand and orders for automobiles, industrial equipment, and semiconductors, fiscal 2021 results for both sales and profits achieved the targets set in the 2023 Medium-Term Management Plan.

#### Steel Strip Department

As the product that forms the foundation of the business as a whole, sales of heat-resistant materials for use in internal combustion engines, such as metal seals for vehicular turbocharger gaskets, are running ahead of plan.

For electric vehicles, in addition to growing materials for relays and for current and other sensors, we aim to develop and commercialize new products such as materials for high-performance motors used in air mobility.

Functional materials, demand for which is growing as a result of the spread of ICT, are also seeing a rise in sales due to the acquisition of new customers.

#### Metal Powder Department

For products used in automotive engine parts, which currently make up the majority of the sales of the business, we are seeking to strengthen our cost competitiveness and deepen co-creation efforts with customers, and volumes remain strong.

to acquire new customers, and our newly developed high-performance powder has had a satisfactory start to production.

Elsewhere, we are working to expand our product lineup in markets where growth is expected, such as powder used in parts for semiconductor manufacturing equipment.

#### **Electronic Materials Department**

For sputtering target materials, in addition to hard-coat products used to increase the hardness of cutting tools and protective films for smartphones and personal computers, we are working to develop and expand sales of new products tailored to changing demand, such as for power semiconductors, the market for which is expected to expand due to the spread of electrification, and the adoption of larger and curved touch panels for use in automotive dashboards.

to triple production capacity and have built a structure for expanding output in fiscal 2022. This enables us to move forward with the development of new products that leverage point light source LEDs for photoelectric sensors and other applications.

#### **Next-Generation Products Development Center**

Progress in commercialization is being made in a number of themes, including materials for lithium-ion battery anodes (active materials). Work is underway to select candidate projects for the creation of other new business themes, in cooperation with the Corporate Research & Development Center and others.

### Sustainability topics

Enhancing the DAP<sup>™</sup>-AM series of environmentally friendly powders for 3D printers (additive manufacturing) Following on from the HTC<sup>™</sup> product announced in April 2021 for use with die-cast molds, in August 2022 we announced LTX<sup>™</sup>, which is suitable for die-cast molds and plastic injection molds. The high thermal conductivity of HTC<sup>™</sup> helps to reduce cycle time by decreasing mold temperature, and contributes to longer mold life by mitigating thermal stress. In addition, LTX<sup>™</sup> reduces distortion in the item being shaped by more than 80% compared to HTC<sup>™</sup>, enabling it to be used for large molds and helping to expand the application domain for additive manufacturing of 3D printers.



Expanding market for various high-

and green innovation

performance parts and materials as a result

of the spread of vehicle electrification, ICT,

Magnetic powder raw

material and the booste

circuits for which it is used



Point light source LEE

- For electric vehicles we are working to maintain and expand our share of magnetic powder used in booster circuits while seeking
- We are also involved in powder for 3D printers (additive manufacturing), and will strengthen our supply system in line with increases in demand. We intend to enhance our lineup of steel for use exclusively with 3D printers, beginning with the area of molds, such as tool steel.

  - With regard to LED production flexibility in an upward direction, which had previously been a problem, we have made investments



Performance positioning for HTC<sup>™</sup> and LTX<sup>™</sup>



Mockup part created using LTX<sup>\*</sup>

### Business Strategy: Machinery Division

### Pursuing the specialties within the specialties, "Together, With Passion"

The Machinery Division provides industrial furnace facilities for the materials industry and environmental conservation facilities for local governments. Through the synergies obtained from materials technology and facilities technology that are unique to Daido Steel, which is involved in both specialty steel production and manufacturing production facilities, this business is the most specialized part of Daido Steel.

Under our slogan of "Together, With Passion," we will further refine the thermal technology we have nurtured, embracing our passion for taking on challenges alongside our customers and partners, responding to every kind of change with a sense of urgency, as we pursue the exited manufacturing together.



Yuji Noguchi Managing Executive Officer, responsible for Machinery Division

### Main products and applications

Melting facilities:	Electric arc furnace with rotating drive (STARQ®), ladle furnaces, vacuum degassing and refining facilities, dust collection facilities for steelmaking
• Heat treatment facilities:	atmosphere control heat treatment furnaces, STC <sup>®</sup> , continuous annealing furnaces
Vacuum heat treatment facilities:	vacuum heat treatment furnaces, vacuum carburizing furnaces (ModulTherm, SyncroTherm), vacuum sintering furnaces

• Environmental conservation facilities: sewage sludge carbonization furnaces, vehicle tunnel dust collection facilities

competitors

products

to next generation

decarbonization, DX

a better place for all.

Shrinking of the domestic market

• Lead taken by competitors in

• Market monopoly of overseas markets by

Interruptions to transmission of techniques

Intensifying price competition for mature

• Entry of competitors into maintenance business

- · Economic development in Asia and high shares by Japanese automobile manufacturers
- · Increasingly stringent customer quality requirements

STARO

- Increasing need for conversion from blast furnaces to electric arc furnaces in steelmaking
- Increasing awareness of SDGs and decarbonization

#### Divisional basic policy and strategy

#### Long-term business vision

• Extensive track record

manufacturing base

user of industrial furnaces

technical skill and ethics

• Power of the brand in Japan

• Proven materials and maintenance

technology derived from specialty steel

• Dual viewpoint as both manufacturer and

• Engineering personnel with high level of

• In addition to leveraging the technologies we have hitherto cultivated to provide products with new added value at all times, we advocate an engineering business that supports customers throughout the lifecycle, including after-sales service

Long-term goals for 2030 • Through our experience, track record, and our creativity and inspiration as an

about a decarbonized society, and lead the

way in building a sustainable society that is

#### 2023 mid-term strategy

- Provide products and services for carbon neutrality engineering organization, we will help bring
  - Develop global markets that contribute to Asian growth
  - Transform business and manufacturing through digital innovation

#### Medium-Term Management Plan progress

Leveraging our strengths as a fabless industrial furnace manufacturer that outsources the manufacturing of parts while being responsible for design and installation (assembly), we will forge ahead with activities to give concrete form to our long-term goals for 2030.

#### Proposing products and services aimed at achieving carbon neutrality I. Expand sales of products that reduce CO<sub>2</sub> emissions

- Expanding electric arc furnaces with rotating drives from general electric arc furnace steel manufacturers to blast furnace manufacturers, as well as promoting the switch to STC furnaces and vacuum carburizing furnaces by making use of subsidies for advanced energy saving
- Strengthening our initiatives to address demand for electric arc furnaces from blast furnace manufacturers
- Expanding sales of Premium STC Furnace (2nd generation) incorporating the latest energy-saving technology, the first installation of which was sold in January 2022

#### II. Establishing technology for next-generation products

- Undertaking demonstration tests of hydrogen combustion burner in preparation for commercialization
- Exploring applications for methanation technology

#### Develop global markets that contribute to Asian growth

#### I. Build local networks

• Began sending maintenance engineers on long-term assignments to China (July 2022), and will continue to explore possibilities for ASEAN partners

#### II. Improve marketing content of website

• Enhance the website for overseas visitors based on analysis and evaluation of access logs (May 2022)

#### Transform business and manufacturing through digital innovation

- I. Industrial furnace digital innovation
- Developing data collection and AI control optimizing technology through enhancements to the Premium STC Furnace

#### II. Develop ICT services

• Implement activities to reveal customer needs by establishing remote maintenance technology

#### III. Transform business and manufacturing through digital innovation

- Developing Product Lifecycle Management (PLM) systems (workflows) with the aim of early implementation
- Preparing deployment of new data management system

#### Sustainability topics

#### SDGs poster for internal education



Selected for the 2022 subsidy program for advanced energysaving investment promotion project costs, in the category of "Advanced facilities & systems"

A total of 10 products were chosen, including vacuum carburizing furnaces (ModulTherm, SyncroTherm), electric arc furnaces with rotating drives (STARQ®), and Premium STC Furnaces (2nd generation).



ModulTherm

## Sustainability Basic Policy and Materiality

### Sustainability basic policy

Since the Company was established in 1916, it has responded to the demands of society based on the manufacture of specialty steel, and has thus contributed to its development. Going forward, we will practice the management philosophy of "Pursuing the potential of materials to support our future," and in addition to enhancing corporate value, we aim to contribute to the resolution of social issues through our business and help bring about a sustainable future.

### **SDGs** initiatives

Sustainable Development Goals (SDGs) were adopted by the United Nations in September 2015 as a common language for achieving a desired vision of the world by resolving social issues under the slogan "Leave No One behind."

The Company will provide specialty steel to support a more prosperous future society through manufacturing that leverages the technological capabilities it has cultivated hitherto based on its management philosophy, its product development capabilities, and its capacity for innovation, and will work to bring about the world aimed for in the SDGs.

### Organization of promoting sustainability

In addition to establishing a "CSR Committee" chaired by the President in fiscal 2007, and strengthening CSR activities to fulfill its corporate social responsibilities, the Company has addressed a variety of issues.

In recent years, balancing the resolution of social issues to bring about a sustainable society on the one hand with sustainable enhancements to corporate value on the other has become increasingly important for management. Based on this trend, in April 2022 the Company established a "Sustainability Committee" as an advisory body to provide reports in response to consultation by the Board of Directors.

A "Sustainability Promotion Section" reporting to the Corporate Planning Department was also launched as a specialist department responsible for rolling out various

company-wide measures.

The Sustainability Committee conducts planning and drafting of proposals and provides opinions with regard to basic management policies, as well as promotional activities and strategies related to sustainability. Important matters are decided after being reported to or put on the agenda of the Board of Directors. Four meetings are held every year. The first such meeting of fiscal 2022 was held on April 12, at which the details of TCFD disclosure were deliberated.

The Company has positioned sustainability at the core of management, and will take a forceful approach to promoting the various measures related to materiality, centered on addressing climate change.



### Materiality

The materiality policy formulated in fiscal 2020 was revised as follows. After re-evaluating "Risks and opportunities" from a management and stakeholder perspective, we have identified respect for human rights, supply chain management, and strengthening governance as additional material (important) issues. At the same time, preservation of the global environment has been reorganized under the categories of business activities and product supply.

1. Preservation of the global environment	Initiatives to a
(business activities)	Transition to
	Technologica
2. Preservation of the global environment (product supply)	Improvement
(	Effective utiliz
	Respect for h
3. Responsibilities and contributions to society	Elimination o
	Promotion of
	Promotion of
	Coexistence v
	Supply chain
	Strengthenin
4. Strengthening governance	Strengthening
	Stable supply



address climate change

a circular economy

I innovation for energy transition

ts in energy efficiency

zation of natural resources

uman rights

f occupational accidents

health management

f diversity

with local communities

management

g corporate governance

g risk management and compliance

of high-quality products

to the global risks in the Global Risk Report 2019, gh level of social concern

faced by the business of the Company from a medium-

each area of business, and the relationship to the items

materiality matrix. Materiality for Daido Steel is identified

## Response to Risks and Opportunities

The environment in which the Company operates is undergoing dramatic change, such as mobility innovation and energy transition to address climate change. By grasping the risks and opportunities arising from changes in the external environment and making use of the nice new business opportunities, we aim to achieve sustainable growth and enhance corporate value by promoting the thematic roles that the Company should fulfill.

Materiality		Risks	Opportunities	Daido Steel's role
	(1) Initiatives to address climate change	<ul> <li>Rise in electricity costs caused by increased use of renewable energy</li> <li>Increase in operating and material procurement costs caused by the introduction of carbon pricing</li> </ul>	Gain the trust of stakeholders in the Prime Market, and improved	Reduce CO <sub>2</sub> emissions through the use of energy-saving measures, decarbonized electricity sources, and decarbonization technology
1. Preservation of the global environment		<ul> <li>Suspension of operation at plants of the Company or its suppliers caused by increases in natural disasters (torrential rain, flooding, etc.)</li> </ul>	evaluations, by addressing TCFD	Enhance absorption of CO <sub>2</sub> through activities that preserve the natural environment
(business activities)	(2) Transition to a circular economy	<ul> <li>Increased procurement costs caused by rising demand for high-grade scrap</li> <li>Operation of plants in regions with a risk of water shortages</li> </ul>	• Expansion of scrap recycling and reducing disposal costs by greater use	Recycle scrap through use of electric arc furnaces
			of by-products • Reduced water procurement costs due to effective utilization of water resources	Strengthen "3Rs" for by-products
				Conservation of water resources
	(3) Technological innovation for energy transition	<ul> <li>Reduced demand for internal combustion engine components caused by progressive shift to electric vehicles</li> <li>Reduced share due to competitors taking technological lead</li> </ul>	<ul> <li>Increased demand for high- performance materials caused by the progressive shift to electric vehicles</li> <li>Increased demand for hydrogen embrittlement resistance steel and other products arising from progressive shift to hydrogen society</li> </ul>	Supply products to address mobility innovation
				Supply products that contribute to green energy business
				Supply products to assist in addressing environmental regulations
	(4) Improvements in energy efficiency	<ul> <li>Reduced share due to competitors taking technological lead</li> <li>Entering market for electric arc furnaces for blast furnace manufacturers</li> </ul>	Rise in demand for electric arc furnace materials and engineering to address environmental issues	Supply materials with outstanding energy efficiency
2. Preservation of the global environment (product supply)			<ul> <li>Increased demand arising from shift to electric arc furnaces through use of converters</li> <li>Rising demand for equipment driven by progressive shift to digital society</li> </ul>	Supply facilities and equipment with outstanding energy efficiency
	<ul> <li>(5) Effective</li> <li>Unstable procurement of raw materials such as rare metals associated with high environmental and social risks</li> </ul>	<ul> <li>Unstable procurement of raw materials such as rare metals associated with high environmental and social risks</li> </ul>	Rising demand for products that do not use natural resources such as rare	Supply products that conserve resources and do not include hazardous elements.
			metals • Rising demand for products that facilitate the effective utilization of	Supply facilities and equipment that contribute to reductions in waste
		water resources	Supply products that help secure water resources	

Materiality		Risks	Opportunities	Daido Steel's role	
	(6) Respect for human rights	<ul> <li>Loss of business opportunities due to inadequate response to laws and regulations and the demands of society</li> <li>Reduced employee motivation and productivity due to inadequate initiatives within the Company</li> </ul>	<ul> <li>Gain trust of stakeholders</li> <li>Enhance employee productivity through internal initiatives</li> </ul>	Strengthen global initiatives for respect for human rights	
	(7) Elimination of occupational accidents	<ul> <li>Accidents and fires during operation of major facilities</li> </ul>	• Enhanced productivity through safe operation	Roll out key health and safety measures	
3. Responsibilities	(8) Promotion of health management	<ul> <li>Infectious disease leading to paralysis of business activities</li> </ul>	Enhanced productivity due to promotion of better health	Promote better health among employees	
and contributions to society		• Failure to recruit and develop	Generation of innovation through	Recruit and develop diverse personnel	
	(9) Promotion of diversity	sufficient personnel due to the declining birthrate and aging of society	acquisition of diverse human resources • Enhanced productivity due to workplace opvirgement and	Build a workplace environment that fosters sense of job satisfaction	
		and employment systems	employment systems that are in tune with the times	Enhance productivity by promoting work style reforms	
	(10) Coexistence with local communities	• Dilution of reason for existence due to reduced contribution to local communities	<ul> <li>Increase employee motivation by improving society's assessment of the Company through encouragement for cooperative activities</li> </ul>	Promote communication with local communities	
	(11) Supply chain management	<ul> <li>Negative impact of inadequate response to environmental and human rights issues by business partners</li> </ul>	<ul> <li>Raise level of mutual sustainability through synergies with business partners</li> </ul>	Strengthen cooperation with business partners through partnership system	
	(12) Strengthening	Continued existence of company	Gain trust of stakeholders through	Reinforce structures such as Board of Directors, committees	
	corporate governance	endangered by governance failures	sound governance	Promote various corporate governance initiatives	
4. Strengthening	(13) Strengthening risk	Trouble caused by inadequate response to risks	Gain the trust of stakeholders and	ldentifying risks and addressing key risks	
governance	management and compliance	<ul> <li>Fines and administrative punishment caused by inadequate response to laws and regulations and the demands of society</li> </ul>	maintain normal business activities by taking the initiative in responding	Promotion of thorough compliance	
	(14) Stable supply of high-quality products (14) Stable supply • Diminished trust due to product liability damages and the occurrence of recall expenses		<ul> <li>Enhance trust among customers through consistent supply of high- quality products</li> </ul>	Thorough quality management and quality improvements	

### Progress of Actions for SDGs and Materiality

No.	Materiality	2023 Medium-Term Management Plan targets/KPls	FY2021 results and current initiatives
1. Preservation of the g	lobal environment (business activities)		
(1) Initiatives to address climate change	Reduce CO <sub>2</sub> emissions through the use of energy- saving measures, decarbonized electricity sources, and decarbonization technology	Promote "Daido Carbon Neutral Challenge" Reduce FY2030 emissions by 50% (compared to FY2013)	<ul> <li>Reduced CO<sub>2</sub> emissions by 4% (compared to FY2013) (CO<sub>2</sub> emissions per ton of production: -26%)</li> <li>Announced endorsement of TCFD in 2021, began disclosing in accordance with recommendations i</li> <li>Began purchases of CO<sub>2</sub>-free electricity (annual reduction of 50,000 tons of CO<sub>2</sub> in FY2021)         <ul> <li>→ expanding to annual reduction of 100,000 tons of CO<sub>2</sub> in FY2022)</li> </ul> </li> </ul>
	Enhance absorption of $CO_2$ through activities that	• Reduce CO <sub>2</sub> through conservation of green spaces and greening activities	Kutcharo Natural Forest Daido: cumulative total of 249,000 m <sup>2</sup> of trees planted     Nagion Daido Forest: cumulative total of 21,000 m <sup>2</sup> of forest maintenance completed

		preserve the natural environment		<ul> <li>Nagiso Daido Forest: cumulative total of 21,000 m<sup>2</sup> of forest maintenance completed</li> </ul>
	Recycle scrap through use of electric arc furnaces	Promote recycling of main raw materials	91% recycling rate for main raw materials	
		Strengthen "3Rs" for by-products	<ul> <li>Promote recycling of by-products (slag, dust, sludge, etc.)</li> </ul>	81% recycling rate for by-products
(2)	Transition to a circular economy	Conservation of water resources	<ul> <li>Promote recycling of water resources</li> <li>Thoroughly manage hazardous waste substances or contaminated water and prevent discharges</li> </ul>	<ul> <li>Recycling rate of over 90% for water</li> <li>Met water discharge standards for all 41 items, including lead and its compounds, hexavalent chron ion concentrations (pH) (Chita Plant, annual measurement, FY2021)</li> </ul>

