



Integrated Report 2025



“Management Philosophy”

Helping Create an Affluent Future through Sustainable Growth by Developing and Providing Distinctive products, Technologies, and Services.

Build the Future

History of
business start-up
and mergers

1925 Established Ogaki Denki Yakin — **1936** Nippon Denki Yakin (Renamed) — **1963** Founded Nippon Denko

1934 Established Horomangawa River Hydroelectric Power — **1951** Toho Denka (Renamed)

1934 Established Chuo Denki Kogyo

2014 Founded Nippon Denko with a new Japanese name

Turned into a wholly-owned subsidiary

2024 Absorption-type merger

Good Steel Comes from Good Raw Materials



Saburo Toma
Founder of Ogaki Denki Yakin Kogyosho Co., Ltd.

Joined Japan Steel Works, Ltd. in 1910. In 1912, he enrolled in the postgraduate course of Advanced Metallurgy at the University of Sheffield in England to study special steel. Afterward, he worked as head of both Hirota Steelworks and Aomori Refinery operated by Fujita Mining Co., Ltd., following which he served as an advisor to NKK Corp.'s Shinminato Plant, and a director and plant head of Nippon Chukosho K.K. He focused on the production of ferroalloys under his motto of “Good steel comes from good raw materials.”

Supply of Industrial Power Using Hydroelectricity



Nobuyoshi Tezuka
Founder of Horomangawa River Hydroelectric Power Co., Ltd.

Launched an electrical engineering business in 1914. Ten years after the establishment, it became known in the industry as Maruden Kogyosho, leading him to serve as the first head of the Tokyo Yamanote Electrical Industry Union. Mr. Tetsuya Hayakawa, a political authority, entrusted him with the commercialization of lamp distribution in the Hidaka Region, and he traveled to Hokkaido in 1926. In 1934, he established Horomangawa River Hydroelectric Power Co., Ltd. to supply electricity for industrial use.

Widespread Contribution to Local Industries



Gosuke Imai
Second president of Chuo Denki Kogyo Co., Ltd.

Contributed to the development of the hydroelectric power business as president (appointed in 1927) of Chuo Denki K.K., which was formed through a merger of Echigo Denki K.K. and Matsumoto Dento K.K. in 1922. Moreover, he worked tirelessly on boosting the production of ferroalloys and manganese metal as president (appointed in 1936) of Chuo Denki Kogyo Co., Ltd., which was established through a joint venture between Chuo Denki K.K. and Chichibu Denki Kogyo K.K. in 1934.



Keep Offering New Value
to the Industry and Society

We have met the needs of society while offering highly unique products and services throughout 100 years. This fundamental approach will remain unchanged. Continuing to pursue self-improvement, we will create additional value by focusing on the creation of innovative products, technologies, and services that will change the conventional industrial structure and people's lifestyles.

Our 100 Years of History

We will commemorate the 100th anniversary of our founding in October 2025. We have been helping create an affluent future through sustainable growth by developing and providing various distinctive products, technologies, and services since we started our business.

At present, we work to solve social issues with our Ferroalloys business, Functional Materials business, Incineration Ash Recycling business, Aqua Solutions business, and Electric Power business.

1995

Incineration Ash Recycling Business

1973

Aqua Solutions Business

1960

Functional Materials Business

1935

Electric Power Business

1925

Ferroalloys Business

1925

Started the Production of Ferroalloys

Having seamlessly engaged in the manufacturing and sale of manganese ferroalloys ever since the establishment of Ogaki Denki Yakin Kogyosho, we currently offer reliable high-quality products as a top supplier in Japan.



High-carbon ferromanganese

1927

Started the manufacturing of the first Japan-produced ferromolybdenum and metal silicon.

1932

Started the manufacturing of ferrochrome at Daimon Branch Plant (current the Toyama Plant).



Daimon Branch Plant

1933

Renamed from Ogaki Denki Yakin Kogyosho to Denki Yakin Industry

1934

Established Horomangawa River Hydroelectric Power

1935

From Hydropower Plant Operation to Electric Power Business

Completed Power Plant No. 1 of Horomangawa River Hydroelectric Power Co., Ltd. (output of 850 kW) and launched hydroelectric power business in the Horomangawa River system.

1935

Started the manufacturing of the first Japan-produced ferrovanadium.

1936

Started the manufacturing of high-carbon ferrochrome at the Kuriyama Plant (current Kuriyama Kosan Co., Ltd.).

Corporate name changed from Denki Yakin Industry Co., Ltd. to Nippon Denki Yakin Co., Ltd.

1938

Corporate name changed from Horomangawa River Hydroelectric Power Co., Ltd. to Hokkai Denki Kogyo Co., Ltd.

1940

Completed Horomangawa River Power Plant No. 2 (output of 4000 kW) and the Hidaka Plant (current Hidaka Office), and started the manufacturing of ferrosilicon the following year.

1951

Constructed the Hiwada Plant (current the Koriyama Plant) and started the manufacturing of ferrosilicon and metal silicon.

Corporate name changed from Hokkai Denki Kogyo Co., Ltd. to Toho Denka Co., Ltd.

1960

From Electric Furnace Operating Technology to Functional Materials Business

Started the manufacturing of ferroboron through a thermite reaction at the Kanazawa Plant (closed in 1973).

1963

Founded Nippon Denko Co., Ltd.

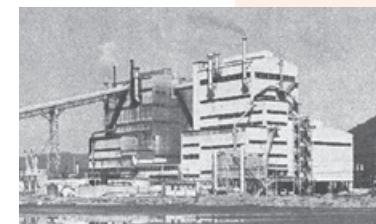
Merger between Nippon Denki Yakin Co., Ltd. and Toho Denka Co., Ltd.



Article in the company newsletter, featuring the decision on the company badge

1970

Arranged a full-fledged operation system for ferroalloys.



Tokushima Plant

1973

From Factory Wastewater Treatment to the Aqua Solutions Business

Commercialization of know-how for treating plant wastewater by removing harmful substances to contribute to the reuse of water resources and environment conservation.



Wastewater treatment equipment

1984

First in the world to start commercial production of ferroboron using an electric furnace.

1986

First in Japan to start the manufacturing of boron oxide.

1989

Started manufacturing of zirconium oxide.

1992

Started full-scale shipment of metal hydride alloys.

1995

From Electric Furnace-Based Waste Treatment to Incineration Ash Recycling Business

Started the recycling of incineration ash, utilizing the surplus capacity of electric furnaces for manufacturing ferroalloys.



Molten metal



ECOLAROCK

2012

Expanded the Overseas Ferroalloys Business

Joined a ferroalloy production project in Malaysia, investing in Pertama Ferroalloys in September.



Pertama Ferroalloys Sdn. Bhd.

2013

Acquired manganese mining interests in the Republic of South Africa.



Kudumane Manganese Resources

2021

Boosted the production capacity of zirconium oxide by 50% and production capacity of boron oxide by 40%.

2022

Completed the incineration ash melting furnace No. 4.



2023

Formulated a Medium/Long-Term Business Plan ending in 2030.

2024

Merger with Chuo Denki Kogyo to enhance initiatives in the Incineration Ash Recycling business.

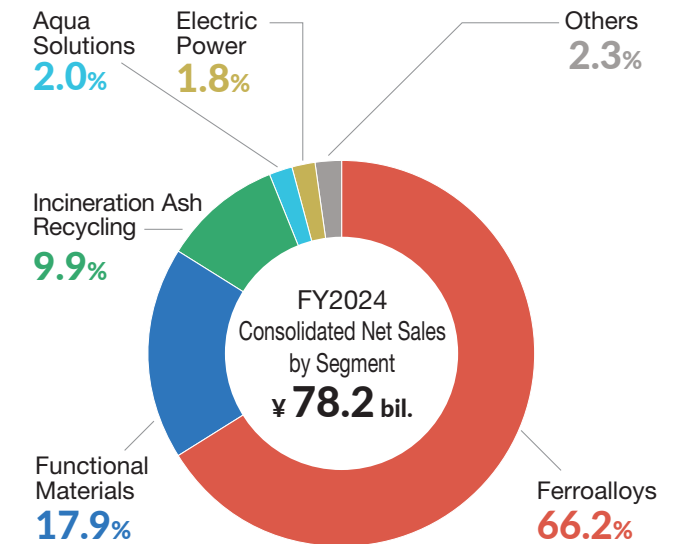
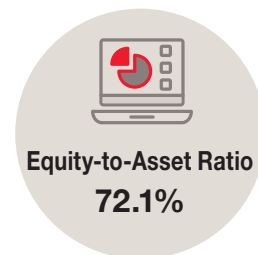
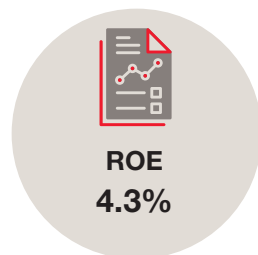
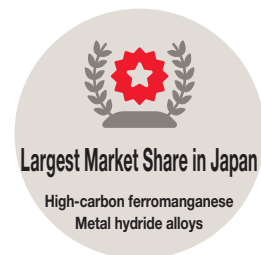
2025

Celebration of the 100th anniversary in October.



Nippon Denko Today

Nippon Denko Group traces its origins to producing ferroalloys to add to iron to achieve the desired properties, and we have applied the basis of our original business, electric furnaces and metallurgical technology, in a wide range of fields.



Businesses

Ferroalloys



Top domestic manganese ferroalloy supplier. Consistent supply of high-quality ferroalloys with outstanding global competitiveness.

Functional Materials



Distinctive material lineup, such as “No.1” and domestically produced “One-of-a-kind” products in the Japanese market.

Incineration Ash Recycling



Perfect recycling Contributing to a recycling-oriented society by recovering resources from incineration ash.

Aqua Solutions

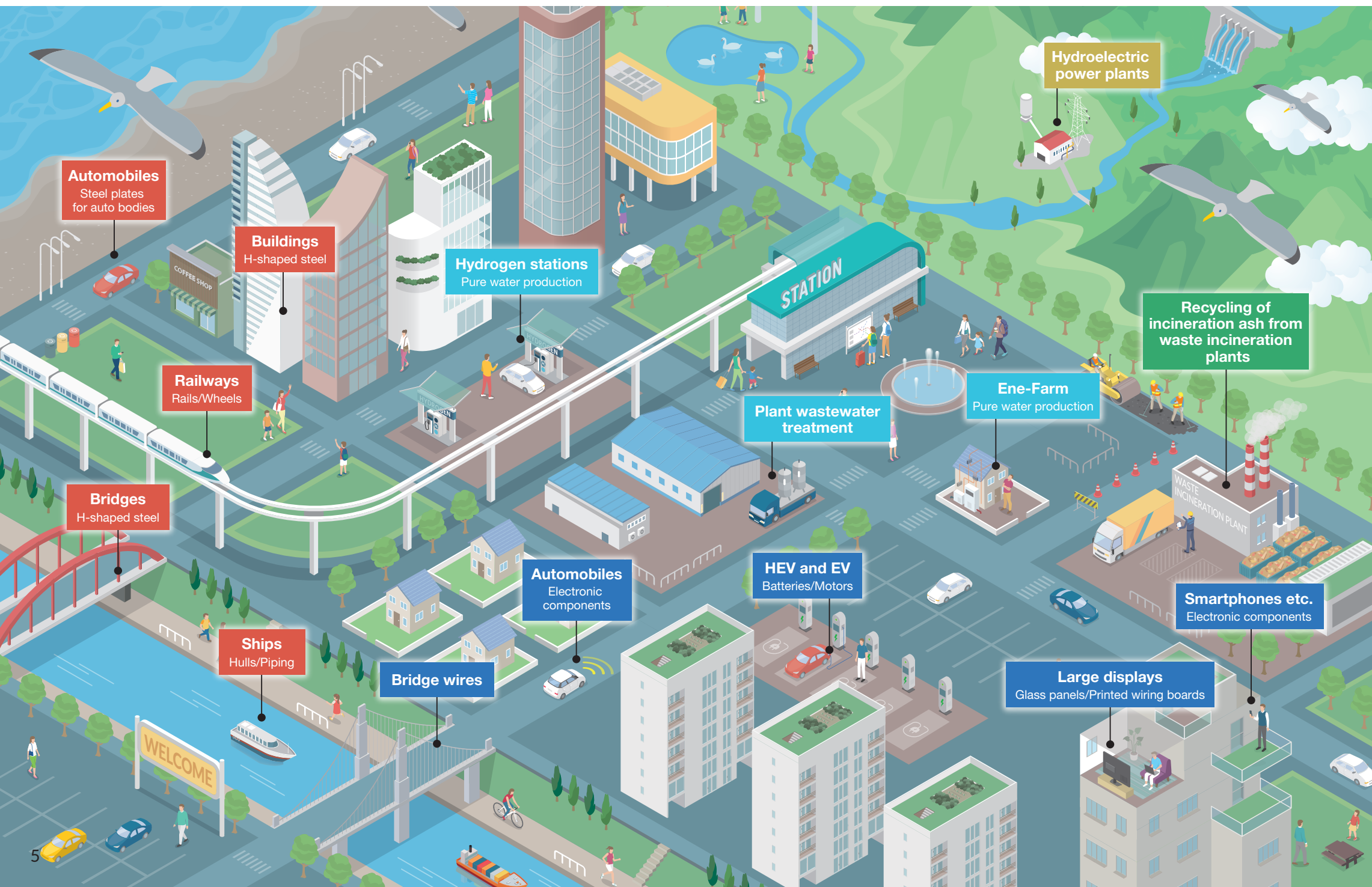


Wastewater treatment equipment and a pure water production system based on ion-exchange resins.

Electric Power



Stable sale of electricity by utilizing renewable energy Feed-In Tariff system (FIT).



Toward Our Ideal State in 2030

We view changes in the environment for realizing a sustainable society as an opportunity and strive for both “solving social issues” and “improving our corporate value,” intending to elevate “Our Desired State” to “Our Ideal State in 2030” as formulated in the 8th Medium-Term Business Plan.