#### 2. Preservation of the global environment (product supply)

	Technological	Supply products to address mobility innovation	• Develop and provide products to support CASE	Available for volume production: steel for e-Axle gears, semiconductor manufacturing equipment materials, soft magnetic materials, power transmission wire, etc.         Jucts to support CASE       • Under development: magnets (higher-performance), materials for lithium-ion battery anodes, high-magnetic flux density materials for motor cores, etc.				
(3) innovation for energy transition	innovation for energy transition	Supply products that contribute to green energy business	<ul> <li>Develop and provide parts and materials to support the diffusion of hydrogen and ammonia businesses</li> </ul>	Installed equipment to evaluate hydrogen embrittlement and corrosion resistance	69-72			
		Supply products to assist in addressing environmental regulations	Develop and provide products to assist in addressing strengthened environmental regulations	<ul> <li>Available for volume production: ship diesel engine valves that address strengthened NOx regulations: DSA760, parts and materials for nuclear reactors and thermonuclear reactors</li> </ul>		6 CLEAN WATER AND SANITATION	9 AND INFRASTRUCTURE	14 BELOW WATER
(4)	Improvements in energy	Supply materials with outstanding energy efficiency	Develop and provide products to contribute to energy savings	<ul> <li>Available for volume production: jet engine shaft for aircraft with the highest thrust in the world</li> <li>Participating in planning green innovation fund projects and the Materials Open Platform for Permanent Magnet</li> </ul>	72.76	7 AFFORDABLE AND T CLEAN ENERGY	13 clivate Action	
(4)	efficiency	Supply facilities and equipment with outstanding energy efficiency	Develop and provide facilities to contribute to energy savings	<ul> <li>Selected for the 2022 subsidy program for advanced energy-saving investment promotion project costs, in the category of "Advanced facilities &amp; systems" (10 Daido Steel products)</li> </ul>	/5-/0	÷.		
		Supply products that conserve resources and do not include hazardous elements	<ul> <li>Mitigate raw material procurement risks by reducing elements such as cobalt and vanadium</li> </ul>	<ul> <li>Available for volume production: cobalt-free powder for additive manufacturing of 3D printers, reduced-cobalt motor core steel sheets, vanadium-less titanium conrods, etc.</li> </ul>				
(5) Effective utilization of natural resources	Supply facilities and equipment that contribute to reductions in waste • Develop and supply sewage sludge carbonization facilities		Under development: next-generation sewage sludge carbonization system					
		Supply products that help secure water resources	Provide parts and materials that help secure water in regions with scarce water resources     Available for volume production: materials for pumps used for desalination plants and extracting water from rivers					

#### 3. Responsibilities and contributions to society

(6)	Respect for human rights	Human rights initiatives	<ul> <li>Firmly establish human rights policy within Company, put in place systems and frameworks to expand activities</li> </ul>	<ul> <li>2 lectures held on human rights (FY2021) → Human rights policy established in FY2022 (October 2022)</li> <li>Harassment education delivered to a total of 1,934 people (FY2021)</li> </ul>	79-80			
(7)	Elimination of occupational accidents	Promote key health and safety measures	Ratio of accidents requiring time off work of 0.20% or lower     Zero serious accidents	Ratio of accidents requiring time off work: 0.45% (FY2021)     Serious accidents: 1 (FY2021)	81-84			
(8)	Promotion of health management	Promote better health among employees	<ul> <li>Promotion of health management</li> <li>Promote early discovery and treatment of poor health or mental illness, and raise health awareness</li> </ul>	<ul> <li>Examination acceptance ratio for those requiring detailed examinations: 97.4% (FY2021)</li> <li>Guidance acceptance ratio for those identified as having poor strength: 91.9%</li> <li>Specific health guidance implementation ratio: 86%</li> <li>Ratio of smokers among those in their 20s: 29.8% (FY2021), education provided to new graduates</li> </ul>	85-86	3 GOOD HEALTH AND WELL-BEING ///	6 CLEAN WATER AND SANITATION	12 RESPONSIBLE DENSIGNATION AND PRODUCTION
		Secure and train diverse human resources	<ul> <li>Encouragement of active roles for women: raise retention rate and ratio of female managers by providing career consultations and education such as selective role model training</li> </ul>	<ul> <li>Female employee retention rate: 88.9% (FY2021)</li> <li>Number of female managers: 15 (as of May 2022)</li> </ul>		4 COULTY EDUCATION	8 BECENT MORK AND ECONOMIC GROWTH	15 UFE ON LAND
(9)	Promotion of diversity	Build a workplace environment that fosters sense of job satisfaction	Job satisfaction awareness surveys and activities to foster job satisfaction	Launch of "Making a company that people look forward to working at every day" project (FY2021)	87-92		10 REDUCED NEQUALITIES	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
		Promotion of work style reforms	Use IT to create efficient work styles regardless of location or time	Remote working ratio at head office departments: 64% (FY2021)		₽	<b>₩</b>	
(10)	Coexistence with local communities	Promote communication with local communities	<ul> <li>Promote preservation and improvements to the environment in regions in which the Company operates</li> <li>Engage in more intensive communication about the environment with local communities</li> </ul>	<ul> <li>Participated in the "Inochi wo Tsunagu PROJECT" (conservation of biodiversity) in the Chita Peninsula Seaside Industrial zone</li> <li>Communication through opening of plant sites and support for cultural and sporting activities: supporting NPO awarded "Greenery Day/Minister of the Environment Award For Meritorious Service in Relation to the Natural Environment," etc.</li> </ul>	93-94			
(11)	Supply chain management	Strengthen cooperation with business partners through partnership system	<ul> <li>Collaborate on ESG issues throughout the supply chain: decarbonization, BCP, VA/VE, SDGs</li> </ul>	<ul> <li>Launched Daido Supplier Partnership system "DSP" (May 2022)</li> <li>Held partner meetings (May 2022) to publicize system (attended by approximately 170 companies)</li> </ul>	95-96			

#### 4. Strengthening governance

	-				
(12) Strengthening governance	corporate Reinforce structures such as Board of Directors and committees, promote various governance initiatives	<ul> <li>Expedite decision-making, enhance corporate value over the medium to long term         → Strengthen systems and functions to strengthen governance</li> <li>Enhance effectiveness and transparency</li> </ul>	<ul> <li>Transitioned to a company with an Audit &amp; Supervisory Committee (June 2022), established Sustainability Committee (April 2022)</li> <li>Selected issues from among the results of the FY2021 evaluation of Board of Directors effectiveness → Addressed these issues in FY2022 by revising successor plans, strengthening IR activities, and promoting timely feedback to Board of Directors</li> </ul>	97-104	8 BECKNY WINK: AND ECENTRATIC GROWTH 17 FRITME COLLS
Strengthening risk (13) management and compliance	risk Identifying risks and addressing key risks	Thorough evaluation of risks using risk map	<ul> <li>Addressed high-risk events based on risk map formulated in FY2020: formed working group and implemented measures related to trade security control, prevention of cartels, BCM, strengthening group governance, and information management</li> </ul>	105-106	
	Promotion of thorough compliance	Firmly establish compliance mindset in all employees	<ul> <li>Firmly establish through messages from executives, education, auditing and so on</li> <li>Eight persons with responsibility assigned, 40 internal reports received (FY2021), all of which were addressed</li> </ul>	107-108	16 редел цизтис нутпитиния
(14) Stable supply of guality produce	of high- ts Thorough quality management and quality improvements	• Index of major quality incidents: 0	• Index of major quality incidents: 0.20 (index taking the actual results from 2006 as "1")	109-110	

	Reference page	Related SDGs	
%) ns in June 2022	57-64	6         CLAN MARKIN And Sublicitions         122         Submittantial Submittantial And Submittantial And And And And And And And And And And	
romium compounds, and hydrogen	65-68	I11     Internet	

## Initiatives to Address Climate Change

#### Initiatives to address climate change: message from CO<sub>2</sub> Reduction Project Leader

In November 2020 we launched a company-wide CO<sub>2</sub> Reduction Project, and formulated the Daido Carbon Neutral Challenge in April 2021 to further strengthen our initiatives for carbon neutrality. However, recently companies are being required to reduce not only their own CO<sub>2</sub> emissions but also emissions throughout the supply chain, and to disclose information regarding climate change problems. This year we disclosed information based on the TCFD recommendations for the first time, and we will strive to continue disseminating appropriate information to stakeholders going forward. With the cooperation of the relevant departments we will move forward with the activities for reducing  $CO_2$  emissions that form the basis of this initiative, addressing the challenge of achieving carbon neutrality by 2050.



Yuichi Ichihara CO<sub>2</sub> Reduction Project Leader

#### Status of Daido Steel initiatives to reduce CO<sub>2</sub> emissions and save energy

Status of initiatives to reduce CO<sub>2</sub> emissions derived from energy use

Daido Steel's businesses consume large amounts of energy. The Company accepts its obligations as a company that uses large amounts of energy and prioritizes efforts to reduce CO<sub>2</sub> emissions derived from energy use, which account for approximately 90% of greenhouse gas emissions in Japan.

By taking a three-pronged approach of achieving drastic energy savings by combining existing technologies, using decarbonized electricity sources and improving consistent yield, the Company is promoting reductions in environmental impact, CO<sub>2</sub> emissions and energy consumption.

#### CO<sub>2</sub> emissions and emissions per ton of production



power companies for each fiscal yea \* Calculations are limited to Scope 1 + Scope 2 on a non-consolidated basis (derived from energy)

#### Examples of CO<sub>2</sub> emissions reductions by saving energy

In order to reduce CO<sub>2</sub> emissions by saving energy, Daido Steel is working on detailed measures to cut energy wastage and losses in each process, as well as through such initiatives as using oxygen combustion technology to raise heating efficiency, and utilizing ceramic fibers to enhance insulation in heating furnaces. Grassroots improvements include using insulation materials to increase heat retention of steam pipes to cut heat losses through radiation and dispersion, and taking steps to counter air leaks at plants.

#### [Oxygen combustion technology]

Oxygen combustion results in high flame temperatures. Because this approach does not need combustion air, the energy required to heat the combustion air can be saved, resulting in improved energy efficiency in temperature ranges above 1,000°C, which are often used at Daido Steel.

In addition to the ladle preheating equipment used in the steelmaking process, Daido Steel is expanding the application of oxygen combustion to soaking furnaces and continuous casting tundish preheating equipment





#### [Using ceramic fibers in heating furnace refractories]

Daido Steel has more than 150 heating furnaces and heat treatment furnaces. Upgrading these to use ceramic fiber, which has excellent insulating properties, results in better heat retention and reduces energy use.

We are steadily expanding the use of these fibers in heating furnaces, which consume large quantities of fuel.

#### [Introduction of camera for detecting gas leaks]

The introduction of gas leak detection cameras, used on regular energy-saving patrols to address the air leaks that are an ongoing occurrence due to equipment deterioration or failure, enables the location of air leaks to be determined more accurately and in less time, thus reducing waste.

#### Work to increase heat retention of steam pipes]

The deterioration of steam pipe heat-retention material and sheet metal over time results in reduced heat-retentiveness and increased risk of pipe corrosion. By performing work to increase heat retention, radiant heat losses can be controlled and the lifespan of the steam pipe extended



ess of deterioration

Reducing CO<sub>2</sub> through the use of decarbonized electric power sources In order to reduce CO<sub>2</sub> emissions, Daido Steel is seeking to decarbonize its sources of power by buying CO<sub>2</sub>-free electric power and installing solar power generation facilities as a way of introducing renewable energy.

#### [Utilizing CO<sub>2</sub>-free electric power and promoting more widespread use in the regions]

In fiscal 2021 the Company began purchasing CO<sub>2</sub>-free electric power (annual reduction of 50,000 t-CO<sub>2</sub>), and in fiscal 2022 this was expanded to an annual reduction of 100,000 t-CO2. In addition to expanding the amount purchased as we approach 2030, we will work in cooperation with Chubu Electric Power Miraiz Co., Inc. to encourage more widespread use of renewable energy in the regions.

#### [Introduction of renewable energy]

The Company began deploying solar power generation facilities at its Shibukawa Plant, with operation beginning in September 2022.

#### Addressing climate change

#### [CDP climate change]

When we first submitted a response to CDP, in fiscal 2021, we received an assessment of "B-." In fiscal 2022, we are working to further enhance information disclosure, such as by including responses on water security.

#### [Endorsement of GX League Basic Concept]

This is a framework intended to generate a group of companies that can compete effectively at the international level, led by Ministry of Economy, Trade and Industry with the aim of achieving carbon neutrality by 2050. It has been endorsed by 440 companies. Going forward, we will engage in discussions on the details of the design.



Ceramic fibers used in place of previous unshaped refractories and bricks

> Example of use in forging heating furnace at Shibukawa Plant



Possible to confirm air leak, but precise location unclea

Extent of air leak region displayed shaded in red





Precise location of air leak can be confirmed



Image from screen of gas leak detection device



Initiatives to Address Climate Change

Information disclosure based on the recommendations of the "Task Force on Climate-related Financial Disclosures (TCFD)\*"



## **Daido Carbon Neutral Challenge**

-Pursuing the potential of materials to support our future-

#### 1: Addressing TCFD recommendations

Daido Steel considers the response to climate change as one of the most important issues facing management in order to realize the management philosophy of "pursuing the potential of materials to support our future." As part of this, we formulated the "Daido Carbon Neutral Challenge" and took on initiatives that aim to reduce CO<sub>2</sub> emission by 50% by fiscal 2030 (compared to fiscal 2013) and achieve carbon neutrality by 2050.

In November 2021 we announced the endorsement of the TCFD recommendations. In addition to strengthening governance further based on the TCFD recommendations, we will work on additional enhancements to our dissemination and disclosure of information by clarifying our strategy and making it easier to understand the risks and opportunities for our business that will arise from climate change.

\* TCFD (Task Force on Climate-related Financial Disclosures)

The TCFD is a task force, set up by the Financial Stability Board (FSB) at the request of the G20, that provides recommendations for corporate disclosure of the financial impact of climate change-related risks and opportunities on business, as well as for specific information on countermeasures.

#### 2. Disclosure of information in accordance with TCFD framework

#### 1) Governance

- As an organization for investigating and deliberating basic policy, important matters, and risks and opportunities related to climate change, the previous CSR Committee was reconstituted in April 2022 as the "Sustainability Committee." This Committee is chaired by the President & CEO, and matters deliberated and decided there are put on the agenda of the Board of Directors.
- In addition, a "Sustainability Promotion Section" and a company-wide "CO2 Reduction Project" have been established, with the aim of planning reductions in CO<sub>2</sub> emissions and diffusing and promoting them throughout the Company.
- Resolutions deliberated and passed by the Board of Directors are rolled out to individual business divisions, which reflect them in their business operations.



#### 2) Strategy

- With the objective of understanding the impact of risks and opportunities presented to the Company by climate change, as well as considering the resilience of Daido Steel's medium- to long-term strategy and the need for further measures, we conducted a scenario analysis for the period 2030 to 2050. For the purpose of this scenario analysis, we referred to climate change scenarios from the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC), namely their 1.5°C and 4°C scenarios\*. We identified a wide range of risks and opportunities, selected those that would significantly influence the business of the Company from the perspectives of "high likelihood of occurrence" and "considerable impact after occurrence," and investigated countermeasures. We will also monitor the risks and opportunities that were not the subject of this analysis on an ongoing basis.
- As a result of verifying countermeasures to these risks and opportunities, we concluded that it is possible to enhance corporate value by developing and expanding sales of high-performance materials and innovative environmental engineering products, based on the basic strategy of the Medium-Term Management Plan for addressing changes in society as we approach decarbonization. Our assessment is that the Daido Steel strategy is resilient.
- \* 1.5°C scenario: a scenario in which countermeasures, such as the strengthening of regulations and changes in markets, are implemented in such a way as to minimize the rise in temperature 4°C scenario: a scenario in which physical phenomena, such as abnormal weather patterns, occur as a result of the rise in temperature

#### TCFD scenario analysis

Scenario	Factor	Change		Impact on Daido Steel	Countermeasures
1.5°C	Progressive shift to electric vehicles	Reduced demand for engine/ exhaust system parts due to progressive shift to electric vehicles	Risk	• We expect internal combustion engine vehicle- related demand to be more or less flat until 2030, but from 2030 onward we assume a significant decline as a result of the progressive shift to electric vehicles.	<ul> <li>Expand sales in future growth markets such as CASE (automotive), semiconductor-related products and green energy to achieve sustainable business growth</li> </ul>
		Rising demand for high- performance materials used in electric vehicles		<ul> <li>Progressive shift to electric vehicles to result in rising demand for high-performance materials*.</li> <li>* High-strength steel and magnetic materials used in e-Axle components, battery materials, control system parts, etc.</li> </ul>	<ul> <li>Develop materials tailored to the needs of each product</li> <li>Increase production capacity in response to rising demand</li> <li>Launch new businesses, and launch and enter the market for new products aimed at next-generation vehicles</li> </ul>
	Strengthening of various regulations, including those governing greenhouse gas emissions	Increase in electricity costs due to use of renewable energy	Risk	Electricity costs to rise as a result of increases in the ratio of renewable energy used.	<ul> <li>Absorb increases in electricity costs by saving energy and improving product yields</li> <li>Introduce renewable energy within the Company itself</li> </ul>
	Introduction of carbon pricing	Increase in operating and procurement costs	Risk	<ul> <li>Possibility of increases in operating costs and procurement costs for alloys and other materials.</li> </ul>	Invest in reducing CO <sub>2</sub> emissions and move completely to renewable energy for all electric power needs to offset cost burden     Request that suppliers reduce their CO <sub>2</sub> emissions
		Rising demand for electric arc furnace materials	Opportunity	<ul> <li>Due to intensifying demands for decarbonization and a strengthening trend toward low-emission products, we expect rising demand for electric arc furnace materials due to their relatively low CO<sub>2</sub> emissions.</li> </ul>	<ul> <li>Actively expand sales of low-CO<sub>2</sub> emissions specialty steel manufactured in our innovative STARQ<sup>®</sup></li> <li>Move forward with the shift to renewable energy to promote further differentiation</li> </ul>
	Rising demand for scrap raw materials	Increase in scrap procurement costs	Risk	<ul> <li>Rising demand globally for electric arc furnace materials, and rising demand for high-grade scrap.</li> <li>Could be affected by soaring prices and difficulties in procurement as a result.</li> </ul>	Expand scrap recovery programs in cooperation with customers, and establish technologies to enable the use of low-grade scrap in order to control soaring prices and secure necessary scrap volumes
	Diffusion of technology to address issues related to the environment and new energy	Rising demand for innovative engineering to address environmental issues		<ul> <li>As investments aimed at improving energy efficiency increase in preparation for decarbonization, demand for our environmental engineering will rise.</li> </ul>	<ul> <li>Actively expand sales of Daido brand energy-saving products*</li> <li>STARQ®, DINCS®, ModulTherm, Premium STC Furnace, etc.</li> <li>Promote the development of engineering products (hydrogen combustion industrial furnaces, etc.) that match user needs</li> </ul>
		Rising demand for hydrogen- related technology and products	Opportunity	<ul> <li>Rising demand for high-performance materials*, such as hydrogen embrittlement resistance steel, as a result of shift toward hydrogen society.</li> <li>High-performance materials used in hydrogen stations, fuel cell vehicles, hydrogen internal combustion engines, and other applications</li> </ul>	<ul> <li>Develop materials tailored to different product needs</li> <li>Acquire new customers and open up new markets</li> </ul>
4°C	Increasingly intense (acute) climactic damage	Risk of operations being suspended due to natural disasters on suppliers and production sites	Risk	<ul> <li>Increasing risk of suppliers and main plants being struck by natural disasters, leading to suspension of operations.</li> </ul>	<ul> <li>Promote BCP measure such as risk management in cooperation with suppliers and ensuring an appropriate level of inventory</li> <li>Continue to implement flood countermeasures for main plants</li> </ul>

#### Preservation of the Global Environment (Business Activities)

#### Initiatives to Address Climate Change

#### 3) Risk management

- As a process for managing climate-related risks, climate-related risks are analyzed, countermeasures are drafted and promoted, and progress is managed through the Sustainability Committee.
- Details of matters analyzed and considered by the Sustainability Committee reported to the Board of Directors, and management of risks is integrated across the Company as a whole.
- For these latest disclosures, we established a working group for climate-related risks and conducted a scenario analysis. After taking into account Daido Steel's business strategy, considering the likelihood of each risk and opportunity occurring and their impact in the event that they do occur, and prioritizing climate-related risks, we will focus on countermeasures to address those items with the highest impact. Going forward, we will establish a TCFD Working Group within the Sustainability Promotion Section that administers the Sustainability Committee, to check and examine matters on an ongoing basis.