“Management Philosophy”

Helping Create an Affluent Future Through Sustainable Growth by Developing and Providing Distinctive Products, Technologies, and Services

Four targets for realizing Our Ideal State

Growth Strategy

To Improve and Stabilize Profitability

Financial Strategy

Sustainability-Related Measures

Achieve both “the resolution of societal issues through our business activities” and “increase in our corporate value through sustainable growth”

9th Medium-Term Business Plan

2024-2030

Our Ideal State in 2030

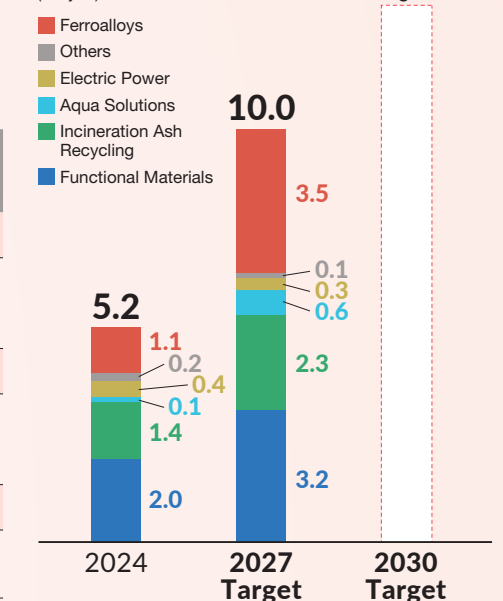
A Company on a Constant Quest for a Better Future by Supporting People’s Lives Through “**Materials**” and the “**Environment**”

Medium-Term Business Plan

Management indicators

FY2024 Results	FY2027 Target	FY2030 Target
Net sales		
¥78.2 bil.	¥95 bil.	¥110 bil. or larger
Underlying Ordinary Profit		
¥5.2 bil.	¥10 bil.	¥13 bil. or larger
ROE		
4.3%	10%	10% or higher

Underlying Ordinary Profit* 13.0 or larger



*Ordinary profit excluding the impact of inventory and one-time factors, which occur due to fluctuations in the market prices of raw materials mainly in the Ferroalloys business.
Adopted in 2023 as one of the management indicators to accurately grasp our inherent performance.
Used for calculating the dividend payout ratio, and remuneration and bonuses for officers and employees, and the entire company aims to maximize the underlying ordinary profit.

Key Points of the Integrated Report 2025

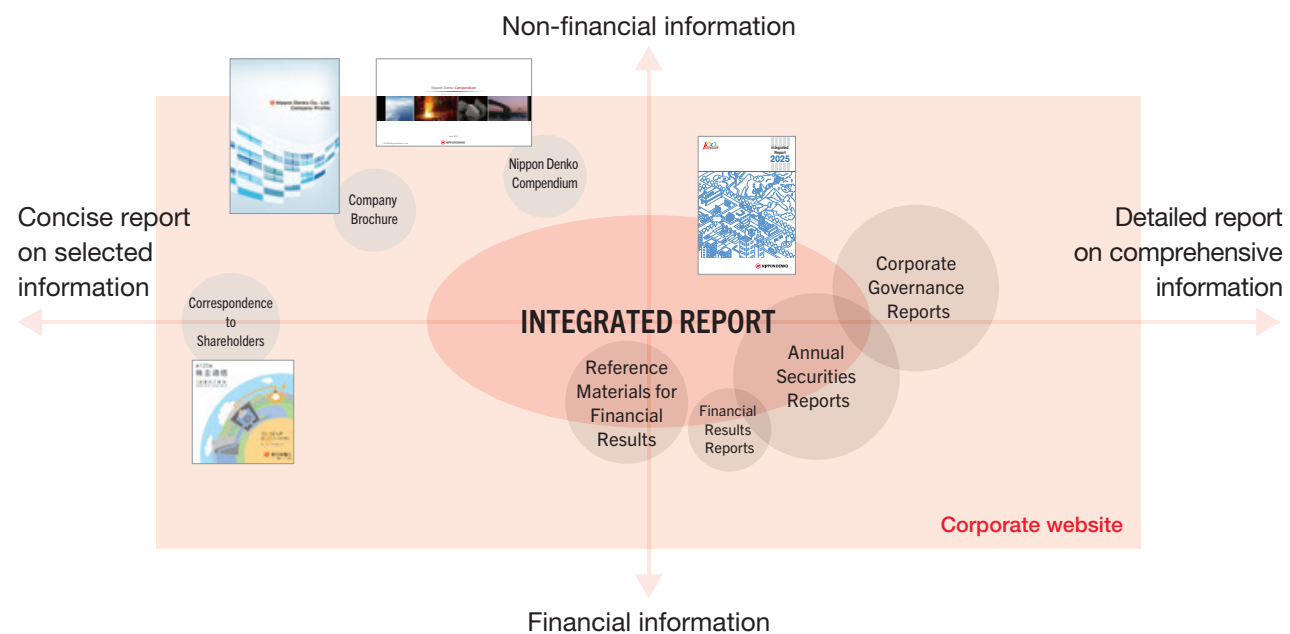
Nippon Denko Co., Ltd. (hereinafter referred to as the “Company” or “we”) publishes this integrated report to integrate financial information and non-financial information to provide various stakeholders including shareholders and investors with an understanding of our corporate activities aimed at solving social issues and enhancing our corporate value. We hope to use this report to facilitate communication with our stakeholders, and we will continue to further enhance the content in the future.

Key Points of the Integrated Report 2025

Point 1 Roundtable Discussion among Outside Directors	The first roundtable discussion among outside directors was held, featuring a debate on the strengths of the Group and the direction of our evolution. Coming from different backgrounds, each of the six outside directors views the Company in a different way. We organized this discussion in which outside directors see strengths and future prospects from a variety of standpoints, which will give our stakeholders an objective view of the Company.
Point 2 Progress of the Medium-Term Business Plan	The year 2024 was the first fiscal year of the 9 th Medium-Term Business Plan, which will end in 2027. We focused on various initiatives for each business and R&D as well as non-financial topics, which will constitute the foundation for value creation, in order to improve our corporate value. Please have a look at this document, which discloses financial and non-financial items in an integrated manner, to confirm the progress of our past initiatives as well as our future direction.
Point 3 100th Anniversary	We will celebrate the 100 th anniversary of our founding in October 2025. The Company has consistently manufactured manganese ferroalloys ever since the establishment, building the position of a top supplier in Japan, and we currently operate five businesses that utilize these technologies. We would be pleased if you could get an idea on when these businesses were launched. Moreover, we are planning to issue a magazine to commemorate the 100 th anniversary in October, which will facilitate an even deeper understanding of the Company.

Communication Tools

In order to satisfy the interest of stakeholders, we make efforts to provide corporate information from financial and non-financial aspects by utilizing a variety of information disclosure tools. As shown in the chart below, the “integrated report” is positioned at the core of such disclosure tools, and introduces medium/long-term growth stories of the Nippon Denko Group (hereinafter referred to as the “Group” or “our Group”).



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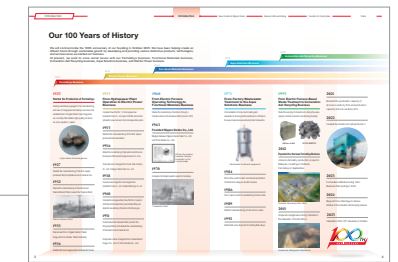
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History of 100 Years



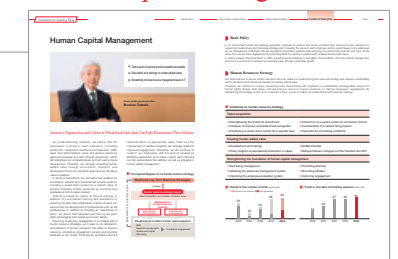
Message from the President & CEO



Roundtable Discussion among Outside Directors



Human Capital Management



Organizations Covered Nippon Denko Co., Ltd. and Nippon Denko Group companies

Period Covered January 1, 2024 to December 31, 2024 (includes some information from outside this period)

Publication Date July 2025

Disclaimer Regarding Forward-Looking Statements

The purpose of this report is to provide information and not solicit the purchase or sale of company shares. In addition, the forward-looking statements in this report were created based on currently available information, the accuracy of such information is not guaranteed and is subject to uncertain factors, and actual performance may differ from forecasts. The Group shall not be liable for any loss or damage resulting from the use of this report.

Message from the President & CEO



**Challenges to solve
social issues by
“materials” and “environment”
with 100 years of trust and
technology**

President & CEO
Yasushi Aoki

Moving to the Next Growth Stage, Based on 100 Years of History in Business

In October 2025, we will celebrate the 100th anniversary of our founding, which is a major milestone. Starting from Ogaki Denki Yakin Kogyosho Co., Ltd. (later Nippon Denki Yakin Co., Ltd.) established in 1925, we have supported the development of the Japanese industry by manufacturing the highest quality manganese ferroalloys based on our belief that “good steel comes from good raw materials.” Through these efforts, we have established a solid position as Japan’s top supplier of manganese ferroalloys and cultivated advanced metallurgical technologies, and we have firmly maintained a world-class competitiveness till today.

Since our founding, we have refined our electric furnace operation technology, which is indispensable for the production of ferroalloys that give steel its properties. These technologies are now applied to the production of

functional materials such as ferroboration and metal hydride alloys, as well as the melting and recycling of incineration ash, contributing to the realization of a sustainable society.

We have expanded our business domains to include electronic components and battery materials, in addition to the original business of ferroalloys, and our competitive advantage is based on the trust built as an important part of the supply chain by dealing directly with leading Japanese companies in those fields. In recent years, we have also been working with municipalities, which led to the expansion of our Incineration Ash Recycling business. In our 100-year history, we have overcome many difficulties. Inheriting the efforts and aspirations of our predecessors, we will strive for further growth and technological innovation for the next 100 years.

Mitigating Risks by Diversified Business Operations Under a Challenging Business Environment

For the fiscal year ended December 31, 2024, ordinary profit doubled from 2.4 billion yen to 4.9 billion yen. However, the underlying ordinary profit excluding inventory impact and one-time factors remained almost at the same level as in the previous fiscal year. The background to this is the stagnation of the global economy and the disruption of supply chains caused by the prolonged conflict in Ukraine and the slowdown of the Chinese economy, which are factors causing global uncertainty. In addition, the depreciation of the yen and soaring prices of commodities caused costs to increase in Japan.

In the Ferroalloys business, a major manganese mine in Australia suspended production and shipment in March 2024 due to a cyclone. The market stabilized after the fall, but the market price of manganese ore temporarily surged. On the other hand, as steel supply and demand eased globally, the market prices of ferroalloys did not rise as much as that of ore, which declined margins.

Even in such a challenging environment, we minimized the impact on business performance by utilizing a pricing formula that keeps the margin between a product price

and a raw material price within a certain range, while also strengthening our cost competitiveness by extending a periodic repair cycle. These efforts were successful in reducing the risk of market fluctuations and keeping the Ferroalloys business profitable.

In the Functional Materials business, although affected by the EV market, signs of recovery are beginning to emerge as users adjust their inventories. Taking advantage of our strength as the “one-of-a-kind domestic products,” we continued negotiations for realizing prices commensurate with added value and strove to increase new customers, which resulted in an increase in profit. The Incineration Ash Recycling business has seen the effect of the price pass-through of the rise in electricity costs to selling prices. In addition to active sales activities targeting municipalities, the market prices of precious metals have remained stable at high levels, contributing to increased earnings.

Thus, the decline in revenue in the Ferroalloys business was offset by other businesses, and the company as a whole was able to maintain the underlying ordinary profit flat and to secure stable earnings.

Achieving “Our Ideal State in 2030,” by Solving Social Issues and Improving Corporate Value

We set “Our Ideal State in 2030” to become “a company on a constant quest for a better future by supporting people’s lives with ‘materials’ and ‘environment.’” We aim to solve social issues and enhance our corporate value by leveraging and refining the strengths of our five businesses.

For example, one of the strengths of our Ferroalloys business is our ability to provide a stable supply of high-quality manganese ferroalloys, backed by our technological capabilities that enable us to remain highly competitive although the cost of electricity is high in Japan. To achieve further sustainable growth, the Tokushima Plant is in the process of extending the interval for periodic repairs of electric furnaces from 1 year to 1.5 years to improve productivity and cost efficiency. We are also working to optimize inventory management of raw materials to strengthen our financial position. In overseas business, we have invested in Pertama Ferroalloys Sdn. Bhd. in Malaysia, which manufactures green ferroalloys based on hydroelectric power generation, and are working to strengthen competitiveness by building a manufacturing model with low environmental impact to reduce CO₂ emissions and improving productivity.

In the Functional Materials business, we offer unique products in niche areas such as electronic components and battery materials, and supply rare materials that only

our company handles in Japan, including boron oxide, ferroboration, and manganese sulfate. We are also responding to the growing demand for zirconium oxide and boron oxide for use in electronic components, and are expanding into the EV and AI fields. In the Incineration Ash Recycling business, we have realized the perfect recycling of incinerated ash by utilizing one of the largest treatment capacities in Japan at 130,000 tons per year. With the shortage of landfill sites for incineration ash becoming increasingly severe, we have announced plans to increase the number of melting furnaces from the current four to seven (with a total treatment capacity of 220,000 tons per year) by 2030, and we plan to make an investment for the fifth furnace by the end of 2025. In the Aqua Solutions business, we will focus on expanding our business domain as well as responding to the needs of society by utilizing the technology and expertise in the wastewater treatment equipment and the pure water production system that we have cultivated over the years. In the Electric Power business, we have obtained certification for the Feed-in Tariff (FIT) system for renewable energy at the Horomangawa River Hydroelectric Power Plant in Hokkaido to promote a stable supply of green electricity, and we are also contributing to CO₂ reduction at the Koriyama Plant through the use of non-fossil certificates.

Message from the President & CEO

Achieving Sustainable Growth by R&D and Synergies Between Businesses

In the 9th Medium-Term Business Plan, we plan to allocate 3.2 billion yen to R&D over four years. This amount is 1.5 times larger than that in the 8th Medium-Term Business Plan. In order to achieve results with speed, in addition to strengthening our internal structure, we are promoting open innovation through collaboration with universities, research institutes, and venture companies to take on a diverse range of themes.