#### 4) Indicators and targets

- In order to assess and manage the impact of climate-related problems on management, Daido Steel has set reduction targets using total emissions of greenhouse gases (CO<sub>2</sub>) as indicator.
- The CO<sub>2</sub> Reduction Project was launched in November 2020, and the Daido Carbon Neutral Challenge was announced in April 2021. The Company is promoting activities to cut  $\mathsf{CO}_2$ emissions with the objective of reducing 2030 CO<sub>2</sub> emissions by 50% over those of fiscal 2013, and of achieving carbon neutrality in 2050.

#### Toward 2030



Toward 2050

Aim to achieve carbon neutrality n line with the development of decarbonization echnologies and infrastructure

#### 2030 targets for reductions in CO<sub>2</sub> emissions





#### Scope 3 disclosure

- In accordance with the "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain," the Company has performed calculations for Scope 3 categories 1, 2, 3, 4, 5, 6, 7, and 13, where such calculations are possible.
- In fiscal 2020, CO<sub>2</sub> emissions for the Company as a whole of 1,103,000 tons were confirmed, within which "Category 1: Purchased Products and Services" accounted for the highest percentage at 73%. In preparation for reducing these emissions, in fiscal 2022, we introduced partner meetings with our main suppliers, during which we engaged in activities to calculate and reduce CO<sub>2</sub> emissions of products used by the Company.
- Going forward, we will continue to work on product development that will enable us to raise the percentage of products (such as high-performance materials used in electric vehicles and hydrogenrelated products) that contribute to reductions in the CO<sub>2</sub> emissions of our customers.
- In addition, we calculate that the three main energy-saving products in the engineering division contribute to annual reductions in the customer's CO<sub>2</sub> emissions of 30,900 tons (fiscal 2020).

#### CO<sub>2</sub> emissions by Scope 3 category

Category	FY2019	FY2020	
1. Purchased products and services	1,055	810	Calculated by multiplying the purchase amount of raw materials and materials by $\ensuremath{CO}_2$ emissions factor
2. Capital goods	80	50	Calculated by multiplying capital investments by CO <sub>2</sub> emissions factor
3. Fuel and energy-related activities not included in Scope 1 or 2	194	168	Calculated by multiplying purchased electricity and fuel by $CO_2$ emissions factor
4. Transportation and delivery (upstream)	57	49	Calculated by multiplying the amount of fuel used and the amount purchased under Category 1, as reported under the Act on Rationalizing Energy Use, by $\rm CO_2$ emissions factor
5. Waste generated in operations	20	17	Calculated based on waste and recycling amount for each type of by-product
6. Business travel	3	1	Calculated by multiplying each mode of transportation by the $CO_2$ emissions factor
7. Employee commuting	3	3	Calculated by multiplying the money spent on each mode of transportation by the $\ensuremath{CO}_2$ emissions factor
13. Leased assets (downstream)	5	5	Calculated by multiplying the leased surface area by the $CO_2$ emissions factor
Total	1,417	1,103	

\* Calculations are limited to categories applicable to Daido Steel on a non-consolidated basis \* Calculations have been performed using the methodology of the Ministry of the Environment's Green Value Chain Platform (database version 3.1)

- \* CO<sub>2</sub> emissions are for Daido Steel Scope 1 + Scope 2 on a non-consolidated basis (derived from energy)
- Emission factors for historical CO2 emissions (2013 and 2021) are calculated based on those provided by contracted electric power companies for each fiscal year





(1.000 t-CO<sub>2</sub>/year)

#### Initiatives to Address Climate Change

### Contributing to achieving a decarbonized society - CO<sub>2</sub> reductions through natural environment activities -

#### Greening initiatives - We protect more than 4,000,000 m<sup>2</sup> of greenery.

Daido Steel protects greenery through ownership of more than 4,000,000 m<sup>2</sup> of forest throughout Japan, including the green spaces at each office and plant, and the forest owned by the Company adjacent to Lake Kutcharo in Hokkaido. The total surface area is equivalent to approximately 568 soccer fields.

#### Kutcharo Natural Forest Daido

This is a forest owned by the Company with a greenery surface area of approximately 3,730,000 m<sup>2</sup>. In collaboration with the Kutcharo Eco Workers local environmental NPO, the Company is removing approximately 15,000 m<sup>2</sup> of bamboo grass every year, and planting broadleaf saplings.

Begun in 2006, these activities continue to this day and as of March 2021 work had been carried out on a cumulative total of 249,000 m<sup>2</sup> of land.

#### (Reference) Lake Kutcharo

- Approximately 20,000 tundra swans and 50,000 to 60,000 ducks of various species pass through Lake Kutcharo during spring and autumn migration seasons every year.
- The location is registered under the Ramsar Convention, an international treaty that protects wetlands that are important habitats for waterfowl





Tree-planting festival (FY2021)

#### Nagiso Daido Forest

On November 1, 2016, Daido Steel concluded a forest caretaker agreement with the town of Nagiso, Nagano Prefecture, where founder Momosuke Fukuzawa became involved in hydroelectric power generation, to commemorate the 100th anniversary of the Company. This forest was named Daido Forest, and in addition to the Company supporting forestry work in the town of Nagiso, our employees participate in tree planting and other activities. The surface area of the green space comes to approximately 21,000 m<sup>2</sup>.



Company employees undertaking tree-planting work (FY2019)



Company employees undertaking tree-planting work (FY2019)

#### Greening activities at manufacturing plants

Daido Steel maintains and manages approximately 330,000 m<sup>2</sup> of green spaces throughout its plants. It is actively expanding such green spaces at each of its plants.





Chita Second Plant greening activities

Hoshizaki Plant greening (before)

Planting trees on the mound for greening at the Chita Plant A mound to be used for greening was created in the western zone of the Chita Plant, on which trees were planted between 2005 and 2014.

This has now developed into a fine woodland. The surface area of the green space comes to approximately 13,000 m<sup>2</sup>.





Employees carrying out tree-planting work

The greening mound (current status)

#### Chita Plant, Hanamomo Park

The management of a Tokai city green space on the eastern side of the Daido Ohashi bridge, which is also the front gate of the Chita Plant, was entrusted to Daido Steel in 2021 under the terms of a comprehensive agreement with the city of Tokai. We are planting this green space with flowering plum, which has a special significance for the Company, and other trees. The

surface area of the green space comes to approximately 7,000 m<sup>2</sup>.



Hanamomo Park (cherry trees)





Hoshizaki Plant greening (after)





Hanamomo Park (flowering plum, azaleas)

## Transition to a Circular Economy

#### Specialty steel is the ultimate sustainable material

In order for us to enjoy the benefits of iron in perpetuity, the electric arc furnace processes that enable scrap iron to be reborn as various specialty steel products and continuously supplied to society are indispensable



#### Daido Steel's role in helping to achieve a circular economy

91% of the raw materials used in Daido Steel's production systems consists of recycled products, mainly scrap iron. By utilizing every last piece of iron, we will shift to a closed-loop system for iron sources.

During the production of specialty steel, by-products such as slag, sludge, scale, and brick scrap are generated. Using proprietary technology, we strive to Reduce generation of these by-products, Reuse them to the extent possible, and Recycle them to minimize the amount of waste.

In addition, large volumes of water are used as cooling water in specialty steel processes, which involve materials at high temperatures, but more than 90% of this consists of recycled water

By making thorough and effective utilization of finite resources in this way, Daido Steel helps to achieve a circular economy.



#### Shifting to a closed-loop system for iron sources

Electric arc furnaces, the driver of iron resource circulation Total production of crude steel in Japan for fiscal 2021 was 95 million tons. It may not be fully appreciated that approximately 25% of this was produced in electric arc furnaces using scrap iron as raw material. On the other hand, Japanese stockpiles of steel (steel that remains in the country in one form or another) are approximately 1.3 billion tons, and 2-3% of this comes onto the market as scrap every year. In other words, that amount of valuable iron resources is being generated.

The main sources of scrap iron are "market scrap," consisting of structures such as bridges and buildings, and dismantled vehicles, "process scrap" originating from production sites that manufacture components for vehicles and a variety of machinery, and "in-house scrap" originating from steelmakers. The electric arc furnace processes of melting, casting, rolling, and machining used to bring these resources back to life as new products are, in a manner of speaking, the recycling processes that drive the circulation of iron resources.

Daido Steel has led the industry not only in developing a variety of technologies and improving production processes to utilize iron resources in the market but also in implementing initiatives aimed at raising the utilization of by-products that are generated within companies. In addition to the traditional characteristics of high quality and low cost, these technologies are also extremely important from the perspective of achieving harmony with the global environment by saving energy and resources, centered on CO<sub>2</sub> reductions.



<Example of effective utilization of iron resources>

• Increase bulk specific gravity/make maximum utilization of process scrap (machining chips)

Machining chips are one type of process scrap. Machining chips are generated during machining processes when creating parts for vehicles and machinery. Because they are small in size and in the shape like springs, they often include different kinds of material and resulting in poor bulk specific gravity.

To deal with these machining chips, which are difficult to use in electric arc furnaces, we have introduced chipping and briquette facilities at the Chita Plant and Shibukawa Plant, and have successfully homogenized the metal fragments and significantly improved bulk specific gravity in order to expand the volume that can be used. This has made a substantial contribution to reduced usage of purchased raw material. (Began operation at the Chita Plant and Shibukawa Plant in 2013)

#### • Electric arc furnace recycling of internal by-products (dust, scale)

At the Chita Plant, Daido Steel's proprietary PRIME recycling facilities enable internal by-products, such as dust and scale containing iron, nickel, chromium and other valuable elements, as metal resources. (Began operation in 2007)

In the Premium Resources with Innovative Method (PRIME) process, scale and stainless steel dust are mixed with a reducing agent and formed into pellets in a granulator, which are then melted for recycling as raw material in the electric arc furnace.

Pelletizing scale and dust, which are by-products in powder form, reduces losses while handling and losses to dust collection during the electric arc furnace initial bore-in period, and enables the efficient recovery from the dust of highly valuable metals such as nickel

#### Transition to a Circular Economy

#### Strengthen "3Rs" of by-products

Specialty steel processes generate large volumes of slag, dust, scale, and other by-products. Daido Steel will promote and strengthen the "3Rs" (Reduce/Reuse/Recycle) through the use of its internally developed technology.

Recycling example from slag generated at the Chita Plant Slag generated at the Chita Plant is mainly recycled as roadbed material, which is steel slag for roads, or aggregate for asphalt concrete.

Through the use of numerous facilities and a variety of testing equipment, Daido Steel has achieved high guality and stable supply.

Going forward, in addition to implementing improvements such as broadening our lineup of slag products and raising the recycling rate further, we will contribute to reducing the use of crushed stone, which is a natural resource.

Recycling example from electric arc furnace dust Electric arc furnace dust generated at the Chita Plant undergoes melt processing using Daido Special Recycling Process for Dust and Slag Melting (DSM) facilities, which were developed in-house.

Scrap iron melted in electric arc furnaces includes galvanized steel sheets and other products, so zinc also accounts for approximately 20% of the electric arc furnace dust.

This is converted to zinc raw material by transforming it into secondary dust with a higher ratio of zinc, which contributes to the circulation of zinc, which is a natural mineral. Moreover, slag from the electric arc furnace is converted to a heavy aggregate, thus enabling electric arc furnace dust to be completely converted to resources.







Daido Steel's by-product recycling rate remains at a high level of 81%.

Going forward, by enabling the utilization of unused by-products, we will raise the by-product recycling rate further.

### Effective utilization of water resources

Large volumes of water are used as a coolant in specialty steel processes, which involve materials at high temperatures. By processing this appropriately, reusing it repeatedly, and minimizing the volume of discharges outside the plant, we have achieved a water recycling rate of more than 90%.



Indirect cooling water for equipment, whose temperature has risen due to having been exposed to high temperatures during the manufacture of specialty steel, is reused after cooling down through permanent cooling towers.



#### Volume of water extracted and discharged

Water drawn volume (10,000 m<sup>3</sup>)

Waste water (10,000 m<sup>3</sup>) (Including rainwater)







#### Reference>

Initiatives to prevent leakages of abnormal water Daido Steel uses a variety of chemical substances, including acids and alkalis. We perceive outflows of such substances from Daido Steel sites as a result of torrential downpours and floods that far exceed forecasts to be one of the water risks that we face. In order to mitigate this water risk, we have established a working group within the Company, which is promoting improvements to facilities and other initiatives.



## **Technological Innovation for Energy Transition**

#### Technological innovation for energy transition

As a result of heightened environmental awareness and strengthened regulations, customer requirements for steel materials are becoming increasingly stringent. Based on cutting-edge research and development in partnership with customers and academia, Daido Steel has achieved functional enhancements compared to previous steel materials in areas such as durability, heat resistance, corrosion resistance, magnetic field strength, smaller size, lower weight, resources saving, and efficiency. Changes in the social environment have led to renewed appreciation for these steady efforts, and demand for our products is growing daily.

### Supply of products to address mobility innovation

We develop a range of products to facilitate the expanded use of CASE and contribute to achieving a green society.

Products	Application	Contribution to a green society	Stage of commercialization
Steel material for gears	e-Axle gear reducers	For use in zero-CO <sub>2</sub> emission BEV	Industrialized (volume production)
Magnets	Motor rotors	Magnets combining high heat-resistance with high magnetic field strength contribute to improving motor performance	Under development
Semiconductor manufacturing equipment materials	Semiconductor manufacturing equipment	High corrosion resistance and cleanliness contribute to stable production of the semiconductors that are indispensable for the shift to electric vehicles and automated driving, etc.	Industrialized (volume production)
Invar wires for overhead power transmission lines	Power transmission lines	To the low coefficient of thermal expansion, adds strength and twist characteristics in order to increase power transmission capacity	Industrialized (volume production)
Soft magnetic strip steel (permalloy, etc.)	Battery current sensors, EPS torque sensors, etc.	In the case of current sensors, extends EV range due to improved fuel consumption	Industrialized (volume production)
Strip steel made from resistive materials	Battery current sensors	Same as above	Commercialized (Sales begun)
High-performance soft magnetic powder (powder for reactors)	HEV booster circuits	Variable voltage control using booster circuits enables the HEV system as a whole to be made smaller and more efficient (improved fuel consumption)	Industrialized (volume production)
Powder for 3D additive manufacturing molds	Diecast molds	Contribution to reducing resources and energy by extending mold life	Commercialized (product completed, sales begun)
EMC components (soft magnetic foil)	Image sensors, current/control ICs, cables, smart household appliances, etc.	Reduces size and weight of constituent parts	Commercialized (product completed, sales begun)
Lithium-ion battery anode active material	Lithium-ion automotive/consumer batteries	Extends EV range	Under development
High magnetic flux density material for motor cores	Motor cores (for drive motors), passenger cars, air mobility, etc.	Contribution to increasing motor torque, reducing size and weight, and saving energy	Under development

#### Gear steel for e-Axle gear reducers

This product is used in Battery Electric Vehicles (BEV) that produce zero CO<sub>2</sub> emissions during operation. A gear reducer motor incorporating gear components that use high-quality, highly durable gear steel enables the size of the unit to be reduced and resources to be saved.

Steelmaking methods based on electric arc furnaces that use recycled iron as raw material lead to suppressed CO<sub>2</sub> emissions, and in addition to developing materials that eliminate the need for heat treatment of parts at the time of manufacture and highstrength materials that help reduce their size, we contribute to bringing about a green, recycling-oriented society.



#### Magnets

Heightened environmental awareness has increasingly spurred requests for improvements in the performance of the magnets that play the main role in electric vehicle motors and their characteristics. The Daido Steel Group first offered neodymium magnets in ring form, which have been ranked highly by customers in applications such as electric power steering and AC servo motors, but in recent years we have also begun production of magnets in sheet form. In 2016, the Company and Daido Electronics Co., Ltd. responded to customer needs by jointly developing and commercializing neodymium magnets completely free of heavy rare earths, that combine high heat resistance with high magnetic field strength. In collaboration with Honda R&D Co., Ltd., these were successfully used in hybrid vehicle drive motor applications for the first time anywhere in the world (winner of the METI Minister's Prize for the Seventh Monodzukuri Nippon Grand Awards, and many other prizes).

Subsequently, intensified research and development led to greater freedom in terms of the shape of the magnet and the magnetic orientation, enabling proposals for a variety of magnets with irregular shapes and special orientations.

Going forward, the Nakatsugawa Advanced Magnetic Materials Development Center, which is an organization for cuttingedge research into magnetic materials, will continue with integrated research and development into high-performance motors from design to demonstration testing, with the objective of further enhancing motor performance. Through the provision of highperformance magnets, we will contribute to achieving carbon-neutral society.



Heavy rare earth-free magnets by hot working process (in sheet form)

#### Soft magnetic/resistive material <Strip steel>

Strip steel made out of soft magnetic or resistive material is used in current sensors to detect remaining battery power, enable fine-grained control of remaining power in rechargeable batteries for electric vehicles, and to extend their range. By improving the characteristics of these materials and broadening the lineup, the Company contributes to further improvements in electric vehicle performance.

#### Current sensor for rechargeable battery and magnetic shielding of cable harness



#### Magnets with a variety of irregular shapes and magnetic orientation



3-laver circular magnet motor rotor



Example of 3-layer circular magnet motor rotor analysis

#### <Powders>

We are providing soft magnetic powders used to reduce the size of HEV systems and others that are suitable raw material for iron reactor cores for booster circuits used to improve efficiency. We are working to expand our lineup of growth products where magnetic characteristics are required, such as inductors and EMC components.



Magnetic powder raw material and the booster circuits for which it is used



Reactor core

#### Technological Innovation for Energy Transition

#### Parts and materials for semiconductor manufacturing equipment

With the shift to electric vehicles and the spread of automated driving, semiconductors such as the microcomputers that control driving, turning, stopping and other basic operations, power semiconductors that control electric power and voltage, sensors that measure images and distances both inside and outside the vehicle, and microprocessors that make decisions regarding automated driving, have become indispensable components. Semiconductors are also a vital element in raising the speed of telecommunications in response to mobility services such as car sharing.

Because large quantities of corrosive gas are used during the manufacture of semiconductors, particularly when fabricating chips, materials that are highly resistant to corrosion and that suppress the occurrence of contamination are required. The parts and materials we provide for semiconductor manufacturing equipment are rated highly for the high corrosion resistance and cleanliness of the clean stainless steel and nickel-based superalloys that they use, and have been adopted by many customers.

Daido Steel had forecast demand for semiconductor manufacturing equipment and actively committed to capital investments, and so it was able to offer stable supply of clean stainless steel even in response to the surge in demand that occurred in fiscal 2021.

#### Invar wires for overhead power transmission lines

As we move towards achieving a green society, the percentage of renewable energy is expected to increase, but on the other hand, there are concerns about insufficient power transmission line capacity. Transmission lines supplied by Daido Steel with cores made of invar, which has a low coefficient of thermal expansion, are expected to have the effect of preventing the sagging of lines during transmission, and of increasing transmission capacity. Going forward, it is expected that overhead electricity lines will be replaced to boost transmission capacity between the power generation and consumption locations, and by offering this product Daido Steel will contribute to the expanded use of renewable energy.

We have developed and begun volume production of invar wires for overhead power transmission lines that have desirable strength and twist characteristics in addition to the low coefficient of thermal expansion. Coinciding with the global rise in demand for power transmission line networks, inquiries regarding our products are increasing continuously.





Invar wires



#### Supply of products that contribute to green energy business

#### Parts and materials for hydrogen and ammonia businesses

In the context of bringing about carbon neutrality, there are expectations for hydrogen as a green energy source that does not emit CO<sub>2</sub> at the point of use. One problem is that hydrogen embrittles many metallic materials during the transportation, storage, and use of hydrogen gas. However, materials such as Daido Steel's high nickel equivalent value SUS316 have properties that resist hydrogen embrittlement putting, and have more than enough resistance to this phenomenon. In addition, economical hydrogen-resistant materials currently under development will help reduce the cost of parts.

Going forward, we will install facilities for evaluating hydrogen embrittlement, and redouble our material research and development efforts. By strengthening our basic research with universities and research organizations, and exploring ways to expand the range of applicable materials in collaboration with users, we will work to further expand the use of hydrogen energy.



Hydrogen embrittlement evaluation equipment scheduled for installation (example)

#### Materials for nuclear power/nuclear fusion reactors

Nuclear power generation is a baseload source of electric power that does not emit CO<sub>2</sub>, and that will in future contribute to the stable supply of electric power as well as raise energy self-sufficiency. Daido Steel supplies important parts and materials for nuclear power generation plants and nuclear fuel reprocessing facilities. We are also working on the development of materials and the supply of parts and materials for use in future innovative nuclear power reactors (fusion reactors, fast breeder reactors, high-temperature gas reactors) that will contribute to achieving carbon neutrality by 2050.

Following the start of construction at the International Thermonuclear Experimental Reactor (ITER), the Company has in recent years also played a role as a supplier and manufacturer of parts and materials in the area of nuclear fusion, and continues to work on initiatives aimed at experimental reactors and prototype reactors in 2040 and beyond.

Also, in order to contribute to maintaining nuclear power generation in 2030, which is a target for Japan's Sixth Strategic Energy Plan, we are supplying parts and materials for the restart of nuclear power plants, entering the market for new products, and promoting the expansion of sales related to next-generation nuclear reactors (small modular reactors, etc.).

#### Development plan



### Supply of products to assist in addressing environmental regulations

#### Ship engine valve

Work is proceeding on improvements in thermal efficiency to reduce  $CO_2$  emissions from ship engines, but achieving this requires the constituent parts of the engine to be capable of operating at high temperatures, and it is necessary to enhance the hightemperature corrosion resistance of the exhaust valve stem, which is used in conditions that are particularly harsh even for this environment. Daido Steel has developed a DSA760 valve stem that exhibits greater corrosion resistance under high temperatures than other nickel-based valve stems that were previously used. The improvements in thermal efficiency achieved by ship engines using DSA760 valve stems result in reductions in  $CO_2$  emissions of approximately 2%.

Testing in actual ships confirmed that corrosion-related depletion of valve stem material improved to less than 50% of that for the material previously used, and volume production began in 2018. We have already shipped more than 10,000 of these valve stems, and expect to deliver 850 such products per month in the second half of 2022. In order to respond to this healthy demand, we are working on expanding production capacity and making improvements in production efficiency.





Structure of ship engine

View of product

**0 470** 



Example of supplied product Radial plate (forged item)



Conceptual image of ITER



## Improvements in Energy Efficiency

#### Taking on the never-ending challenge of improvements in energy efficiency

Daido Steel is contributing to achieving a green society not only by reducing CO<sub>2</sub> emissions from its own internal manufacturing processes but also by providing innovative energy-saving products with heat-resistance, vacuum, and materials technology to reduce CO<sub>2</sub> emissions during end use by the customer.

It is Daido Steel's technological development capabilities that support this initiative. These capabilities have already been rated highly outside the Company, as can be seen by Daido Steel receiving certification under the Project for Promotion and Support of Investment in Innovative Energy Savings, but we are actively working with users and industry peers on joint development of further advanced functionality. In order to transcend the organization and achieve a green society, we will continue to address this never-ending challenge.

### Selected as "Innovative Facilities & Systems" under the Project for Promotion and Support of Investment in Innovative Energy Savings for fiscal 2022

Ten products from the Machinery Division of the Company were selected to be eligible for grants under the Project for Promotion and Support of Investment in Innovative Energy Savings for fiscal 2022\*1 as Innovative Facilities & Systems\*2 in the category of "(A) Innovative Businesses."

1. Electric arc furnaces with rotating drives (STARQ®)	Electric arc furnace that reduces electricity used by rotating the furnace body to ensure uniform melting.
2. Premium STC Furnace (2nd generation)	By adding new functionality to our bestselling STC <sup>®</sup> furnace, we achieved significant energy savings, strengthened IoT functions, and reduced operating time.
3. DINCS®	Energy-saving combustion system in which the radiant tube used for indirect heating is equipped with a high-efficiency heat exchanger.
4. ModulTherm	"Skill-free," energy-saving vacuum carburizing furnace. Enables significant reductions in CO <sub>2</sub> compared to the previous gas carburizing process.
5. SyncroTherm	Vacuum carburizing furnace that enables small lots 1/10 of the previous size. Enables significant reductions in $CO_2$ compared to the previous gas carburizing process.
6. Electric arc furnace equipped with scrap preheater in movable furnace top	Electric arc furnace with a mechanism that preheats (using waste heat recovery) by bringing the high-temperature gases from the melting stage into contact with scrap added.
7. Environmentally friendly scrap preheater	High-efficiency movable scrap preheater that uses high-temperature waste heat from an electric arc furnace.
8. Electric arc furnace direct dust collection controller	Dust collection airflow control consisting of dust collection airflow, which is calculated based on factors influencing gas generated by the electric arc furnace, linked to E-adjust <sup>®</sup> function for determining meltdown.
9. High-efficiency control system for steelmaking plant building dust collection system	Dust collection control system that achieves high efficiency and optimal operation by controlling dust collection airflow in buildings.
10. Meltdown determination system (E-adjust®)	System that enables electricity per ton of production to be reduced by equalizing scrap meltdown determination, through the automatic analysis of noises and high-frequency waves originating inside the electric arc furnace.





ium STC Eurnace



SyncroTherm

\*1 Grants under the Project for Promotion and Support of Investment in Innovative Energy Savings

A project to subsidize part of the expenses required for introducing highly energy-efficient equipment and facilities, selected from among energy-use rationalization initiatives planned by a private-sector organization, such as a business operator

\*2 Advanced energy-saving facilities and systems announced as being eligible for subsidies by the Sustainable open Innovation Initiative (SII)

### Participation in green innovation fund projects

In preparation for achieving carbon neutrality by 2050, we will make use of the funds created by the New Energy and Industrial Technology Development Organization (NEDO), to develop innovative technology related to materials, motor structure, inverters, and cooling. These will be used to improve the efficiency of motor systems (average system efficiency of 85%), and to reduce their size and weight while increasing power (system power density of 3.0 kW/kg), thus contributing to more efficient usage of electricity in mobility applications.

This "high-efficiency electrical system development" project will run for nine years from fiscal 2022 to fiscal 2030 as a collaborative structure between project leader Hitachi Ltd., Hitachi Astemo, Ltd., Hitachi Industrial Products, Ltd., Tohoku Steel Co., Ltd. and Daido Steel.



Batter

Excerpted from summary materials for the New Energy and Industrial Technology Development Organization (NEDO) project for Next-generation Storage Battery and Motor Development (source: Hitachi Ltd.)

### Participation in Materials Open Platform for Permanent Magnet (Magnet MOP)

Together with core member National Institute for Materials Science (NIMS), Daido Steel, TDK Corporation, Shin-Etsu Chemical Co., Ltd., and Hitachi Metals, Ltd. participate in Materials Open Platform for Permanent Magnet to conduct joint research with the objective of efficiently resolving the shared basic issues faced by the magnet industry.

Magnet MOP was launched in 2022, and is expected to conduct basic research for three years in a collaboration between industry and academia. The main research themes are clarifying the mechanism of magnetic characteristics expression, building a thermodynamics database and calculating phase equilibria, and developing methods for data-driven magnetic research.

Through our participation in Magnet MOP, we seek to accelerate our own development of magnetic materials, and achieve high-probability improvements in performance over a short span of time. By enhancing the performance of magnets, we will achieve improvements in the efficiency of the motor that is said to account for approximately half of all electricity consumed, and contribute to significant energy savings.







Excerpted from materials from the Industry Structure Transformation Working Group of the Green Innovation Subcommittee of the Industrial Structure Council of the Ministry of Economy, Trade and Industry



Setting shared core issues

Conduct world-class core foundational research for rare earth permanent nagnetic materials through industry and academia that cannot be achieved as a single company and contribute to strengthening the international eness of the Japanese magnets industry Add new experimental and document data to the thermodynamic database and analytics platform that was developed by ESICMM, and aim to construct a promising high-performance magnets materials design foundation Research area Topic: "Industry-academia collaborative foundational research on rare earth permanent magnetic materials' Analyze magnetic quality concept mechanism that uses standard samples Use NIMS magnet analysis platform and Spring 8 next-generation radiation facility · Construct thermodynamics database and phase equilibrium calculation Expand results of elemental strategy project through newly acquired data • Develop techniques for data-driven magnet research and spread to participating companies puting, such as simulations, etc ⇔TDK ★大同特殊鋼 日立金属 Shis The

Improvements in Energy Efficiency

# Advisor Sagawa was awarded the Queen Elizabeth Prize for Engineering and the IEEE Medal of Honor

In recognition of his role in inventing, developing, and globally commercializing the world's strongest permanent magnet, the neodymium magnet, which has contributed to the development of clean and energy-saving technologies, Dr. Masato Sagawa, an advisor to the Company, was awarded the Queen Elizabeth Prize for Engineering. This is presented to individuals or groups whose ground-breaking technological innovations have been of widespread benefit to the world. Dr. Sagawa was also presented with the IEEE Medal of Honor, which is awarded to researchers and engineers for outstanding technological accomplishments that improve the environment or public safety, or contribute to the development of industry.

The neodymium magnet invented by Dr. Sagawa is considered to exert the most powerful magnetic force in the world, is widely used in air conditioners, refrigerators and other equipment, and has made a tremendous contribution to energy savings. The contribution made by these magnets in saving energy and reducing CO<sub>2</sub> emissions, such as in motors for electric vehicles, the use of which has spread rapidly in recent years, continues to increase.

#### <<Background to invention and hopes for the future>>

Dr. Sagawa engaged in new research from a completely different perspective from that which had previously been used in magnetic material research, and in 1982 he discovered the neodymium-iron-boron configuration, which had a maximum magnetic field strength of approximately twice that of the samarium-cobalt magnets that were the strongest magnets at that point in time. However, a variety of initial problems needed to be overcome before commercialization, such as a rapid deterioration in magnetic field strength when subjected to increases in temperature, and loss of performance due to oxidation during use. Through repeated efforts, such as by searching for additive elements that would enable the magnet to maintain its strength even at high temperatures and optimizing the amounts of these additives, and by developing surface treatment technology to prevent oxidation, Dr. Sagawa perfected this substance as an industrial material that can be used in a variety of applications.

It began to be used in hard disk drives for computers, with applications expanding to include cellular phones, MRI scanners, various household appliances, industrial robots, wind turbines, and other uses, and becoming a material that supports cutting-edge technology. It also helps improve the efficiency of motors, and is now an indispensable presence for achieving energy savings and achieving a decarbonized society.

Magnets for FV/HEV drive motors



Masato Sagawa Advisor, Daido Steel Co., Ltd.







Pump motor magnet

### Cutting-edge jet engine shaft for aircraft

In 2005, US-headquartered GE Aviation began development of the GEnx engine to provide revolutionary environmental performance to customers and society. By equipping aircraft with this engine, reductions in fuel consumption of 15% and reductions in exhaust gas levels of 50% or more can be achieved compared to the previous model. The GEnx engine has been adopted for use by Boeing in medium to large aircraft for long-distance passenger routes, such as the B787 and B747. Daido Steel was chosen as the supplier of the engine shaft, which is a key component of these engines.

To date, approximately 2,100 engine shafts have been shipped. Demand fell during the most recent three years due to the decline in air transportation that followed the COVID-19 pandemic, but deliveries are expected to resume in the second half of 2023 at a pace of around 200 shafts per year.

In addition, Daido Steel supplies engine shafts through engine manufacturer IHI Corporation, and the high-strength steel used for these engine shafts, which is known as maraging steel, was jointly developed by GE, IHI, and Daido Steel.

This was initially developed between 1995 and 1999, but in response to subsequent demands for ever-higher levels of quality, we worked to improve strength and fatigue property, it eventually resulted in volume production of shafts for the GEnx engine beginning in 2016. We expect to capture further demand going forward as the fruit of the technical innovation that led to this product.

#### GEnx jet engine (illustration)





## Effective Utilization of Natural Resources

#### Effective utilization of natural resources

Daido Steel is actively engaged in developing products that contribute to the effective utilization of natural resources. As well as seeking to make effective utilization of natural resources, such as by developing materials that use less or no rare metal, reusing as raw materials steel materials that would previously have been discarded after use, utilizing the energy within the material itself as a heat source, and providing cheaper products while maintaining the same level of guality as previous products, Daido Steel avoids risks associated with its own procurement of scarce resources, and in this way helps build an environment in which highly functional systems can be used by greater numbers of users.

#### Developing and providing rare metal-free products

#### Development of materials that use less or no cobalt and vanadium

A variety of elements are added to specialty steel to increase its properties (value addition), but for high value-added materials in particular usually contain much rare metals such as cobalt and vanadium. Meanwhile, the volume of rare metals mined is limited, and from a resource risk standpoint, there is a desire to reduce the amount used as much as possible. To address this, we are developing materials that reduce or eliminate rare metals in many products, avoiding material procurement risk and also contributing to the reduction of environmental impact through the effective utilization of rare resources.

In future, we will expand our lineup of materials with reduced rare metals centered on superalloys.







Example of a model mold manufactured from maraging steel alternative cobaltreduced-cobalt steel sheets free 3D additive manufacturing powder for motor cores

Con rod manufactured from vanadiu free titanium alloy

### Development of recyclable target materials

Normally, only around 10 to 20 percent of target materials used in the PVD technique of magnetron sputtering is used, and the remainder is discarded.

To address this, Daido Steel is developing and providing target materials that are recyclable by melt them again after use that can be manufactured using melting technology. The used targets are collected and remanufactured as targets again to enable cyclical use of raw materials, contributing to more efficient resource utilization.

At present, we provide a target material for wire protection film for in-vehicle touch panels (NCT) and a blackening layer for metal-mesh panels for curved touch panels (STARMESH<sup>®</sup>- $\alpha$ 1,  $\beta$ 1), which can be applied to next-generation touch panels that are larger, curved and heat resistant



Next-generation sewage sludge carbonization system

Sludge generated during sewage treatment was previously disposed of in landfill after incineration, but through a process of pyrolysis under low-oxygen conditions, it can be converted to a resource as carbonized products. Daido Steel has developed and sells its own unique self-sufficient carbonization furnace, which reuses dry distilled gas from the sludge as a heating source. The carbonized products can be effectively utilized for fuel or fertilizer, or other applications.

The next-generation carbonization system under development



### Development of pump parts for desalination plant and river water intake

The shafts of river water intake pumps used for securing water resources and desalination plant intake pumps use stainless steel, which has excellent corrosion resistance against salt water and mechanical strength. These are used in desalination plants in areas such as the Middle East, contributing to the securing of water resources and the development of farmland. To date, we have shipped approximately 3,000 shafts, and will continue to supply shafts to pump manufacturers in future, with the intent to respond to demand for water resources, which is increasing more and more with the decrease in forests due to climate warming, and the increase in population in areas such as Africa.

In the past, we have manufactured stainless steel pump shaft material with less bending during machining, but we have matched product specifications with pump manufacturers who are the final processors, and established an inexpensive manufacturing method with the same quality as existing products by optimizing product specifications and manufacturing processes. Daido Steel will contribute to achieving an environment with sufficient water by providing highly functional pumps for more people.



Flow and overview of desalination plant

Blackening layer for metal-mesh electrode



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Clear water





Photo of pump Photo of pump shaft (Source: Torishima Pump Mfg. Co., Ltd. website)

## **Respect for Human Rights**

#### Initiatives to respect human rights

Daido Steel strongly recognizes the impact the Group's business activities have on society, and believes taking initiatives to respect human rights with a view spanning all supply chains related to business activities is its social responsibility for the realization of a sustainable society where nobody is left behind and contributing to socioeconomic development.

Until now, Daido Steel has provided extensive occupational safety education for officers, employees and especially managements, made safety the highest priority, promoted health and productivity management, and also implemented initiatives such as management of appropriate working hours and activities to prevent harassment. Furthermore, hotlines have been established inside and outside as an internal reporting system, and steps have been taken to correct, halt and prevent negative impacts based on the content of reports.

In fiscal 2022, we started initiatives in line with international norms and trends on "business and human rights," and the Group will work as one to expand the scope of activities to a system promoting initiatives for the respect of human rights, engage in the formulation of the "Daido Steel Group human rights policy," strengthen and review human rights due diligence, and improve the system for remedies. The roles of the relevant divisions are shown in the table to the right.

Daido Steel will respect the individuality and diversity of each employee of the Group, and contribute to the realization of a society without human rights violations or discrimination through the creation of workplace environments where everyone can work enthusiastically and initiatives to respect human rights in all supply chains (see page 95).

Department	Section	Responsibilities	
Corporate Planning	Sustainability Promotion Section	General human rights, secretariat Coordinated initiative contact point External disclosure	
Department	Corporate Communication Section	Press releases, website publication Social contributions (Mécénat, Kutcharo Natural Forest)	
CRM Department Auditing Section Risk Management Section		Monitoring (third line) Corporate Code of Ethics, Code of Conduct Hotline improvement	
Planning Department for Affiliates	_	Group coordination	
General Affairs Department	General Affairs Section	Social contribution (general) Grievance (complaint processing) improvement	
Personnel Department	Personnel Planning Section	Formulation of human rights policy Raising awareness of officers and employees Identification of risks through assessment of negative impacts Handling of priority issues → Monitoring (second line)	
	Diversity Section	Job satisfaction, diversity	
Innovative Safety and Health Department	Various sections	Occupational safety and health, health and productivity management	
Procurement Department	Planning & Administration Section	Supply chain management	
Each plant	General Affairs Section	Handling priority issues (first line) Social contributions (local communities)	

#### Roadmap



### Eradication of harassment within the company and management of appropriate working hours

The Daido Steel Corporate Code of Ethics stipulates that the Company will "respect employees' diversity, character, and individuality, while ensuring safe and comfortable working environments and realizing freedom and high quality of life," and the Company is working to establish a workplace environment in which individuals can fulfill their potential based on fair evaluation. As part of this, in fiscal 2020, we began activities to eradicate harassment, which was positioned as a high risk in the companywide risk assessment. In fiscal 2021, we implemented face-to-face, e-learning and remote harassment education for all division heads, and 1,934 people participated including domestic Group companies.

Furthermore, to appropriately track working hours, these have been managed based on the times computers are turned on and off, and there were no instances of failure to pay overtime, including overwork and overtime. We implement audits of working hours as part of compliance auditing.

#### Priority issues and future roadmap

In August 2022, we established the priority issues in the table to the right by referring to the characteristics of the steel industry and external assessment items. We are steadily proceeding with initiatives to address these priority issues according to the roadmap shown on the following page.

Priority Issue	Content
Elimination of discrimination	Respect diversity and do not discriminate for any reason
Prohibition of	Do not perform sexual harassment, power harassment or any other form of harassment
harassment	In the event harassment occurs, promptly respond appropriately
	Respect labor, health and safety laws and regulations such as the prevention of overwork and guaranteeing minimum wages in all countries and regions the Group does business
Respect for labor rights	Respect freedom of association and collective bargaining rights
ngnis	Through sincere and active dialogue with employees, endeavor to build sound labor relations and secure stable employment through problem solving
Prohibition of	Prohibit and do not use involuntary forced labor in all countries and regions the Group does business
child labor	Respect the rights of children, and prohibit and do not use labor and employment of workers under legal working age in each country and region
Realization of a	Respect the individuality and diversity of all people, and promote the creation of workplace environments where everyone can work enthusiastically
environment	In addition to striving to hire locally overseas, support the resolution of labor issues in local communities, such as by employing socially vulnerable people



Harassment training



Harassment training materials

## **Elimination of Occupational Accidents**

#### Efforts to eliminate occupational accidents

No management results can make up for occupational accidents. "Safety and health are the source of happiness," and "the foundation of corporate management." Based on the principle of "Safety takes precedence over everything," we establish working environments enabling everyone working in the Group, including elderly and women, to work safely with peace of mind and conduct activities to eliminate occupational accidents.