Our main research areas are “materials” and “carbon neutrality.” In the area of “materials,” recently published results include vanadium dioxide with excellent resistance to temperature changes for use in satellites, electromagnetic wave absorbing materials for the 6G era developed in collaboration with the University of Tokyo, and materials for increasing the hardness of stainless steel. We will continue to develop products that contribute to improving the performance of electronic and battery materials. In the carbon neutrality research

area, we are developing technology to realize the ferroalloy manufacturing process using wood cokes, instead of coal cokes, in order to reduce CO₂ emissions, and we aim to establish a manganese ferroalloy manufacturing process that does not emit CO₂ at all.

In order to apply these research results to existing businesses and new areas, we are taking the following three strategic initiatives. (1) Thoroughly improve productivity and reduce costs, (2) Advertise the added value of unique products and sell them at appropriate prices, and (3) Create new businesses and utilize M&A. With regard to new business creation, we have invested in Galdieria, Co., Ltd., a venture company that possesses algae technology that adsorbs gold, palladium and other precious metals, and will work to build a new business by linking it with our wastewater treatment network.

allows employees to focus on high value-added work. In the Business DX, we will optimize the allocation of management resources by visualizing the entire supply chain to create new businesses.

In addition, we are training employees to have 40 data scientists by 2026 and 80 by 2030, and are steadily

strengthening the foundations for promoting DX. With regard to GX, we have set a target of reducing CO₂ emissions by more than 45% from the level in 2015 by 2030, and are actively promoting energy conservation measures and accelerating research for adopting wood cokes.

Aiming for ROE of 10% or Higher and Maximizing Corporate Value with Financial and Non-Financial Initiatives

Our financial targets are to achieve ROE of 10%, net sales of 110 billion yen or larger, and ordinary profit of 13 billion yen or larger by 2030. We are making efforts to improve ROE from both the perspectives of revenue growth and capital efficiency improvement. On the earnings side, we will invest a total of 45 to 50 billion yen as growth investment to increase production capacity and accelerate DX and GX. In terms of capital efficiency, we will raise D/E ratio to an appropriate level and increase equity capital efficiency through financial leverage and inventory optimization. To this end, we will increase capital efficiency and improve shareholder value through the enhancement of non-current assets, which are the source of profits, and proactive shareholder returns.

To return profits to investors, we formulated a new shareholder return policy in August 2024. It defines the underlying profit as the dividend standard, with a dividend payout ratio of 40% and a minimum annual dividend per share of 10 yen. This is because we have implemented structural reforms in the Ferroalloys business, which had experienced large profit fluctuations, such as reviewing and renovating production sites and adopting a price formula, and businesses other than Ferroalloys, such as Functional Materials and Incineration Ash Recycling, have steadily grown and improved profit stably, enabling us to provide stable and proactive profit returns.

In order to gain the trust and sympathy of the capital market for our efforts, we will continue to further enhance our investor relations activities and expand opportunities for dialogue not only with institutional investors, but also with individual shareholders through briefings as well as individual investors through events, thereby further deepening our dialogue with our stakeholders.

We have built a relationship of trust with our various stakeholders over the 100 years since our founding, and this is what has made us what we are today. We will continue to make steady progress as a corporate group that can meet your expectations, and we would appreciate your continued understanding and support of Nippon Denko.

Accelerating Growth Through DX and GX While Having Human Capital as the Core of Growth Driver

Human resources are the most important foundation for promoting our business. As the working population continues to decline, our group is working on human capital management based on the themes: “talent acquisition,” “increasing human added value,” and “strengthening the foundation of human capital management” in order to realize our medium- to long-term business strategy. In addition to hiring human resources who can play an active role inside and outside Japan, we are maximizing the value of existing employees by bringing out their abilities through education and training.

In terms of recruitment, we have adopted a career-track system for a specific area to accommodate diverse work styles. In addition, we are popularizing our recognition and enhancing recruitment capabilities through radio commercials targeting local high school students near our plants, a support system for scholarship refunds, and a referral hiring system.

In human resource development, in addition to supporting skill development through various programs, we prioritize fostering a mindset. As part of this effort, I myself hold group discussions with managers on an ongoing basis to exchange and share beliefs on management mutually. I encourage employees to take

on challenges by quoting my own motto, “The opposite of success is not failure, but doing nothing,” or using profound remarks from the writer Yasushi Inoue, such as “Those who work hard talk about hope, and those who slack off talk about frustration.” We have also positioned the promotion of DE&I as an important theme, and have started training programs for female leaders to promote human capital management toward “Our Ideal State in 2030.”

Meanwhile, we are also promoting DX and GX, the pillars of sustainability management, across the board, and in the DX area, we are developing measures in line with the roadmap in the three areas of “Production DX,” “Operation DX,” and “Business DX.” In the Production DX, as the first step toward the adoption of a smart factory, we have been visualizing production information for the Tokushima Plant’s functional materials and the Koriyama Plant since 2023 to improve production and operational efficiency. In 2025, we plan to install this system in the ferroalloy manufacturing line at the Tokushima Plant and the incineration ash recycling facility at the Kashima Plant to promote labor saving, automation, and improved safety. In the Business DX, we will adopt a new personnel management system and digitalize business processes to create a system that



Roundtable Discussion among Outside Directors

The Strengths and Direction of Evolution of a 100-Year-Old Company, as Told by Outside Directors



Perspective and Stance as an Outside Director

Ohmi: As an outside director, I believe it is important to maintain a certain distance from the management while offering opinions from an external perspective of shareholders and society at large. In doing so, I place value not only on short-term viewpoints, but also on making proposals from a medium- to long-term perspective. Personally, I worked at Mitsubishi Corporation for about 30 years, 20 of which were spent handling ferroalloys. I have been visiting this company since I was young, and on-site experience is one of my strengths. Later in my career, I served as president of four companies, including publicly listed companies. Drawing on that past management experience, I strive to provide insights that reflect my own perspective.

Itami: Precisely because we live in a time of rapid change and uncertainty, I make a conscious effort to constantly question my own knowledge and experience and to maintain a mindset of continuous learning. Originally, I spent 32 years at Shin-Nippon Seitetsu (now Nippon Steel Corporation), where I was mainly involved in human resources and labor relations, as well as general affairs

and the management of subcontractors. I was responsible for designing systems and leading organizational reforms both at steel plants and at the head office. I also experienced the merger with Sumitomo Metal Industries and the integration of group companies, and I worked hard on business restructuring and building organizational and personnel systems from a position in which I understand both the front lines and the headquarters. Having consistently examined the role of corporations within society throughout these experiences, I now strive, as an outside director, to share my own views while further honing my expertise and deepening my understanding.

Nakano: I have spent over 30 years in the financial sector, primarily involved in currency dealing and trading in financial markets. I became an outside director of this company in 2021, and I found its open and transparent atmosphere, where one can speak freely, very appealing. There are two things I consciously keep in mind. One is my strong desire, as someone from a financial background, to help “raise stock price.” The other is to

speak up without hesitation when something catches my attention, even if it seems trivial. Although I sometimes find myself puzzled by the technical terms of the manufacturing industry, I believe that such candid, unfiltered perspectives can actually spark new and meaningful discussions.

Tani: I was involved in domestic and international factory operations at Ajinomoto for many years, and after retiring, I assumed the role of an outside director at this company. Although I had no prior knowledge of the industry, I found that the essence of manufacturing is universal, so I was able to engage in the role without feeling out of place. At the Board of Directors meetings, I try to focus on fundamental issues from a medium- to long-term perspective and make candid observations without slipping into micromanagement. Another important point for me is not just to offer critiques, but to contribute my own proposed solutions to deepen the discussion. At times, I intentionally raise certain topics to stimulate discussion. I believe in the principle: “if something feels off, I clearly say it’s off,” and I aim to energize the Board of Directors meeting through the exchange of candid opinions.