#### <<2022 Companywide Safety Management Policy>>

- 1. Rebuilding a safety education system within the workplace … Enhancement of safety sensitivity through small group activity
- 2. Safety education providing an understanding of the hazards in the workplace
- ··· Promotion of steady OJT education in the workplace 3. Creation of systems for risk identification
- ··· Risk assessment promotion 3-year plan, essential improvement of facilities
- 4. Strengthening of construction management

#### Safety management organization

We have established a safety management system headed by the President, and safety messages from the President are disseminated throughout the Company. Actual conditions are monitored and appropriately handled by the Safety and Health Committee and labor and management working as one.

Information is shared across the Group through safety meetings with Group companies.



#### Specific activities

Each plant forms annual plans and conducts activities accordingly. Reports on progress and results are shared through monthly safety patrols of each plant and in regular meetings such as the Companywide Safety and Health Committee and the Companywide Plant Manager Meeting. In particular, when a disaster occurs, an extraordinary meeting of the Companywide Safe Plant Manager Council is held immediately to share issues, implement measures and provide education. Officers attend the major meetings, and work to ensure safety management in each plant on a management level.

Furthermore, Team Leaders Meetings are held four times a year for the purpose of sharing information on a workplace level and unifying mindsets on safety activities, and also strive to understand workplaces in detail by conducting individual interviews in an effort to prevent accidents.

<<Targets>>

Serious accidents: zero Rate of lost-time work injuries: ≦0.2 Safety study sessions and safety research meetings are held several times a year with Group companies. Discussion themes and research themes are brought together, and concerns and safety issues in work processes are shared to discuss measures to take. We are engaged in truly grassroots activities to prevent disaster and accident. With regard to overseas business locations, Innovative Safety and Health Department sends staff on site to directly provide safety guidance.

#### Companywide safety events in fiscal 2021



#### Details of support for overseas locations in fiscal 2021

Overseas subs	idiaries			
OSF	Halting of on-site patrols due to COVID-19 (2020, 2021)	Dispatch of patrol personne	<ul> <li>Innovative Safety and</li> <li>Health Department of</li> </ul>	
DDMS oversea (on-site tours	as JV safety activities halted due to COVID-19)	Di	spatch of safety	
11 overseas joint ventures with DDMS	<ul> <li>Follow-up of accidents based on accident reports</li> <li>Provision of Daido's safety activity information</li> </ul>		technicians	
Mutual study session with Thai staff (on-site patrols halted due to COVID-19)				
Daido Electronics (Thailand) Co. Ltd. (DET)				
DAIDO DMS (Thailand) Co., Ltd. (DMST)   Implementation o				
Tohoku Manufacturing (Thailand) Co., Ltd. (TMT) on-site guidance v screen connected				
Daido Steel (Thailand) Co., Ltd. (DSTH) with the site				
Daido Kogyo (Thailand) Co., Ltd. (DKT) 2021)				
Maruta Hope (Thailand) Co., Ltd. (MHT)				
Daido Shimon	nura Steel Manufacturing (Thailand) (	o., Ltd. (DSST)		

#### Safety record

The rate of lost-time work injuries in the manufacturing industry is lower than the average level for all industries, and the steel industry is particularly low. However, as the performance of all industries and the manufacturing industry has deteriorated since 2018, Daido Steel's performance has also deteriorated significantly, and an impermissible serious accident occurred in 2021.

At present, we are implementing "workplace safety education and securing of a framework for activity" and "safety education for understanding hazards in the workplace" to heighten safety sensitivity especially among young employees, and started a 3-year plan in 2022 for promotion of risk assessment as "the creation of a framework for identifying risks."



#### Annual event schedule in fiscal 2022

Safety activities concerning "stop," one of the three principles of safe behavior
• Review and verification of safety procedures and strengthening of education

Double cutting of power source and utilization of signs prohibiting operation

Themes discussed in safety study sessions

Group 2 (Sep. 14) Handling of anomalies at night

Group 1 (Oct. 26) System for watching over workers working alone

Group 2 (Nov. 25) Safe placement of materials



#### **Elimination of Occupational Accidents**

#### Key measures for health and safety

#### 1. Education system for improving safety sensitivity <<Assignment of safety evangelists>>

Safety educators/instructors (evangelists) are assigned in each workplace. Personnel who are well-versed in general tasks within the workplace and thoroughly versed in the hazards and risks provide hands-on guidance on site using actual equipment on basic rules, procedures and risk avoidance for young employees and employees with little experience in order to improve their sensitivity to danger.

#### <<Experiencing danger>>

Efforts are made to improve safety sensitivity through activities for all personnel conducted in small groups to experience hazards that have become less common in modern manufacturing processes. Education is also carried out to think about avoidance in anticipation of accidents by objectively observing sources of danger before they enter a dangerous state.



#### <<Start of 3-year plan for promotion of risk assessment>>

In 2022, we started a 3-year plan for the promotion of risk assessment in which employees share the risks in their own workplaces to create a system leading to improvements. In the first year, we have been conducting activities emphasizing risk assessment education.





#### <<Expert safety education system>>

An expert safety education system is being implemented for the purpose of further strengthening education to experience danger. General education is provided to team leaders, and specialized education is provided when they are subsequently promoted. This is positioned as ongoing education for employees working on front lines, including partner companies.



#### 2. Risk assessment of chemical substances

In order to enrich chemical substance RA management made mandatory by the Industrial Safety and Health Act, tracking and maintenance is performed using lists in workplaces handling chemical substances within each site, and efforts are also made to improve labeling and SDS acquisition management.

## 3. Creation of safety management system We are making efforts aimed at the commencement of operation of ISO/OSHMS\* (in certain plants) in 2025. \* Occupational safety and health management system

4. Essential improvement of facilities safety <<Sharing of occupational accidents inside and outside the Company>> Occupational accidents occurring inside and outside the Company are shared with (rolled out to) each plant to prevent near miss accident.



#### ■ 5. Introduction of safety support technology <<Safety monitoring system utilizing IT>> In order to quickly discover anomalies when working alone, the on-site manager is notified along with the location when an anomaly is detected by the smart watch worn by the worker.







#### Details of initiatives

- Creation of a system enabling each site to manage tracking and new additions of chemical substances, and adapt to changes
- Management of response to new chemical substance regulations (to be enforced from April 2024)
- Response to the shift to a voluntary management system in each company

#### Details of initiatives

- Clarification of application of system including affiliates and Group companies
- Establishment of safety manuals
- Establishment of safety targets and safety action plans
- All time monitoring and investigation of hazards
- Determination and implementation of measures

#### <<Reduction of risk when operating cranes>>

We are making efforts to avoid accidents of getting caught during particularly high-risk crane operation.



(Already implemented in some plants by 2021, being rolled out to other plants)

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## Promotion of Health and **Productivity Management**



#### **Basic** approach

Based on the awareness that safety and health are the source of happiness, while human resources are the most valuable of a company's resources, Daido Steel aims to build a company where employees work with vigor and motivation. It is assumed that employees will continue to grow and maximize their performance as a team and as individuals, and it is necessary for every employee to remain physically and mentally healthy in order to achieve this. By promoting health and productivity management, we seek to improve the productivity of employees and the entire organization, and to increase social value.

#### Medium- to long-term policy

We are engaged in mental health and physical health with behavioral objectives based on four pillars as shown on the right



#### Key management indicators

1. Indicators on health investment measures

Illness prevention: 100% implementation of interviews of each employee by industrial health staff at least once per year, 100% examination acceptance rate for those requiring detailed examinations

- 2. Targets concerning changes in individuals' behavior
- Prevention of passive smoking: 20% or lower smoking rate among employees in their 20s by fiscal 2027
- 3. Final target indicators

Prevention of mental illness: 50% or higher positive evaluation in a question on internal survey about employees' work engagement, stating "I work in a condition filled with mental and physical vitality"

#### Health and productivity management organization

Under the direction of the President, health and productivity management promoter and the Health Management Specialized Section play a central role in coordination with the health insurance association to implement measures in each plants and office and share information with Group companies.



### Initiatives for evaluation and improvement

- Health diagnosis data analysis results and health issues have been explained to each plant and office since fiscal 2021, and reflected in the actions of each location.
- From 2022, we began tallying the previous year's performance for key management indicators, and reflect the checks and action against the results in the current year's planning.
- We have established a unique President's Award for Health system for individual activities of each plant and office to increase the motivation of each location.

### Past initiatives and results

#### 1. Mental healthcare

- 1) Assigned industrial doctors and public health nurses in all regions
- 98.9% in fiscal 2020, 98.4% in fiscal 2021
- 3) Provided tiered education opportunities

#### 2. Physical care

- 1) Illness prevention, infection prevention
- Implemented recommendations involving managers to achieve 100% examination acceptance ratio for those requiring detailed examinations: 97.2% in fiscal 2020, 97.4% in fiscal 2021
- Provided opportunities for triple workplace vaccination to prevent the occurrence of COVID-19 clusters: first and second in July to September 2021, third in March to April 2022. A total of 19,984 people were vaccinated in the Nagoya area and Shibukawa area
- Implemented follow-ups by health nurses to increase the rate of implementation of specific health guidance: 85% in fiscal 2020 and 86% in fiscal 2021
- 2) Establishment of appropriate exercise and dietary practices
- Performed yearly measurement of physical strength (2 steps, long seat body anteflexion, total physical response time), and provided guidance for those identified as having poor strength: 91.9% guidance acceptance ratio in fiscal 2021
- Introduced healthy menu items in cafeterias of plants and offices to instill awareness of a well-balanced diet e.g.) Provision of free salads, setting a Tomato Day, adding reduced-salt menu items

#### 3) Prevention of passive smoking, quitting smoking

- Provided non-smoking education to recruits to improve the 29.8% ratio of smokers among those in their 20s (fiscal 2021)
- Expanded non-smoking time during working hours Implemented non-smoking during working hours: 3 plants (Hoshizaki Plant, Tsukiji Techno Center, Shibukawa Plant)

Implemented non-smoking time: 2 plants (Chita Plant, Takiharu Techno Center)

### Future priority themes and measures

Priority theme: Implementation of measures leading to improvement of work engagement Percentage of positive responses to "I work in a condition filled with mental and physical vitality": Improved by 36.5% in fiscal 2021 results

1. Mental healthcare

1) Planning and delivery of e-learning targeting on-site managers 2) Resumption of periodic delivered education (delivered education: seminars by health nurses dispatched to each workplace) 3) Holding seminars for notifying employees of the external consultation contact point

2. Physical care

1) Instilling awareness of changes in own behavior by entering and carrying Individual Goal Declaration Cards 2) Expansion of support to guit smoking with a view to banning smoking within working hours throughout the entire company in March 2024, promotion of collaborative health with the health insurance association



President's Award for Health

2) Implemented industrial health staff interviews with the goal of communicating with each employee at least once each fiscal year:



## **Promotion of Diversity**

#### Initiatives to promote diversity

As it becomes increasingly difficult to recruit talented personnel due to the impact of the declining birthrate and aging population, it is essential to establish a workplace environment in which people respect and acknowledge each other's differences, regardless of gender, nationality, values, sexual orientation or disability. We believe that utilizing the abundant individuality of diverse human resources, and fulfilling individual capabilities is a source of competitive strength, and increases a company's advantages.

#### Overview of initiatives to promote diversity

After implementing a diversity promotion project, Daido Steel reorganized the Diversity Section under the Personnel Department from October 2018, and has been building a foundation for the promotion of diversity management with the aim of creating a company in which not only women but each and every employee can work enthusiastically.

#### <3 Steps of diversity promotion>

Connect each employees' unique qualities to achieve unlimited creativity—Autonomous sustainability as company

	Step 1	Step 2	Step 3
	Understand/accept diversity	Utilization/promotion of diversity	Tap into creativity by diversity
Individual/organization	<ul> <li><understand acknowledge="" and="" differences="" each="" other's=""></understand></li> <li>(1) Encouragement of active roles for women</li> <li>(2) Internal awareness/culture transformation (Invigorate)</li> <li>(3) Establish environment</li> <li>Respect values, qualities, and culture of the individual</li> <li>Establishment and revision of systems, etc.</li> <li>(4) Deliberation and construction of benefit system and workstyle options</li> </ul>	<ul> <li><strengthen and="" utilize<br="">mutual differences&gt;</strengthen></li> <li>(1) Continue to invigorate company (culture transformation)</li> <li>(2) Invigorate human resources by level (improve autonomy of employees)</li> <li>(3) Shape career development and structure</li> <li>(4) Promote hiring of diverse personnel (women, elderly, LGBT, people with disabilities, foreign nationals)</li> </ul>	<invigoration capabilities="" diverse="" of=""> <ol> <li>Acknowledge presence of diversity to allow people to tap into capabilities</li> <li>Maintain and pass on company awareness and culture</li> <li>Construct system</li> <li>Establish purpose in human resources development</li> <li>From diversity promotion to human resources invigoration</li> </ol></invigoration>
Management	<form team="" the=""> From individual to team           (1) Deliberate training of diverse management human resources (including next-generation managers)           (2) Human resources training to understand and meet expectations of role           (3) Support employee autonomy (enhancement of individuality and harmonization with fulfillment in work)           Promote understanding of workstyle reforms</form>	<increase capabilities="" team=""> Form adaptive and flexible team (1) Begin training diverse management human resources (2) Continue, maintain, and pass on human resources training to understand and meet expectations of role (3) Form mutual cooperation structure that utilizes the characteristics of subordinates and method to pass on technical skills Execution/promotion of workstyle reforms</increase>	<maximize capabilities="" team=""> To be an autonomous team <ol> <li>Hold, strengthen, and maintain diverse management human resources</li> <li>Expand autonomous self-growth mindset in employees (company capabilities)</li> </ol> Foster/establish awareness of workstyles</maximize>
'14/10	15 16 17 18 19 20 2	21 22 23 24 25 26	27 28 29 30 31
	2017 Medium-Term 2020 Medium-Term	2023 Medium-Jerm	>>

Management Plan Management Plan

Management Plan

### Development and recruitment of diverse personnel

In the encouragement of active roles for women that has been a focus from the outset, the number of women applying for jobs is gradually increasing due to introducing and providing an understanding of female employees working at Daido Steel, and a variety of measures such as the expansion of occupations and the providing a good environment. Looking to the future, we will continue to create an environment in which female employees can exhibit their individual skills and continue to play active roles, such as promotion of understanding of workplace assignments, further improvement of the working environment, and implementation of career training and interviews.



### Support for the creation of job satisfaction

Creating job satisfaction of each individual and enlivening the workplace as required in SDGs and ESG leads to building and developing the foundations of the Company, such as ensuring the psychological safety of employees, the development and retention of human resources and the promotion of transfer of skills. As part of the creation of a culture accepting and reutilizing diversity, an awareness survey of all employees has been conducted since fiscal 2020, to directly approach them about job satisfaction. Based on the survey results, we have launched the "Making a company that people look forward to working at every day" project in fiscal 2021 and commenced activities. Furthermore, we will conduct training for section managers to fully draw out the capabilities and experience of members, and engage in the creation of a team that produces high performance.

#### We will change the workplace ourselves! Our slogan is "Energize the workplace!"



	Purpose and Objectives
	Set separately for staff and experts
	Implemented one per year (female global staff and their superiors)
ce	Assignment according to skills and experience
S	Selective training for area staff (role models)
9	Independent selection and visualization of own resources
	Expansion of early reinstatement support and leave systems
ns	Consideration of establishment of daycare centers

Promotion of Diversity

#### Promotion of work style reforms

As the working population is expected to decrease in future, it is becoming increasingly important to realize a work-life balance through work styles that match employees by flexibly combining a variety of work styles enabling the execution of operations with a limited workforce. Daido Steel has abolished core time in the flex time system to enable employees to have work styles that match a variety of lifestyles. Furthermore, due to the spread of COVID-19 since fiscal 2020, we have launched a new work style reform working group and considered how employees work.

#### Overview of activities of the new work style reform working group (WG)



#### Main accomplishments in fiscal 2021

#### <(1) Expansion of remote work>

Daido Steel began the remote work system in fiscal 2020, and we conducted surveys of employees on working remotely to further increase convenience in order to make additional enhancement to the system.

#### <(2) Improvement of efficiency of meetings>

We reviewed meetings and took steps to reduce them. We formulated a policy on holding meetings unique to Daido Steel, and as a result of making revisions in each division, we have abolished meetings themselves, and also reduced the frequency, number of attendees and length of meetings.

#### <(3) Promotion of paperless operations>

Paperless operations are necessary for remote work and web conferencing. For example, we have made improvements such as replacing conventional paper-based internal approval procedures with a workflow system.

### Reduction of copy paper purchased by Head Office divisions



#### Meeting man hours

= number of meetings × length × number of attendees There was an overall reduction of 32.8% throughout the company when comparing before and after the steps were taken.

#### <(4) Introduction of free address office>

Certain divisions have introduced a free address system in some offices where employees do not have fixed desks, but are able to work freely at any desk using mobile tools. This was introduced in anticipation of further promotion of paperless operations.



### Employee data (non-consolidated)

		Mar. 31, 2018	Mar. 31, 2019	Mar. 31, 2020	Mar. 31, 2021	Mar. 31, 2022
Average age	Age	39	39	39	39	39
Average years of service	Years	17	17	17	16	17
		FY2017	FY2018	FY2019	FY2020	FY2021
Number of employees taking childcare leave	Persons	11	14	14	13	31
	(Of which, men)	2	5	4	8	23
Number of employees taking nursing care leave	Persons	0	0	0	2	0
	(Of which, men)	0	0	0	2	0
Rate of employees using paid leave	%	53	55	65	42	59

#### Number of employees





#### Number of people hired





#### Rate of employment of people with disabilities (%)



Promotion of Diversity

#### **Education for employees**

To develop human resources that will put the Conduct Guidelines into practice and realize the Management Philosophy, we have adopted a human resource development policy of "promoting employee autonomy and developing human resources who will learn (grow) autonomously with high aspirations and persist in their challenges." We engage in employee development based on our expectations for each grade, knowledge acquired off-the-job and skills, as summarized in the skills development guidebook to the right.



Development of professional human resources Employees acquire the required knowledge and skills at each level based on our lifelong education system so that they can grow in stages into manufacturing professionals.



Staff course DMK\* training \* Daido Monozukuri Kaikaku (Daido Manufacturing Refor

#### [Daido Steel's education system]

#### Promotion of diversity

The Daido Steel Technical Training School provides training for new female expert\* recruits at manufacturing sites, and also conducts training for on-site managers and office managers at the workplaces where the recruits will be assigned to promote understanding of diversity in preparation for the assignment of the recruits one year later.



Female experts at the Daido Steel Technical Iraining School \* Expert: An in-house designation for frontline workers, mainly in manufacturing sites.



### Education and development data

#### Staff course education

The environment for companies is changing dramatically: customers and their needs are diversifying, markets are globalizing, and the world is accelerating towards carbon neutrality. The abilities and specialist knowledge required of individual employees is also becoming more diverse, with organizations and individuals strongly expected to demonstrate the ability to adapt to changes more than ever before.

To respond to these changes, the Company is conducting various types of training designed to develop human resources with high aspirations who will continue to learn by themselves (grow) and take on challenges, since each individual will need to make autonomous judgements and actions and constantly develop their abilities.

#### Development of global human resources

We are also working to develop global human resources in response to the globalization of markets.

#### [Trainee system]

Employees are dispatched to Group companies overseas where they learn business practices that they cannot learn through study overseas, as well as acceptance of other values and work styles.

[Overseas study]

Employees study overseas at universities, research institutions and so forth, learning specialist knowledge, culture, and languages that can only be acquired overseas.

#### Expert course education

The Company has an in-house vocational training school, where newly graduated experts receive skills training for one year after joining the Company on manufacturing technology, electricity, and machine maintenance at the Daido Steel Technical Training School.

The school has adopted the educational policy of "Developing Human Resources into Positive and Independent 21st Century Leaders." The school provides training based on the following three policies:

- (1) Foster the awareness needed to recognize hazards as a threat and obtain the skills needed to work safely
- (2) Comply with basic rules as working adults, such as work standards, protocols, quality requirements, and delivery deadlines, as well as the habit of regularly providing reports, keeping communication channels open and asking for guidance or advice
- (3) Acquire basic knowledge and skills as a worksite operator and obtain all necessary qualifications



#### Time investment in staff training (Hours per person/year)





#### Hours of training per year at vocational training school (Hours per person/year)



## Coexistence with Local Communities

#### Coexistence with local communities

Daido Steel is focused on social contributions based on the themes of contribution to local communities, environmental preservation activities, art and cultural activity support, and sporting activity support, as a member of the local community for creating a sustainable society. The linkage with society obtained through these activities is an essential element of business continuity. We aim to contribute to the achievement of SDGs by continuing to actively communicate with local communities.

### Contribution to local communities

In order to contribute to the creation of employment in a wide range of regions in addition to deepening regional communities' understanding of plant operation, we are engaged in a variety of activities such as cleaning activities around plants, opening up sports facilities including gymnasiums and sportsgrounds, and sponsoring various events.

#### 1. Participation in the Inochi wo Tsunagu PROJECT: Initiative for Biodiversity

Inochi wo Tsunagu PROJECT, led by the local student club Inochi wo Tsunagu PROJECT Student Organizing Committee with 12 companies, government bodies, experts and NPOs linked under the single theme of biodiversity to exchange information and collaborate on activities with the aim of raising biodiversity throughout the community and forming an ecological network. In fiscal 2021, we created a new biotope in Chita Second Plant with the aim of further forming an ecological network.





Initiative example (1): Biotope Expanding a habitat for living creatures by establishing a biotope in a corner of a company's vegetated area with consideration for biodiversity.



Initiative example (2): Cooperation with events to raise awareness Cooperation with the operation of various events that spark interest in biodiversity.



In fiscal 2021, the Inochi wo Tsunagu PROJECT received the "Minister of the Environment Award for the Creation of a Sustainable Society."

#### 2. Firefly viewing

The Hoshizaki Plant is keeping fireflies on site with the slogan "A steel company where the fireflies glow" and has been holding firefly viewing sessions for the locals as part of its local contribution activities since 2006.

Fireflies are also provided to neighboring elementary schools in activities to enable observation of the biology of fireflies in an educational setting. These activities were suspended due to the impact of COVID-19, but were resumed for the first time in three years in fiscal 2022.

#### Special Environmental Website

Initiatives for greening of plants and biodiversity including the Inochi wo Tsunagu PROJECT (conservation of biodiversity) and firefly viewing, and initiatives with the local NPO "Lake Kutcharo Eco Workers," in forests owned by the Company in Hokkaido are published on our special environmental website.

The Daido Natural Observation Journal on the site publishes information and photos on nature and living organisms seen in each plant.

#### Environmental preservation activities

We conduct activities symbolized by environmental conservation of the forest owned by the Company on the shore of Lake Kutcharo in Hokkaido and support Lake Kutcharo Eco Workers, a local environmental NPO. In recognition of the activities, Daido Steel received the "Minister of the Environment Award for Preservation of Wildlife" in fiscal 2018 and the NPO received the "Greenery Day/Minister of the Environment Award For Meritorious Service in Relation to the Natural Environment" in fiscal 2021.

#### Art and cultural activity support

Since 1991, Daido Steel has contributed to local musical culture as the sole sponsor of the "Virtuoso Series" hosted and planned by CBC TELEVISION CO., LTD., brimming with individuality provided by small and medium halls that provides a sense of unity with the performer. Four concerts were held in fiscal 2021, and attended by people of a wide range of ages.

#### Sporting activity support

Daido Steel contributes to the sound mental and physical development of youth and the realization of a lifelong sporting society. We are engaged in activities to energize local communities through the power of sport, such as support of Tokai Handball School and participation in Nagoya Sports Commission; Deraspo Nagoya.





Daido Steel Special Environmental Website https://www.daido.co.jp/sustainability/eco/special/



Kutcharo Natural Forest Daido



Tree-planting activities



Virtuoso Series 2021





Support for Tokai Handball School



Deraspo Nagoya Energizing Nagoya with sport

## Supply Chain Management

#### Supply chain management

In order to fulfill its social responsibility at a higher level as a member of society, Daido Steel recognizes that initiatives not only within the Company but throughout the entire supply chain are necessary, and that it is vital to work with business partners who understand our intentions.

#### Procurement policy

The Daido Steel procurement policy specifies the basic approach and stance of social responsibility to be fulfilled by the Company. It advocates fair and correct transactions, compliance and respect for the environment, society and human rights in order to continue to provide products and services that satisfy customers and also establish and maintain strong partnerships with business partners. See below for details.

https://www.daido.co.jp/about/procurement/policy/index.html

#### Establishment of new partnership system

In May 2022, we established the DSP partnership system with 200 major partners for the purpose of strengthening a wide range of coordination with business partners. This is a system for strengthening coordination throughout the entire supply chain with business partners and solving problems together because, with recent changes in social conditions and industry structure, issues have emerged that cannot be resolved by Daido Steel alone.



The specific details of activities are as follows.

1. Have periodic interaction with business partners in Partners Meetings to promote the sharing of information.

2. Provide active disclosure of information on Daido Steel and listen to business partners' opinions through questionnaire surveys\*, leading to improvement of the entire supply chain.

3. Provide support for business partners ESG activities, VA/VE, etc.

\* Self-evaluations of the level of initiatives concerning corporate governance, human rights, labor, the environment, fair corporate activities, quality and safety, and local communities.

#### Examples of carbon neutral measures

Scope	Content	Frequency
• Business partners participating in Partners Meetings (200 companies)	Communication of Daido Steel's 2030 targets and policies	Once per year
Business partners not calculating emissions	<ul> <li>Implementation of seminars (basic calculation under the Global Warming Countermeasures Act and Energy Saving Act)</li> <li>Confirming progress</li> </ul>	Once every 6 months
• Business partners for key items (50 companies)	Hearings on status of Scope 3 calculations	Once every 6 months

### Procurement initiatives in the 2023 Medium-Term Management Plan

Under the Conduct Guidelines set forth in the 2023 Medium-Term Management Plan, Daido Steel is working with business partners in the areas of decarbonization, BCP, VA/VE and SDGs.

#### Initiatives with business partners in the 2023 Medium-Term Management Plan



#### **Promotion of SDGs**



Items to promote with business partners

Thorough compliance	Compliance with related laws and regulations
Protection of human rights	<ul><li>In addition to protecting human rights in com</li><li>Maintain labor environment, thorough safety</li></ul>
trengthen information security	Confidential information leakage prevention

#### Responsible mineral procurement

Daido Steel confirms that 3TG (tantalum, tungsten, tin and gold) and Co (cobalt) are not conflict minerals by obtaining conflict-free mineral certification from each business partner.

In addition to obtaining conflict-free mineral certification for new sources, we also obtain information from smelting manufacturers in an effort to ensure risk-free procurement. We are also engaged in the utilization of recycled products.

(Partially modified from 2022 Partners Meeting materials)

Prioritize general concept; specific initiatives undeterminedDecarbonization initiatives just began

Promote reduction in CO<sub>2</sub> emissions
Expand response scope to compliance, human rights, information management, etc.

and social codes, and employee education

npany, confirm any human rights violations from suppliers, regions v and health measures, and employee education

plans, information security strengthening, education

## Strengthening of Corporate Governance

#### Corporate governance

Daido Steel views corporate governance as one of the key issues for management in today's rapidly changing business environment. We strive to increase management efficiency, accelerate and improve decision-making, and ensure management transparency. In addition to the Daido Steel Group Management Philosophy and Conduct Guidelines, the Company has established the Daido Steel Corporate Code of Ethics to clarify its responsibilities as a corporation that contributes to society. Through these measures, the Company endeavors to maintain its foundation as a corporation that is open to society.

#### Governance system

Daido Steel made the transition to a company with an Audit & Supervisory Committee in June 2022 for the purpose of speeding up management decisions, enhancing medium- to long-term corporate value, and further strengthening the governance system.

With the transition to a company with an Audit & Supervisory Committee, part of the execution of operations that was a matter to be discussed by the Board of Directors has been delegated to the President in an effort to increase medium-to long-term corporate value by speeding up decision making and focusing the content of deliberation in the Board of Directors on management policy and management strategy.

In order to secure a system that enables supervision and monitoring, the delegated matters are deliberated in the Management Meeting attended by directors who are full-time Audit & Supervisory Committee members or in the committee, depending on the contents of the matters to be discussed. Furthermore, efforts are made to further strengthen the Board of Directors' governance of management by giving directors who are Audit & Supervisory Committee members the right to vote in the Board of Directors. The state of Daido Steel's corporate governance is disclosed in the Corporate Governance section of the Company's website.

Organization format	Company with an Audit & Supervisory Committee
umber of members of the Board of Directors ursuant to the Articles of Incorporation	19
hairperson of Board of Directors	Chairperson (except when concurrently serving as President)
erm of directors who are not Audit & upervisory Committee members	1 year
erm of directors who are Audit & Supervisory ommittee members	2 years
umber of directors	13
lection of outside directors	Yes
umber of outside directors	5
umber of outside directors designated as idependent officers	5

https://www.daido.co.jp/common/pdf/pages/ir/policy/governance/governance.pdf



(Note) CRM Committee: Corporate Risk Management Committee CRM Department: Corporate Risk Management Department

Figures in parentheses indicate the number of meetings held in fiscal 2021. Figures are not shown for the Audit & Supervisory Committee or the Sustainability Committee because they were newly established in fiscal 2022

#### Progress in strengthening of corporate governance



• Appointed one female director • Three outside directors

Initiatives aimed at improvement of effectiveness of Board of Directors

of Board of Directors

- We are carrying out the following initiatives to increase the effectiveness of the Board of Directors.
- management planning and management strategy, and we are working to strengthen supervisory functions and striving to increase medium- to long-term corporate value.
- (2) We are striving to encourage active discussion in meetings by sending materials on matters to be discussed by the Board of Directors to outside officers in advance to provide them with a deeper understanding.
- (3) Meetings for exchanging opinions with outside officers apart from the Board of Directors are arranged when deeper discussion is required. Efforts are made to make the Board of Directors productive by referring to the opinions raised in meetings to exchange opinions.

#### Evaluation of Effectiveness of the Board of Directors

Daido Steel has performed an evaluation of the effectiveness of the Board of Directors once every year since 2016 by conducting a survey of all directors. The content of the survey is made up of I. effectiveness of discussion and consideration, II. effectiveness of supervisory function, III. effectiveness of leadership, IV. effectiveness of establishment of environment, V. effectiveness of responses to shareholders and stakeholders, and VI. effectiveness of composition, etc. of the Board of Directors (28 questions). The analysis and evaluation results based on the survey are reported to the Board of Directors. In fiscal 2020, supervision of operation of the internal reporting system, succession planning for CEO and others and feedback of

opinions of shareholders were mentioned as issues.

Improvements were made to address supervision of operation of the internal reporting system by reviewing the content of reports in the Board of Directors. Issues remain with succession planning for CEO and others and feedback of opinions of shareholders, and we will continue to endeavor to make improvements.

• Review of succession planning for CEO and others

• Strengthening of IR activities and timely and appropriate feedback to the Board of Directors Going forward, we will continue to strive to improve effectiveness by revising the questions according to changes in the environment while referring to the opinions provided.



(1) By delegating part of the execution of operations to the President, the content of deliberation in the Board of Directors is limited

We plan to take the following action in fiscal 2022 to address the issues identified based on the results from fiscal 2021

#### Strengthening of Corporate Governance

#### Status of officers (Director skill matrix)

	ESG Management/ Planning	Manufacturing Technology/R&D	Sales/Marketing	Finance/ Accounting	IT	Overseas Business	Legal/ Compliance
Tadashi Shimao	0		0		0	0	
Takeshi Ishiguro	0		0			0	
Tsukasa Nishimura	0	0					0
Tetsuya Shimizu	0	0				0	
Kazuhiro Toshimitsu			0				0
Toshiaki Yamashita	0		0				
Akihito Kajita			0	0	0		0
Shuji Soma		0			0	0	
Ryoichi Yamamoto	0		0				
Mutsuko Jinbo		0					0
Susumu Shimura	0	0					0
Kiyoshi Mizutani	0		0	0		0	0
Kenji Matsuo	0		0	0			

1. Skills forming the basis for corporate management

(1) ESG Management/Planning (2) Manufacturing Technology/R&D (3) Sales/Marketing (4) Finance/Accounting 2. Skills that are essential for future business operation and will be focused upon

 Skills that are essential for future business operation a (1) IT (2) Overseas Business

3. Skills required in non-financial aspects

(1) Legal/Compliance

#### Ensuring Diversity of the Board of Directors

Directors are elected from the perspective of being able to deal with management of and issues in each business, and being able to make decisions based on exchanging diverse opinions for the improvement of effectiveness of the Board of Directors. At present, Daido Steel emphasizes not only knowledge, experience and skills and a global perspective, but also ensuring diversity in terms of gender, age and career history, including for outside directors, to have a very well balanced composition.

#### Officer remuneration

#### Policy

Remuneration of officers is paid in cash as monthly remuneration and bonuses.

A Policy for Determination of Individual Remuneration of Directors (Excluding Directors Who are Audit & Supervisory Committee Members) (hereinafter, "Determination Policy") has been specified, the individual remuneration of directors (excluding directors Who are Audit & Supervisory Committee members) is paid in accordance with this. The details of the Determination Policy are as follows. <Monthly remuneration>

This is calculated based on the remuneration table within the scope of the monthly limit on remuneration specified in the Shareholders' Meeting. Remuneration of directors (excluding directors who are Audit & Supervisory Committee members) is made up of (a) a fixed part for each position and (b) a performance-linked part. Remuneration tables are specified for each position, and the percentage of payment of the performance-linked part is designed to be larger for higher positions according to their duties. Consolidated ordinary income is used as the indicator for performance-linked remuneration. Remuneration of outside directors (excluding directors who are Audit & Supervisory Committee members) is made up of only (a) a fixed part for each position.

#### <Bonuses>

These are 100% performance-linked to provide an incentive for improving performance, and non-consolidated ordinary income is used as the indicator for performance.

Remuneration of directors who are Audit & Supervisory Committee members is determined based on discussion in the Audit & Supervisory Committee.

#### Amount of remuneration (fiscal 2021)

	Total amount of	Total amount of remunerat	Number of officers	
Officer type	remuneration (Millions of yen)	Fixed remuneration	Performance-linked remuneration	included
Directors (excluding outside directors)	343	229	113	7
Audit & Supervisory Board Members (excluding outside Audit & Supervisory Board Members)	29	29	-	1
Outside officers	69	69	-	6

#### Cross-Shareholdings

• Cross-Shareholdings Policy

We believe that cooperative relationships with related companies are essential in all areas of business conducted by the Company, such as procurement of raw materials and others, development, manufacture and sale of products, and stable supply. To achieve sustained growth in future, we believe it is necessary to maintain relationships of trust with stakeholders and increase medium- to long-term corporate value. Therefore, our basic policy is to reduce cross-shareholdings as a whole while only continuing appropriate holdings in light of the perspective of increasing corporate value.

#### • Review of Cross-Shareholdings

Every year, Daido Steel reviews the purpose and appropriateness of individual cross-shareholdings in the Board of Directors. The appropriateness of holdings is reviewed by performing a quantitative review of financial stability, share price and dividends of the portfolio company, and a qualitative evaluation of the importance in Daido Steel's business by considering the amount sold to or from the portfolio company, the amount of profit and the amount of financial transactions. Holdings will be reduced if not found to be appropriate according to the conditions in future.

In the 2023 Medium-Term Management Plan, we decided to reduce the amount of cross-shareholdings (excluding deemed shareholdings) to 20% or less of net assets with an aim to reduce it to 10% in the long term. In fiscal 2021, which was the first year covered by the plan, we reduced holdings of six stocks by ¥7.4 billion, bringing the amount of cross-shareholdings (excluding deemed shareholdings) to 20% or less of net assets to 18.8%. And then, by the end of 2023, we intend to make a further reduction aiming to lower cross-shareholdings including deemed shareholdings to 20% or less of net assets.

#### Voting Criteria

Daido Steel exercises its voting rights by making comprehensive decisions based on the issuing company not performing antisocial acts, whether the proposal will contribute to enhancing the medium- to long-term corporate value of the issuing company, and the impact on the Company.

## List of Officers (As of Jun. 24, 2022)

#### Directors



Chairperson of the Board	Apr. 1973	Joined Daido Steel Co., Ltd.
of Directors, Representative	Jun. 1998	General Manager, Management Department, Chita Plant
Evocutivo Director	Jun. 2000	General Manager, Sales Department No.1, Steel Business Division
Executive Director	Jul. 2002	Chief Staff, Corporate Planning Department (General Manager in charge of
		planning)
Tadashi Shimao	Apr. 2004	General Manager, Corporate Planning Department
	Jun. 2004	Director and General Manager, Corporate Planning Department
	Jun. 2006	Managing Director
	Jun. 2009	Representative Director and Vice President, and General Manager, Tokyo Head Office
	Jun. 2010	Representative Executive Director, President
	Jun. 2015	President & CEO, Representative Executive Director
	Jun. 2016	Chairperson of the Board of Directors, Representative Executive Director (current

position)

FY2021 Board of Directors Attendance 13/13

President & CEO, Representative Apr. 1980 Joined Daido Steel Co., Ltd.