Ono: At Shin-Nippon Seitetsu, I was involved in finance and planning divisions, as well as in the management of group companies and equity affiliates. Later, I served as a director at other listed companies, and from this term, I have taken on the role of full-time outside director at this company. When I was on the executive side, I remember being encouraged by the advice of outside directors who brought diverse perspectives. I believe that execution and auditing are two sides of the same coin, and the auditing side, pointing out mistakes or shortcomings, ultimately serves to support the executive function. Since it is not realistic to fully grasp problems through just a few audit meetings per year, I aim to actively engage in continuous dialogue with the executive team in my capacity as a full-



time Audit & Supervisory Committee member. At the same time, I intend to share insights with part-time Audit & Supervisory Committee members to ensure a balanced and well-rounded approach.

Suemura: As a certified public accountant, I have been involved in auditing for about 30 years, and in 2023, I assumed the role of an Audit & Supervisory Committee member at this company. While I am still struggling to learn the culture and customs of the steel industry, I approach the Board of Directors meetings with a continuous learning mindset. What I keep in mind is that outside directors are not only advisors, but also have the role of independently ensuring that executive operations are being conducted appropriately. In addition, due to the capital relationship with Nippon Steel, there is a possibility that external scrutiny will be directed toward the company’s independence. That is why I believe the participation of outside directors with no conflicting interests in the Board of Directors meetings is highly meaningful. I place great importance on fulfilling the monitoring function from a fair and autonomous perspective.

The Characteristics of the Governance Structure, the Composition of the Board of Directors, and its Effectiveness

Ohmi: It is essential to maintain an environment within the Board of Directors that fosters open and candid discussions. I believe that many corporate scandals stem from outside directors not fully fulfilling their roles. At our company, outside directors are composed of members with diverse backgrounds, including manufacturing, trading, finance, and accounting. I view it as a strength which enables active discussions from a wide range of perspectives based on diversity of career experiences.

Itami: I believe that the role of outside directors is inseparably linked to independence and diversity. I previously worked at Nippon Steel, and I value thinking, speaking, and acting from the standpoint of an independent individual, free from constraints by past affiliations. To maintain sound governance, it is important not to be overly bound by one’s role, but to approach discussions with a responsible attitude as a member of society. At the Board of Directors meetings of our

company, I actively ask questions and speak up even on matters I am not deeply familiar with. I feel that the Board



Roundtable Discussion among Outside Directors



of Directors is highly dynamic, with directors from diverse backgrounds exchanging frank and honest opinions.

Nakano: Outside directors each offer their perspectives at Board of Directors meetings, and at times, these opinions can be quite strict. Discussions in the Board of Directors meetings incorporate those opinions. The challenge, however, lies in how effectively the opinions of outside directors and the board's discussions are communicated to levels just below the executive tier. I have yet to feel that the voices of outside directors are truly permeating throughout the entire organization, so I see this as an area for improvement going forward. Fortunately, over the past four years, we have seen no major scandals or significant deterioration in business performance. However, I do have some concerns about our overseas operations, and depending on how things unfold, there may be situations in which outside directors will need to voice their opinions more assertively in management decisions. I believe that maintaining the overall health of the organization requires ongoing preparedness and proactive communication, even during stable times.

The Company's Strengths and the Expectations and Challenges for the Future

Ohmi: I believe that Nippon Denko has three key strengths. The first is its 100-year history of production using electric furnaces, along with the accumulated knowledge, expertise, and human capital that have supported this long-standing tradition. In particular, in the ferroalloy sector, where market conditions are highly volatile and raw materials depend heavily on imports, the fact that the company has survived as the only remaining independent player is a remarkable achievement. The second is the long-standing relationship of trust with Nippon Steel. The third is the diversity of its product lineup, including promising future business seeds beyond ferroalloys. However, these strengths can also represent potential challenges. In other words, moving away from dependency on specific customers and business domains and cultivating new pillars of growth

Tani: The role of outside directors is to contribute to the enhancement of medium- to long-term corporate value. To achieve this, it is essential to assess the effectiveness of the Board of Directors through three key aspects: systems, corporate culture, and the quality of people. First, our company is commendable for having a well-developed system for information sharing through pre-meeting briefings. On the other hand, it is also crucial to maintain a corporate culture that allows us to detect early signs of problems and foster a mindset of "thinking together" that enables more constructive and in-depth discussions. When such a sense of unity exists, the board's effectiveness can be greatly improved. Additionally, to broaden the medium- to long-term perspective even further, it may be beneficial to include individuals who can approach issues from different ways of thinking. As for minority shareholder protection, the fact that outside directors make up one-third of the Board of Directors holds a certain significance. However, in terms of substantive independence, this may still be insufficient. I believe that gaining even greater trust would require a majority of outside directors who have no prior connection with Nippon Steel.

Suemura: As an outside director, I believe that one of the most important perspectives is the protection of minority shareholders. At our company, individual shareholders account for over 40% of the total, which is relatively high compared to other listed companies of similar size. This makes it all the more important for us to earn their trust and make decisions from the standpoint of shareholders, something I see as a key responsibility of outside directors. Additionally, the transition from a company with a Board of Auditors to the one with an Audit & Supervisory Committee has made the auditing function more collaborative, requiring greater teamwork. Unlike the previous system of individual auditors, we are now expected to conduct audits efficiently and effectively from an outside director's standpoint, closer to management. In the future, I aim to contribute to enhancing the quality of auditing as an "outside director-led audit."



will be key themes in the future. I believe that leveraging existing technologies and assets as a foundation and seizing new growth opportunities through external collaboration, such as M&A or strategic alliances, will contribute to enhancing corporate value.

Nakano: Our company is certainly the one that I would like to introduce to investors, but a major challenge is that the overall picture of our business is "hard to grasp." In fact, we have a wealth of material that could be communicated externally, but I get the impression that it is not being fully utilized. To enhance corporate value and stock price, it is essential to strengthen IR activities and address this lack of clarity. That will be the key to raising both corporate value and stock price. For example, we are involved in numerous initiatives with significant social impact, such as recycling incineration ash, which have great potential to be well-received if communicated effectively. At present, investors' interest remains relatively low, so I hope to help improve our brand name by encouraging more active information dissemination to external stakeholders.

Tani: Our strength lies in the solid track record of having manufactured ferroalloys for 100 years since our founding. However, I believe one of our weaknesses is that we may be too attached to the image of being a ferroalloy company. That attachment could potentially limit future growth. Rather than being content with the past, we need the entire company to think about what kind of company we want to be for the next 100 years. We have many businesses that offer social value and treat the planet, not people, as a customer. For example, projects like incineration ash recycling help transform what once burdened the earth into something beneficial. Other efforts in functional materials and hydroelectric power are aimed at reducing environmental impact. It is important that we raise awareness of such a fact. While our modest and diligent corporate culture is a strength, we need to communicate how we contribute to society clearly in the future. We possess strong technological capabilities, but there is still room for growth in marketing. By positioning "the earth as our customer" and effectively conveying the value we create through solving these social challenges, we can enhance our corporate value.