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		-		
-			*	

	P	
Executive Director	Jul. 2002	General Manager, Sales Department No.1, Steel Business Division
	Jun. 2004	General Manager, Steel Sales Department, Steel Business Division
Talvashi Jahisuwa	Jun. 2006	General Manager, Steel Planning and Management Department, Steel Business
l'akesni isniguro		Division
	Jun. 2008	General Manager, Corporate Planning Department
	Jun. 2009	Director and General Manager, Corporate Planning Department
	Apr. 2012	Director
	Jun. 2012	Managing Director
	Jun. 2013	Managing Director, General Manager of Specialty Steel Products Division, and
		General Manager, Specialty Steel Bar & Wire Business Division
	Jun. 2014	Representative Director and Vice President, General Manager, Tokyo Head Office
		and General Manager, Specialty Steel Products Division
	Jun. 2015	Representative Executive Director, Executive Vice President, General Manager,
FY2021		Tokyo Head Office
Board of Directors Attendance	Jun. 2016	President & CEO, Representative Executive Director (current position)

FY202 Board 13/13

**Representative Executive** 

Director, Executive Vice President

Tsukasa Nishimura



Apr.	1981	Joined	Daido	Steel	Co.,	Lt

Nov. 2003 Deputy General Manager, Hoshizaki Plant, Steel Business Division

- Jun. 2006 General Manager, Hoshizaki Plant, Steel Business Division
- Jun. 2009 General Manager, Stainless Steel & Tool Steel Business Division Jun. 2010 Director and General Manager, Chita Plant, Specialty Steel Business Division Apr. 2012 Director and General Manager, Chita Plant, Specialty Steel Products
- Division
- Jun. 2013 Director
- Jun. 2014 Managing Director
- Jun. 2015 Director, Managing Executive Officer Jun. 2016 Representative Executive Director, Executive Vice President (current position)

Supervisor of all departments, in charge of CRM Department FY2021 Board of Directors Attendance 13/13

**Representative Executive** 

#### Tetsuya Shimizu

General Manager, Functional Products Business Division, and General Manager, Tokyo Head Office, in charge of Corporate Research & Development Center, Sales Division FY2021

Board of Directors Attendance 13/13

- Apr. 1985 Joined Daido Steel Co., Ltd. Director, Executive Vice President Jul. 2008 General Manager, Advanced Materials R&D Department, Specialty Steel Research
  - Center, R&D Division
  - Jun. 2010 General Manager, Specialty Steel Research Center, R&D Division
  - Oct. 2014 General Manager, Material Solutions Department, Forged Products Division Jun. 2016 Executive Officer and General Manager, Material Solutions Department
  - Apr. 2017 Executive Officer and General Manager, Corporate Research & Development Center
  - Apr. 2019 Executive Officer and General Manager, Corporate Planning Department
  - Apr. 2020 Managing Executive Officer and General Manager, Corporate Planning Department Jun. 2020 Director, Managing Executive Officer and General Manager, Corporate Planning
  - Department Jun. 2021 Director, Managing Executive Officer and General Manager, Functional Products Business Division
  - Apr. 2022 Representative Executive Director, Executive Vice President, General Manager, Functional Products Business Division, and General Manager, Tokyo Head Office (current position)



Representative Executive Director, Executive Vice President

#### Kazuhiro Toshimitsu

In charge of General Affairs Department, Legal Department, Personnel Department, and Director's Departmental Section FY2021 Board of Directors Attendance 13/13

Director, Managing Executive

Toshiaki Yamashita

Officer

Officer



General Manager, Specialty Steel Business Division, in charge of Die Forging Division FY2021 Board of Directors Attendance 13/13

Director, Managing Executive

Akihito Kajita



In charge of IT Planning Department, Finance & Accounting Department, and Internal Control (Financial Instruments and Exchange Act) FY2021 Board of Directors Attendance 13/13



Apr. 1985 Joined Daido Steel Co., Ltd.

Jun. 2009	General Manager, Stainless Steel Sales Department, Stainless Steel & Tool Steel
	Division

Apr. 2012 General Manager, Nagoya Sales Department, Specialty Steel Bar & Wire Business Division, Specialty Steel Products Division

Jun. 2015 General Manager, Nagoya Sales Department, Automobile Business Unit

Apr. 2017 Executive Officer and General Manager, Planning Department for Affiliates

Apr. 2019 Executive Officer and General Manager, General Affairs Department

Apr. 2020 Managing Executive Officer and General Manager, General Affairs Department Jun. 2020 Director, Managing Executive Officer

Apr. 2022 Representative Executive Director, Executive Vice President (current position)

Apr. 1986 Joined Daido Steel Co., Ltd.

- Apr. 2012 General Manager, Automobile Sales Department, Specialty Steel Bar & Wire Division, Specialty Steel Products Division
- Jun. 2015 General Manager, Tokyo Sales Department, Automobile Business Unit
- Jun. 2016 General Manager, Automobile Business Unit
- Apr. 2017 Executive Officer and General Manager, Corporate Planning Department
- Apr. 2019 Executive Officer and General Manager, Automobile Business Unit
- Apr. 2020 Managing Executive Officer and General Manager, Automobile Business Unit Jun. 2020 Director, Managing Executive Officer and General Manager, Automobile Business Unit

Jun. 2021 Director, Managing Executive Officer and General Manager, Specialty Steel Business Division (current position)

- Apr. 1986 Joined The Industrial Bank of Japan, Limited
- Apr. 2011 General Manager, e-Business Division of Mizuho Corporate Bank, Ltd.
- Apr. 2012 General Manager, Toyama Corporate Banking Division
- Jul. 2013 General Manager, Toyama Branch of Mizuho Bank, Ltd.
- Apr. 2014 General Manager, Corporate Banking Division No. 1 Jun. 2015 President & CEO of Mizuho Electronic Monetary Claim Recording Co., Ltd.
- Jun. 2017 Executive Officer of Daido Steel Co., Ltd.
- Jun. 2019 Director, Executive Officer
- Jun. 2021 Director, Managing Executive Officer (current position)

#### List of Officers

#### Directors (Outside)



Independen
a

ent	Apr. 1986	Joined Nippon Steel Corporation
	Apr. 2009	Group Manager, Flat Products Marketing & Technical Service Department, Flat
		Products Division
	Nov. 2010	General Manager, Sheet & Coil Division of Yawata Works
	Apr. 2013	General Manager, Head of Div., Production & Technical Control Division, Yawata
		Works, Nippon Steel & Sumitomo Metal Corporation
	Nov. 2014	General Manager, Head of Div., Production & Technical Control Division, Kimitsu
		Works
	Apr. 2016	Executive Officer, Head of Div., Flat Products Technology Division, Flat Products
		Unit
	Apr 2010	Managing Executive Officer, Head of Works, Nagova Works, Nippon Steel

- Corporation (current position) Jun. 2019 Director of Daido Steel Co., Ltd. (current position)
- FY2021 Board of Directors Attendance 13/13

#### Reason for Election -

It was determined that he is well qualified because he has a wide range of knowledge and insight on management as a management executive of a steel company.



officer	Independent	Apr. 19.
		Feb. 199
		Feb. 200

Ryoichi Yamamoto

#### 73 Joined The Daimaru, Inc.

993 Manager of Sales Planning Department, Osaka Umeda Store 001 Director, and General Manager of Sales Reform Promotion Office and General Manager of Sales Planning Office, Department Store Operations Headquarters, Head Office May 2003 President and COO Sep. 2007 Director of J. FRONT RETAILING Co., Ltd. Sep. 2007 Director of Matsuzakaya Co., Ltd. Mar. 2010 President of Daimaru Matsuzakaya Department Stores Co. Ltd. Apr. 2013 President of J. FRONT RETAILING Co., Ltd. May 2017 Director, President, and Representative Executive Officer May 2020 Director and Board of Directors Chairperson (current position) Jun. 2021 Director of Daido Steel Co., Ltd. (current position)

FY2021 Board of Directors Attendance 10/10

#### Reason for Election

Director

It was determined that he is well qualified because he has a wide range of experience and knowledge on management based on his experience in top management of companies in different industries than that of Daido Steel.



Outside officer	Indep
Director	

- Mar. 1992 Acquired Doctor of Engineering at Nagoya University Apr. 1996 Assistant Professor of Materials Engineering Laboratory, Daido Institute of
- Technology Apr. 2001 Professor of Department of Electrical and Electronic Engineering, School of

Mutsuko Jinbo

- Engineering Apr. 2017 Director of Daido Educational Institutions (current position) Apr. 2017 President of Daido University (current position)
- Jun. 2019 Director of Daido Steel Co., Ltd. (current position)

FY2021 Board of Directors Attendance 13/13

#### Reason for Election

It was determined that she is well gualified because she has a wide range of knowledge and experience as director of an educational corporation and as the president and professor of a university.

#### Directors (Audit & Supervisory Committee Members)



Director (Audit & Supervisory Committee Member / full-time)

Susumu Shimura

FY2021 Board of Directors Attendance 13/13 Audit & Supervisory Committee Attendance 14/14



Outside officer Director (Audit & Supervisory

Committee Member / full-time)

Kiyoshi Mizutani

FY2021 Board of Directors Attendance 12/13 Audit & Supervisory Committee Attendance 13/14

Reason for Election board member of an operating company.

#### Outside officer Independent

Director (Audit & Supervisory Committee Member / part-time)

Kenji Matsuo

#### FY2021 Board of Directors Attendance 13/13 Audit & Supervisory Committee Attendance 14/14

Reason for Election It was determined that he is well qualified because he has a wide range of knowledge and insight on management based on his experience in top management of a financial institution.



Apr. 1981 Joined Daido Steel Co., Ltd. Apr. 2006 General Manager, Environmental Facilities Department, Machinery Division Apr. 2008 General Manager, Takiharu Techno Center, Machinery Division May 2009 General Manager, Planning & Management Department, Machinery Division Apr. 2012 General Manager, Machinery Division

- Jun. 2012 Director and Manager of Machinery Division
- Jun. 2015 Managing Executive Officer
- Jun. 2017 Director, Managing Executive Officer
- Apr 2019 Director
- Jun. 2019 Full-Time Audit & Supervisory Board Member
- Jun. 2022 Director, Full-Time Audit & Supervisory Committee Member (current position)

Apr. 1982 Joined The Tokai Bank, Limited

- Jun. 2010 Executive Officer of The Bank of Tokyo-Mitsubishi UFJ, Ltd.
- Jun. 2010 Executive Officer of Mitsubishi UFJ Financial Group, Inc.
- Jun. 2012 Deputy President of MST Insurance Service Co., Ltd.
- Jun. 2015 Full-Time Audit & Supervisory Board Member of NIPPON SHARYO, LTD. Jun. 2019 Full-Time Audit & Supervisory Board Member of Daido Steel Co., Ltd.
- Jun. 2022 Director, Full-Time Audit & Supervisory Committee Member (current position)

It was determined that he is well qualified because he has a wide range of knowledge and insight on management based on his experience as a management executive of financial institutions and full-time audit & supervisory

> Apr. 1973 Joined Meiji Life Insurance Company Jul. 2001 Director and General Manager. Real Estate Investment Department Apr. 2005 Managing Director of Meiji Yasuda Life Insurance Company Dec. 2005 President Jul. 2006 President, Director, Representative Executive Officer Jul. 2013 Representative Executive Officer Jul. 2013 Senior Adviser Jun. 2017 Audit & Supervisory Board Member of Daido Steel Co., Ltd. Apr. 2022 Honorary Advisor of Meiji Yasuda Life Insurance Company (current position) Jun. 2022 Director, Audit & Supervisory Committee Member of Daido Steel Co., Ltd. (current position)

## **Risk Management and Compliance**

#### 1. Risk management

#### (1) Risk Management System

Daido Steel believes that risk management and compliance are the starting points for ensuring the continuity of its businesses, and perceive them to be one of the most important management issues.

In order to achieve the sustained development of the Daido Steel Group, we have established Risk Management Regulations stipulating basic matters on risk management, and are conducting activities accordingly. Based on these regulations, risks are defined as events that could have a detrimental impact on the Company, and we perform comprehensive and integrated tracking and evaluation of risks, determine policies on responses to risks, implement preventative measures, and implement ongoing monitoring of these activities. The Company has appointed an officer who is responsible for risk management and compliance as the companywide supervisor of risk management and compliance to promote these initiatives. Furthermore, the Corporate Risk Management (CRM) Committee chaired by the President that is an advisory organ to the Board of Directors has been established as an organ to discuss matters related to the risks surrounding the Daido Steel Group and matters concerning internal control, and it supervises the status of operation of internal controls pertaining to risk management and financial reporting.

The Company periodically formulates and revises a risk map on the risks that impact business operation, assesses risks, and selects important risks related to the Company and notifies the relevant divisions. Furthermore, working groups (WG) are established for risks that should be addressed by the entire company, and they conduct companywide activities and periodically report to the CRM Committee.

Furthermore, we have built a three lines model with the CRM Department as the final line of defense as a system for dealing with various risks, laws and regulations.

#### [Diagram of the Three Lines Model]



#### (2) Risk Map-based Risk Management Activities

Daido Steel uses a risk map to organize risks in business operation according to the degree of impact and frequency of occurrence. Working groups are organized to respond to particularly high risks among these. There were no payments of fines or settlements related to ESG issues, and no provisions were made for these.

#### Risk Map (Excerpted version)

		Loss category Degree of impact					
		Moderate impact Serious impact Ca		Catastrophic impact			
rence	Low	Risks that occur by chance or around once or twice per year	Cash flow     Embezzlement, breach of trust	Soil contamination     Hazardous     Business plan     substances	Carbon neutrality measures     Facilities-related     Demand     environment		
cy of occur	Medium	Risks that have the potential to occur	Accounting scandals     Taxation-related	Cartels     Personnel-related     Non-preparati     of BCP	on • Security trade control • Inspection data • Natural disasters • Industrial waste		
Frequen	High	Risk that could occur at any time	<ul> <li>Foreign exchange movements</li> <li>Personal information</li> <li>Overseas business</li> </ul>	Accidents such as fires     IT environment     Information security     Harassment     Hara	and		

2023 Medium-Term Management Plan Orange: Being handled by WG

#### (3) Addressing major risks

#### (1) Deliberation in the CRM Committee

- such as responding to priority management risks. (2) Working group (WG) activities
- In addition to organizing working groups (WG) in coordination with the relevant divisions to promote activities for risks with particularly of activities were carried out in fiscal 2021.

#### [Trade Security Control]

- Export control internal audits (Daido Steel Group) and education through e-learning system
- Establishment of workflow system for export classification review, introduction of system for halting incoming orders
- [Prevention of Cartels]
- Arrangement of establishment of relevant internal rules for the prevention of cartels [BCM]
- earthquake in the Nankai Trough (Establishment and operation of temporary alternative headquarters in the Tokyo Head Office, utilization of MCA radio\* as a means of communication in the disaster, etc.)
- supply during power outages, etc.)
- Support for BCP formulation for Group companies
- [Strengthening of Governance of Group Companies]
- Education and study by theme and area led by Group companies and activities for the mutual exchange of information (subcommittees), for the purpose of enhancing the overall strength of the Group
- Six subcommittees: Audit & Supervisory Board members, important laws and regulations, internal control, internal audit, risk management & BCM, human resources management
- Various training seminars, individual consultations, provision of support [Information Management]
- Information management training through an e-learning system based on the information management guidebook
- Response to the protection of personal information

For risks other than the above, each risk owner implemented initiatives to prevent and reduce risks.

#### Fiscal 2022 Plan

(1) Implement risk management activities based on the "Risk Map for the 2023 Medium-Term Management Plan" (2) Hold meetings of the CRM Committee: Reporting and deliberation of the status of risk management activities (including reports on the status of initiatives by each risk owner)

- (3) Continue promotion of working group (WG) activities: export control audits, implementation of BCM training, holding subcommittee meetings for Group companies, continuation of cybersecurity measures, etc.
- Group) and roll out to overseas Group companies. Further enhance the Group's risk management and compliance education by expanding content

In addition to the above, we will proceed with the establishment, etc. of the necessary education, internal audits and rules for increasing the level of the Group's risk management and compliance.

#### (4) Crisis Management System

In preparation for the occurrence of crises such as natural disasters, accidents, domestic or foreign terrorism or conflict, and scandals, Daido Steel has formulated regulations for emergency countermeasures in the event of a major accident, with the purpose of promptly sharing information with concerned parties, making a speedy response to the issue, and minimizing the impact on business activities. The Daido Steel Group as a whole, including Group companies, conducts business operations based on these regulations. The Group has also deployed emergency radios to create a system enabling reliable sharing of information when a crisis occurs.

Since fiscal 2020, as a response for the prevention of COVID-19 infection, we have swiftly collected information on not only people who are infected, but also those in close contact or semi-close contact, and people feeling unwell who may be infected, and centrally managed this at head office. Furthermore, as preventative measures, we are promoting remote work, promoting flex and staggered office hours, downsized and dispersed meetings, and promoted web conferencing.

• The CRM Committee held six meetings, and deliberated issues and measures related to risk management under normal circumstances

high importance or priority, the content of activities is periodically reported and deliberated in the CRM Committee. The following kinds

• Implementation of BCM training with participation by management in anticipation of response immediately after the occurrence of a major

• Promotion of plant earthquake and disaster prevention measures (measures against oil leaks from equipment, measures to secure power

• Promotion of cybersecurity measures (strengthening of monitoring system, consideration of incident response, etc.)

(4) Expand use of e-learning systems within the Group (implemented in 16 companies by the end of fiscal 2021 → expand to 90% of entire

\* MCA radio: A business radio system using Multi-Channel Access radio technology

#### **Risk Management and Compliance**

#### 2. Compliance

#### (1) Code of Ethics and Code of Conduct

Daido Steel has established the Daido Steel Corporate Code of Ethics and the Daido Steel Code of Conduct as standards for behavior that all Company staff and other concerned parties should follow, and distributes these to all employees and offers training on these codes to each tier of its workforce. Furthermore, the status of compliance including the status of compliance with the above Code of Ethics and Code of Conduct such as the content, history and investigation results of internal reports are reported to the CRM Committee as needed.

#### Daido Steel Corporate Code of Ethics

Daido Steel strictly observes and adheres to the letter and spirit of all laws, as well as ethical standards applicable in all jurisdictions in which the Company conducts its business, and behaves in a socially sensible manner based on the following eight principles.

- 1. Contribute to society through technology, service, and quality that maintain the satisfaction and trust of customers and society.
- 2. Compete for business and conduct appropriate business in the marketplace in a fair, transparent, and free manner, and maintain sound and normal relationships with political and administrative institutions.
- 3. Disclose Daido's corporate information in a fair and positive manner through extensive communications with shareholders and members of society.
- 4. Respect employees' diversity, character, and individuality, while ensuring safe and comfortable working environments and realizing freedom and high quality of life.
- 5. Act positively and voluntarily with the awareness that environmental issues are something common to all people.
- 6. Conduct all corporate activities as a good corporate citizen in compliance with corporate ethics and legal requirements. Also, give careful attention to protecting personal and customer information. In conducting international corporate activities, respect local cultures and customs and manage in a way that allows contributions to the development of local cultures.
- 7. Take a stringent and resolute attitude toward any unreasonable demands from antisocial forces or organizations that threaten the order and safety of civil society.
- 8. To realize the Daido Steel Corporate Code of Ethics, the management assumes the responsibility to take the initiative to internally familiarize the spirit of the Corporate Code by setting good examples and to make group companies and customers know of the same. The management also assumes the responsibility to take the initiative to improve the company structure. In the event of any violation of this code, management shall personally investigate and resolve the matter, and make a prompt and accurate disclosure of information pertaining to the matter. After such disclosure, management will take measures to prevent recurrence, and will discipline violators appropriately.



#### (2) Internal Reporting System

We have established Internal Reporting Regulations and maintain an internal reporting system to receive consultations and reporting on compliance in Daido Steel and Group companies. We have established hotlines in the divisions in charge and an externally as the contact points for internal reporting, and the content of reports is reported to the officer in charge of risk management and compliance and the Audit & Supervisory Committee, which provides instructions for the divisions in charge to investigate and respond. Furthermore, in addition to reporting the status of operation to the CRM Committee, etc., we implement companywide initiatives according to the cause and frequency.



#### (3) Compliance Initiatives

Compliance is the premise of the sustained development and business continuity of a company, and initiatives are continuously being carried out with the highest priority. The Company is instilling compliance in all Group employees through the following specific activities.

Fiscal 2021 Results
(1) Issued messages from the President and Executive Officers, including New Year's greetings from the President and the Corporate Ethics Month (October) message
(2) Made the internal reporting hotline and how reports are received widely known to employees through media such as internal newsletters
(3) Revised the "Important Laws and Regulations for the 2023 Medium-Term Management Plan" (identify important laws and regulations related to the Group's business operations, organize legal requirements, and propose and implement countermeasures for laws and regulations of especially high priority), and collected and disseminated new information
(4) Promotion of harassment elimination activities: Provided harassment prevention training to all office managers
(5) Implemented compliance audits of the Company's plants and offices, and Group companies (appropriate management of work hours, etc.)
(6) Implemented education and individual consultation on the internal reporting system for supervisors and persons in charge of internal reporting in Group companies
(7) Provided training on laws and regulations to Daido Steel Group employees
(8) Held Group CRM study sessions (members comprise officers responsible for compliance within the Daido Steel Group)
In addition, we provided support for the discovery and individual corrections of compliance issues within the Group.

#### \* Holding of keynote address on "Corporate Compliance"

Every October is positioned as Corporate Ethics and Compliance Mor activities to raise awareness of corporate ethics and compliance amo In fiscal 2022, the Executive Vice President in charge of the CRM

keynote address and deliver a video message as part of Corporate Etl

#### 3. Ensuring anti-corruption compliance

The Daido Steel Code of Conduct stipulates restrictions on gifts and entertainment, and we ensure anti-corruption compliance among officers and employees.

In particular, we have incorporated items on anti-corruption compliance in the training for recruits and training for personnel before being assigned overseas, and conduct education on this.

### 4. Elimination of antisocial forces

The Daido Steel Corporate Code of Ethics and the Daido Steel Code of Conduct stipulate breaking off relations with antisocial forces, and we ensure the prevention of corruption among officers and employees. In addition, we stipulate provisions on the elimination of antisocial forces when concluding agreements with new business partners.

iscal 2022 Plan							
1) Hold lectures by the Executive Vice Presid CRM Department) during Corporate Eth	dent (officer in charge of ics Month*						
<ol> <li>Continue compliance awareness activitie internal newsletters</li> </ol>	s utilizing media such as						
3) Revise "Important Laws and Regulations and communicate it to the Group	" collect new information,"						
<ol> <li>Continue to promote "harassment elimin Group companies</li> </ol>	nation activities" including						
<ol> <li>Implement compliance audits of the Con offices, and Group companies (laws rela environment, Worker Dispatch Act, etc.)</li> </ol>	npany's plants and ted to the business						
6) Implement individual consultation on the for Group companies	e internal reporting system						
7) ★ Implement employee awareness surve survey results, and report to the CRM Co (★ New initiative in fiscal 2022 (will also be periodically	ey, assess and analyze ommittee implemented from fiscal 2022))						
n addition to the above, we will continue to essions and implement education on Group	o hold Group CRM study o compliance.						
ath and we are promoting	20226 108110						
ng all employees.	企業倫理月間講演 CRMB世早新社長						
Department will provide a	企業コンプライアンスについて						
hics and Compliance Month.							

## Stable Supply of High-Quality Products

#### Initiatives for stable supply of high-quality products

Stable supply of high-performance, high-quality materials is essential for the realization of a sustainable society. Also, stable supply cannot be achieved without assured quality management.

Daido Steel is broadly promoting the improvement of employees' skills and sensitivity to quality, sharing and rolling out of examples of quality improvement and accidents, and activities to prevent misidentification, including in Group companies. Going forward, we will endeavor to maintain and improve quality to continue to be a materials manufacturer that is a cornerstone of a safe and secure sustainable society by delivering reliable quality to customers.

#### President's quality policy

"Quality is the basis of reliability" Let's deliver products with assured quality to customers!

We aim to achieve "zero serious quality accidents" based on the President's Quality Policy. Although improvements are being made since fiscal 2018, we will aim for zero accidents by going back to the basics of correct procedures and correct work.





#### **Quality Assurance Committee**

The Daido Steel Group is promoting quality control improvement measures centered on "Daido Group Quality Assurance Committee." The committee was launched in 2006 and is chaired by the officer in charge of guality. Its members are made up of Daido Steel plant managers and the heads of quality assurance divisions of Group companies, and is a group for quality improvement where around 45 guality managers meet at once. The committee shares and rolls out information on serious guality incidents, improves common quality issues, introduces examples of improvements and makes quality improvements for the entire Daido Steel Group

#### Committee Structure

### **Quality Assurance Committee**

8 Daido Steel plants 15 Daido Group companies 2 manufacturing divisions

#### **Quality Assurance Expert Committee**

- Analysis Subcommittee
- Non-destructive Testing Committee
- Spark Test Subcommittee

#### <<Examples of Recent Activity>>

- Elimination of identification failures through the promotion of automation when verifying identification
- Commitment to automation of tests and communication of measurements
- Quality compliance audits by the head office quality assurance section

#### <<Committee Operation>>

- Frequency: Held once every three months
- The results of activities are reported in the Quality Assurance Committee, and corrections and improvements are made by rolling these out across the organization. (Including activity reports of each subcommittee)

#### Example: verification of identification QR code

The steel ingot identification markings that had been handwritten in paint were changed to identification labels with QR codes to enable machine verification

(Effect: prevention of human error such as written mistakes and verification mistakes)



#### **Product safety**

Daido Steel is strengthening systems for managing environmentally hazardous substances of concern contained in products in accordance with standards such as ISO9001 for quality and ISO14001 for the environment.

Furthermore, the Daido Steel Group is appropriately managing environmentally hazardous substances of concern that are becoming more strictly regulated year by year (RoHS Directive, REACH Regulation, etc.), and provides non-use certificates safety data sheets (SDS) and chemSHERPA (a scheme for communicating information on environmentally hazardous substances of concern) to meet customers' requirements.

#### Quality education

Knowledge is shared with the entire Group through the Analysis Subcommittee, the Nondestructive Testing Committee and the Spark Test Subcommittee, developing testing personnel with a high level of specialized knowledge.

In addition, we maintain internal education systems on quality such as voluntary management activity (JK) education and practical lessons on quality investigation.

Daido Steel has performed JK activities in 1,214 themes per year on a non-consolidated basis and 736 theme per year in Group companies.

#### **Analysis Subcommittee**

- Activities to maintain precision through mutual analysis using the same standard samples
- Study group on new analysis technology [Participation]
- 1 Daido plant, 4 Group companies
- [Frequency]

#### Non-destructive Testing Committee Spark Test Subcommittee Activities to increase the JSNDI Periodic practical tests (maintaining skills) qualification test pass rate through the • Spark test competition (improving skills) • Establishment of a working environment • Mutual inspection of testing and for spark testing calibration methods [Participation] 3 Daido plants, 4 Group companies 6 Daido plants, 11 Group companies [Frequency] [Frequency] Held once every three months Held once every three months

- creation of a guide
- [Participation]
- Held once every three months

### **Quality Guidelines**

- Pursuit of higher quality through participation by all
- Manufacturing with world-class QCD competitiveness
- Detection of quality risks and prevention of problems in advance

#### Example: Transmission of test measurement results

Improved the existing workflow of "(1) measurement  $\rightarrow$  (2) reading -

(3) handwriting result  $\rightarrow$  (4) inputting to computer" to "(1) measurement  $\rightarrow$  (4) transmission to computer" through the introduction of machines and software. (Chemical composition analysis, tensile testing, dimension measurement etc.) (Effect: prevention of reading/writing/input errors, improvement of testing reliability)



#### Daido Steel Group's ISO Certification

Daido Steel's plants:

Certification obtained in all plants

Group companies:

Certification obtained in all manufacturing companies

Management of environmentally hazardous substances of concern related to quality assurance

- Substances restricted under the RoHS Directive
- Substances restricted under the REACH Regulation, substances subject to approval, substances of concern
- Substances restricted under other laws and regulations, etc.



Spark test competition

## Ten-year Financial Summary

										(Millions of yen)
Years ended March 31	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Net sales	440,428	457,731	483,633	460,577	445,122	505,219	543,255	490,421	412,722	529,667
Operating income	15,425	18,977	20,408	24,432	25,513	36,218	33,815	24,768	10,070	36,982
Ordinary income	16,475	20,287	21,729	25,108	26,373	36,130	34,343	24,298	12,642	39,200
Profit attributable to owners of parent*1	10,983	12,616	10,886	6,746	16,386	23,920	21,182	10,987	4,516	26,894
R&D expenses	4,560	5,160	5,300	5,766	6,205	5,419	5,638	6,002	4,722	5,785
Capital investment (plan)	25,400	26,400	20,600	28,300	32,800	38,600	37,200	25,300	12,500	25,500
Capital investment (construction)	26,791	44,404	30,295	23,205	28,940	35,605	34,413	37,529	24,448	21,027
Depreciation	19,229	20,052	22,436	22,454	23,275	20,740	23,171	24,662	25,912	26,797
Total accets	511 150	557 522		525 675	574 160	642 021	650 607	625 800	665 506	720 107
	211,133	222 152	256 021	د <i>۲</i> ۵,۵۵۵ ۲۵۵ دود	250,950	294 424	295 509	272 562	202 1/2	220,107
Net accets	211,921	252,152	200,021	252,052	200,501	204,434	203,300	273,302	200,143	365 004
Interest bearing debt	146 000	1/2 025	146 209	126 114	142 500	160 252	174 009	102 001	100 010	229,004
	140,999	145,065	140,208	150,114	142,333	100,552	174,998	195,001	190,012	229,090
Net cash provided by (used in) operating activities	33,607	28,567	25,739	45,731	28,390	31,043	28,114	41,033	33,766	(16,684)
Net cash provided by (used in) investing activities	(28,471)	(34,313)	(32,178)	(23,164)	(26,449)	(30,215)	(33,707)	(39,326)	(29,395)	(14,568)
Net cash provided by (used in) financing activities	(17,356)	(7,633)	(2,792)	(20,164)	(1,843)	5,477	5,589	10,526	2,999	19,402
	100		500			6 672	6 607	6.447		7 725
Net assets per share (yen)	489	535	590	545	609	6,672	6,697	6,417	/,111	/,/35
Profit attributable to owners of parent per share (yen)	25	29	25	16	39	561	497	258	106	631
Shareholders' equity ratio (%)	41.5	41.6	43.5	43.5	45.3	44.3	43.9	43./	45.6	45.3
Return on sales (ROS) (%)	3.5	4.1	4.2	5.3	5.7	7.2	6.2	5.1	2.4	/.0
Return on assets (ROA) (%)	3.2	3.8	3.8	4.5	4.8	5.9	5.3	3.8	2.0	5.6
Return on equity (ROE) (%)	5.4	5.7	4.5	2.8	6.7	8.8	7.4	3.9	1.6	8.5
Cash dividends applicable to the year per share (yen)	4.5	5.0	6.5	7.5	10.0	Interim 6.0 Year-end 60.0* <sup>2</sup>	130.0	70.0	35.0	180.0
<net by="" sales="" segment=""></net>										
Specialty Steel	232,701	250,749	262,438	254,150	228,965	254,808	278,924	241,462	198,218	267,310
High Performance Materials and Magnetic Materials	152,759	159,367	1/8,513	1/2,/86	103,495	186,809	202,357	181,038	161,254	212,319
Parts for Automobile and Industrial Equipment	121,868	123,776	130,293	131,078	120,331	130,807	137,839	120,933	100,355	120,980
Engineering	33,751	31,980	25,436	28,609	25,587	26,974	29,340	27,492	21,259	18,644
Irading and Service	19,221	18,856	21,089	19,612	24,047	25,612	25,962	31,529	28,954	38,872
(Elimination of intercompany sales)	(119,874)	(127,000)	(134,137)	(145,659)	(117,304)	(119,793)	(131,168)	(112,033)	(97,320)	(128,459)
<operating by="" income="" segment=""></operating>										
Specialty Steel	3,514	1,691	3,177	7,560	5,813	6,478	5,998	5,148	(2,632)	3,827
High Performance Materials and Magnetic Materials	6,648	11,104	13,517	12,331	17,416	22,195	20,694	13,638	12,172	26,650
Parts for Automobile and Industrial Equipment	3,394	3,779	1,023	1,298	(516)	3,070	2,308	430	(2,109)	4,979
Engineering	762	1,125	1,652	2,071	1,218	1,835	2,291	2,960	858	(1,277)
Trading and Service	1,109	1,280	1,043	1,173	1,583	2,686	2,527	2,581	1,786	2,834
(Elimination of intercompany profits)	(2)	(3)	(6)	(2)	(2)	(48)	(5)	9	(4)	(31)

\*1 Profit attributable to owners of parent was previously presented as "net income" until the fiscal year ended March 31, 2015.

\*2 A one-for-ten reverse stock split of common shares was conducted on October 1, 2017.

## Company Overview (As of March 31, 2022)

Daido Steel Co., Ltd. Corporate Name: Founded: August 19, 1916 February 1, 1950 Incorporated: President: Takeshi Ishiguro Number of Employees 3,332 (Non-Consolidated): Common Stock: ¥37,172,464,289 Number of Issued Shares: 43,448,769 Number of Shareholders: 18,257

	Principal Banks:	Mizuho Bank, Ltd., MUFG Bank, Ltd., Mitsubishi UFJ Trust and Banking Corporation			
	Lead Managers:	SMBC Nikko Securities Inc., Mizuho Securities Co., Ltd., Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., Nomura Securities Co., Ltd., Daiwa Securities Co. Ltd.			
Principal Business Partners:					
	<sales></sales>	Nissan Motor Co., Ltd., Honda Motor Co., Ltd., Toyota Motor Corporation, DENSO CORPORATION, Mitsubishi Heavy Industries, Ltd., IHI Corporation, Nidec Corporation			
	<procurement></procurement>	Chubu Electric Power Co., Inc., TOHO GAS Co., Ltd., Obayashi Corporation, Sumitomo Metal Mining Co., Ltd., MM&KENZAI Corporation, HANWA Co., Ltd.			

#### Principal Shareholders:

	Investment in t	he Company
Name of Shareholder	Number of Shares Held (Thousands of Shares)	Investment Ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	5,142	12.06
NIPPON STEEL CORPORATION	3,100	7.27
Custody Bank of Japan, Ltd. (Trust Account)	2,398	5.62
Meiji Yasuda Life Insurance Company	2,075	4.86
Mizuho Bank, Ltd.	1,577	3.69
NHK SPRING CO., LTD.	1,449	3.39
MUFG Bank, Ltd	1,405	3.29
Honda Motor Co., Ltd.	1,305	3.06
Toyota Motor Corporation	869	2.03
Mitsubishi UFJ Trust and Banking Corporation	758	1.77

\* Excluding treasury stock

## List of Group Companies (As of March 31, 2022)

	Number of employees		
Name of company	(As of March 31, 2022)	Location	Corporate website address
Specialty Steel			
Daido Die & Mold Steel Solutions Co., Ltd.	535	Daito, Osaka	http://www.daidodms.co.jp/en/
DAIDO DMS MALAYSIA SDN. BHD.	106	Selangor, Malaysia	http://www.daidoamistar.com.my
DAIDO DMS SINGAPORE PTE. LTD.	20	Singapore	—
DAIDO DMS (THAILAND) CO., LTD.	210	Chachoengsao, Thailand	http://www.daidopdm.co.th
Daido Tienwen Steel Co., Ltd.	158	Taoyuan-Hsien, Taiwan	http://www.daidosteel.com.tw
Daido Technica Co., Ltd.	675	Tokai, Aichi	http://www.daido-technica.co.jp
Daido EcoMet Co., Ltd.	158	Tokai, Aichi	http://www.d-ecomet.co.jp
Riken Seiko Co., Ltd.*	201	Chuo-ku, Tokyo	http://www.rkn.co.jp
Tohoku Steel Co., Ltd.*	327	Murata-cho, Shibata-gun, Miyagi	http://www.tohokusteel.com
Maruta Transport Co., Ltd.*	486	Mizuho-ku, Nagoya	http://www.maruta.co.jp
Sakurai Kosan Co., Ltd.*	67	Minami-ku, Nagoya	http://www.sakuraikosan.co.jp
Izumi Denki Kogyo Co., Ltd.*	55	Sumida-ku, Tokyo	http://www.izumidenki.com
Kawaichi Sangyo Co., Ltd.*	188	Kawasaki-ku, Kawasaki	http://www.kawaichi.jp
High Performance Materials and Magnetic Materials			
Nippon Seisen Co., Ltd.	600	Chuo-ku, Osaka	https://www.n-seisen.co.jp/en/
THAI SEISEN CO., LTD.	207	Samutprakarn, Thailand	_
Shimomura Tokushu Seiko Co., Ltd.	242	Ichikawa, Chiba	http://www.sts-shimomura.com/en/
Shimomura Tokushu Seiko (Suzhou) Co., Ltd.	52	Jiangsu Province, China	http://www.stss-shimomura.cn
ORIENTAL SHIMOMURA DRAWING (M) SDN. BHD.	66	Penang, Malaysia	_
Daido Shimomura Steel Manufacturing (Thailand) Co., Ltd.	28	Chonburi, Thailand	_
Daido Electronics Co., Ltd.	279	Nakatsugawa, Gifu	http://www.daido-electronics.co.jp/english/
Daido Electronics (GuangDong) Co., Ltd.	83	Guangdong Province, China	_
Daido Electronics (Suzhou) Co., Ltd.	358	Jiangsu Province, China	_
Daido Electronics (Thailand) Co., Ltd.	463	Avutthava. Thailand	_
Nissei Seiko Co., Ltd.	77	Minami-ku, Nagoya	http://www.nssy.co.jp
Parts for Automobile and Industrial Equipment			
FUJI OOZX Inc.	555	Kikukawa, Shizuoka	http://www.oozx.co.jp
FUILVALVE (GUANGDONG) CORPORATION	172	Guangdong Province, China	
PT. FUJI OO7X INDONESIA	200	West Java, Indonesia	_
FUJI QOZX MEXICO, S.A. DF C.V.	150	Guanaiuato, Mexico	_
Daido Castings Co. Ltd	471	Minato-ku, Nagoya	http://www.d-cast.ip
Daido Precision Industries I td.	208	Toshima-ku. Tokyo	http://www.daidoseimitu.co.ip/e/index.htm
Toyo Sangyo Co. Ltd	73	Obira-mura Kurokawa-gun Miyagi	http://www.ring-roll-toyo.co.jp
Japan Drop Forge Co. Ltd	126	Amagasaki Hyogo	http://www.i-d-f.co.ip
	125		http://www.objostar.com
Daido Steel (Thailand) Co. Ltd	56	Chonburi Thailand	
Daido Ster Techno Co., Ltd	263	Shibukawa Gunma	http://www.dsteku.in
Engineering	205	Shibakawa, Ganna	nup.n www.ustercu.jp
Daido Machinony Co., Ltd	257	Minami-ku Nagova	
Daido Environment Engineering Co. Ltd	557	Minami-ku, Nagoya	http://www.daido-kankvo.co.in
Daido Plant Industrios Co., Ltd.	71	Minami ku, Nagoya	http://www.daido-kankyo.co.jp
Trading and Service	71	Williami-ku, Nagoya	http://www.daldo.plant.co.jp
Daida Kagya Ca. Ltd	245	Minato ku. Tokyo	http://www.doidekogyo.co.ip
Daido Kogyo Co., Etd.	21	Panakak Thailand	
Daido Rogyo (mailand) Co., Elu.	21		
Daido Steel (America) inc.	47	Shanghai China	—
Daido Steel (Shanghai) Co., Ltd.	47	Shanghai, China	—
Dalao Steel Materials lecrinology Shanghai Co., Ltd.	12		https://www.doido.iti-/
Daido II SOlutions Co., Eta.	220		https://www.udiuo-itS.co.jp/
Daldo Buriseki Kesearch, Inc.	209	IVIIIIami-Ku, Nagoya	http://www.daido.co.jp/dbr/en/index.html
Valdo Life Service Co., Ltd.	284	IVIIIIami-Ku, Nagoya	nttp://www.daidolite.co.jp
KISOKOMA Heights Co., Ltd.	34	Kiso-machi, Kiso-gun, Nagano	nttp://www.kisokoma.co.jp
Silent partnersnip with IAKAKUKA FUNDING CORPORATION LID. as business oper	rator —		
22 OUTER COTTIPATINES		Unmarked, Consolidated subsidiary	Associated company accounted for by the equity method



### DAIDO STEEL GROUP Beyond the Special

#### Head Office

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#### Tokyo Head Office

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