Suemura: One of our company's strengths is the stable business relationship we have maintained with Nippon Steel. However, in the world of business, nothing is certain. External factors can dramatically change the business environment, and that is why it is essential to develop the second and third pillars of our operations. These pillars do not have to be limited to technological fields. For example, aiming to become "the most female-friendly steel company" and incorporating sustainability perspectives could be an effective way to differentiate ourselves. In particular, creating a working environment where minority groups within the organization feel included, supported, and can confidently demonstrate their abilities is extremely important for achieving sustainable growth. If we can promote such unique strengths that set us apart from other companies, I believe our corporate value will continue to increase.

Itami: Nippon Denko is a long-established company now celebrating its 100th anniversary. Perhaps because it has overcome many hardships throughout its history, I get the impression that many people within the company are very earnest and humble. While this attitude brings many benefits to corporate management, I also feel that the company may not fully recognize or leverage its own achievements and capabilities, nor communicate them sufficiently to its many stakeholders. As symbolized by the recent trend toward non-financial information disclosure, I believe that in the future, the evaluation of corporate value will increasingly focus not only on financial performance, but also on non-financial elements such as human capital and relationships with business partners. The very processes involved in addressing sustainability issues will become even more important. Although we do not yet have significant achievements in areas such as climate change response and diversity, what matters most is actively taking on these challenges and steadily building a track record. I am convinced that how we approach these issues will become a source of our corporate value. In the past, I was involved in interdisciplinary research called "the Social Science of Hope," and I believe that precisely because there are difficult social challenges, it is essential to clearly define the ideal future, set concrete goals, and boldly take action to achieve them. I believe that this very effort embodies our company's aspirations and purpose in society, and sharing that vision with all our stakeholders is vital.

Value Creation Process

Ever since the establishment, the Group has forged ahead with the evolution and development of our businesses in response to changes in the external environment, offering value to the society. We keep contributing to solving social issues based on the keywords of “materials” and “environment”, and improving our corporate value to offer value to our stakeholders.

External Environment

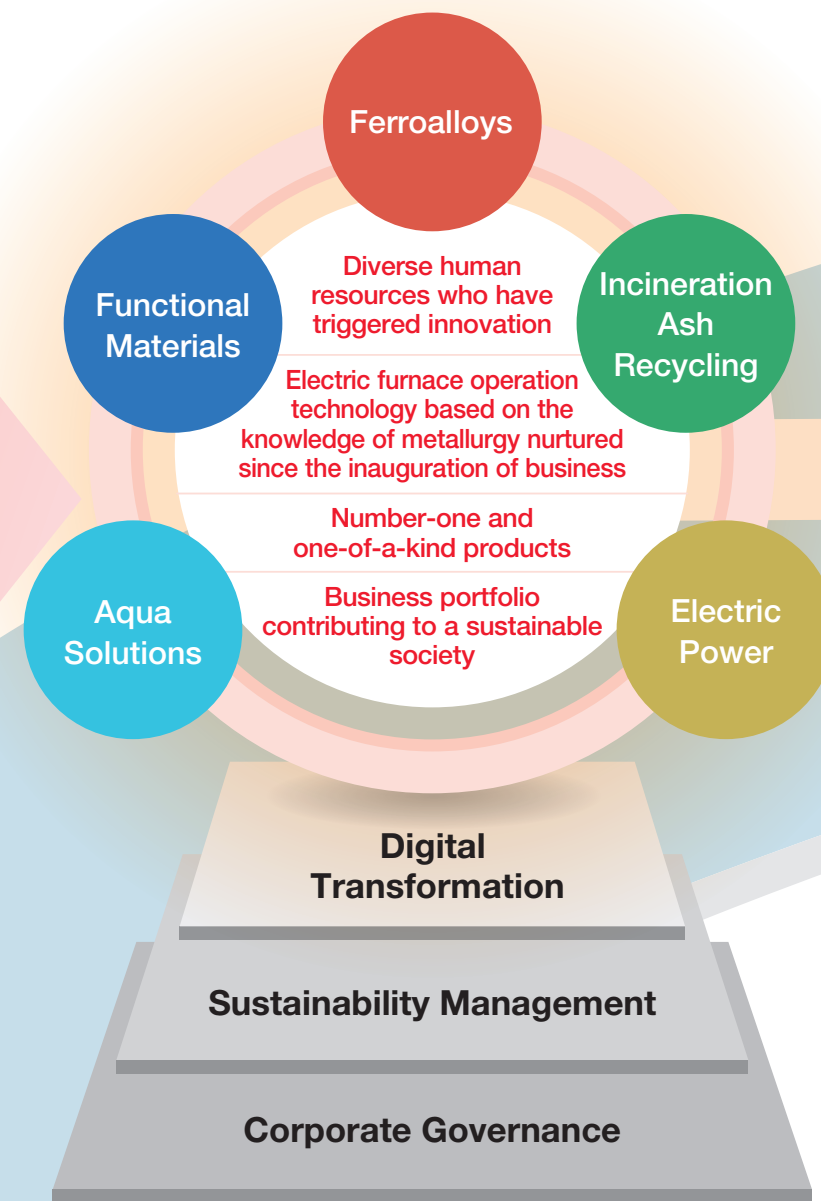
- Development of the industry and technologies based on digital evolution, including AI
- Shift to a low-carbon/ decarbonized society
- Increase of geopolitical risks
- Decreasing and aging population in Japan

Input

See p. 21 for details.

- Manufacture Capital
- Intellectual Capital
- Human Capital
- Social Capital
- Natural Capital
- Financial Capital

Business Activities



Output

Materials

- Electrification of Automobiles
- Stable Supply of Unique Products
- Needs for Green Materials
- Utilization of Urban Mines
- Hydrogen Society
- Purification of Wastewater

Environment

FY2024 Results	FY2027 Target	FY2030 Target
Net sales		
¥78.2 bil.	¥95 bil.	¥110 bil. or larger
Underlying Ordinary Profit		
¥5.2 bil.	¥10 bil.	¥13 bil. or larger
ROE		
4.3%	10%	10% or higher

Outcome

Solution to Social Issues

- Carbon Neutrality
- Advancement of mobility fields
- Strong supply chain
- Circular economy
- Affluent water environment

Enhancement of Corporate Value

- Management that is conscious of cost of capital and stock price
- Business growth by providing solutions to social issues

Providing Value to Stakeholders

- Shareholders Investors
- Employees
- Business partners
- Local Communities

Our Ideal State in 2030

A Company on a Constant Quest for a Better Future by Supporting People's Lives Through “Materials” and the “Environment”

Management Capital

We enhance six kinds of capital to create value. We will keep providing further value to the society by enhancing these kinds of capital, which are the input in the value creation process.



Manufacture Capital

Strengths and Characteristics

- The equipment for manufacturing ferroalloys, which is our original business, is highly competitive even in global terms. We boast the largest market share in Japan for high-carbon ferromanganese produced with this equipment.
- Regarding functional materials, we offer a number of one-of-a-kind products, manufactured by no other company in Japan.
- Our Incineration Ash Recycling business, which has been rapidly growing in recent years, boasts the largest treatment capacity in Japan among private enterprises.

Results for FY2024

Capital investment	3.9 bil. yen
Number of operational bases (Japan)	6 bases
(Overseas)	2 bases

Initiatives for Further Reinforcement

- In the Incineration Ash Recycling business, we plan to increase the number of electric furnaces from 4 to 7 by 2030 to boost our treatment capacity.
- We will increase the annual production volume from 180,000 tons to 200,000 tons by extending the periodic repair cycle of equipment for manufacturing ferroalloys.



Intellectual Capital

- Technologies for the operation of electric furnaces based on expertise on metallurgy, which has been fostered for 100 years since the establishment.
- We cultivate technologies for smelting and refining metal and manufacturing chemicals to develop highly distinctive new products and technologies.

R&D expenses	0.6 bil. yen
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- In the 9th Medium-Term Business Plan, we forecast R&D expenses of 3.2 billion yen, up 1.5 times from the 8th Medium-Term Business Plan.
- We will arrange a system for the visualization and analysis of data from production to shipment by promoting Production DX to work toward streamlining of operations and enhancement of quality control.



Human Capital

- We will arrange a system for facilitating diverse work styles to promote DE&I and well-being.
- Education and training are based on on-the-job training (OJT), and we strive to produce added value by offering education and training as well as opportunities for growth.

Number of employees in the Group	950
Expenses for education and training	40.96 mil. yen

- We will arrange a working environment that emphasizes DE&I, respect for human rights, diverse work styles and well-being to improve employees' engagement.
- We will enhance our recruitment capabilities by improving our popularity and adopting a variety of programs.



Social Capital

- We have built relationships of trust with our business partners by providing high-quality products. Regarding raw materials that need to be imported, we have evaluated the risks in each producing area and built a robust supply chain.
- In the R&D domain, we accelerate the development of high value-added products by enhancing the cooperation with universities and external institutions.
- We reinforce the relationship of trust with our stakeholders by enriching information disclosure.

Joint research with external institutions	13 projects
Financial results briefing session	3 sessions
Briefing session for individual shareholders	1 session

- In addition to further enhancement of the cooperation with universities and external institutions, we will explore the opportunities for collaboration with start-up companies through investment in venture capital.
- We reflect the voices of our shareholders and investors in information disclosure, striving for a deeper level of communication.



Natural Capital

- We manufacture products from substances that exist in the natural world, with manganese ore being a prime example. These substances are not likely to be depleted soon.
- Incineration ash recycling, wastewater treatment and hydroelectric power businesses are planet-positive businesses that reduce the burden on the natural environment.

Treatment volume of incineration ash	98,000 tons
Volume of hydroelectric power sold	58,717 MWh

- We strive to reduce CO₂ emissions for achieving carbon neutrality in 2050.
- In the Incineration Ash Recycling business, we plan to boost the annual treatment capacity to 220,000 tons by 2030.



Financial Capital

- The profit and loss in the Ferroalloys business have been stable owing to initiatives during the period of the 8th Medium-Term Business Plan. We pursue both high-level growth through proactive investment activities and return to shareholders under the new financial strategy upheld in the 9th Medium-Term Business Plan.

Fixed ratio	65.5 %
Net D/E ratio	0.15
Inventory turnover period	6.4 months

- We formulated a new shareholder return policy in August 2024, enhancing return to shareholders. In the new policy, dividend payout ratio was raised to 40% (previously 30%) and the minimum dividend was set at 10 yen/share.
- We strive for "reinforcing non-current assets as a source of profits," "financial leverage in an appropriate range," "proactive shareholder returns" and "improving the efficiency of inventories" as stated in the financial strategy of the Medium/Long-Term Business Plan.

Progress of the Medium-Term Business Plan



In the 9th Medium-Term Business Plan, we uphold the strategy of doubling the profits of all businesses except ferroalloys, which are prone to the impact of the market situation, and working toward the reinforcement and stabilization of management foundations. In 2024, the first fiscal year of the Medium-Term Business Plan, we boosted the revenues of the Functional Materials business and Incineration Ash Recycling business, and managed to achieve a consolidated ordinary profit of approx. 5 billion yen, doubling from the previous fiscal year, despite the sluggish market situation of ferroalloys.

On the other hand, the business environment surrounding the Company has undergone significant changes since the formulation of the Medium-Term Business Plan, and the accelerating decline of crude steel production in Japan, drop in shift to EVs, impact of Trump's tariffs, etc. have become apparent. Amid such situation, the needs for incineration ash recycling show

a sign of growth and we are planning to make a decision on investment in increasing the capacity of incineration ash melting furnaces this year. Moreover, we will make sure to grasp tendencies such as the extension of AI data centers and revisions to supply chains, paving the way for expanding sales of our products.

This February, we invested in “Galdieria, Co., Ltd.,” a start-up company that aims for recycling through microalgae, and we will go on to launch a business of recovering precious metals from factory effluent in cooperation with the Aqua Solutions business. We shall proactively consider collaboration, etc. with other companies to work toward the expansion of our business.

We shall make company-wide efforts to realize “Our Ideal State in 2030” by utilizing the technologies and business foundations we have cultivated until now, while flexibly responding to changes in the business environment.

Our Ideal State in 2030

A company on a constant quest for a better future by supporting people's lives through “materials” and the “environment”

Providing value to diverse stakeholders

To achieve both “Solving Social Issues” & “Enhancing Corporate Value”

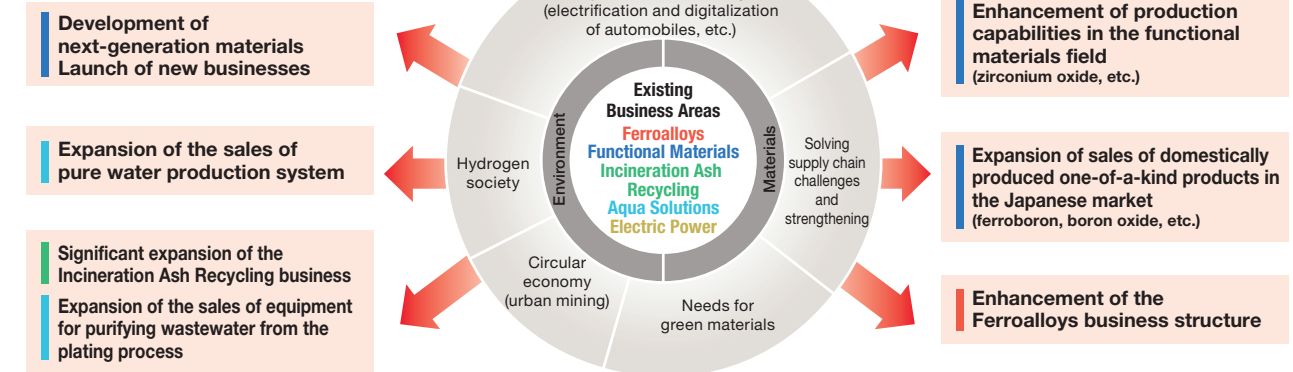
Growth Strategy

- To solve social issues by providing products, technologies and services
- To address social issues in the course of conducting business activities
- To enhance the corporate foundation for sustainable growth

Numerical Targets for FY2030

Net Sales	Ordinary Profit	ROE
¥110 bil. or larger	¥13 bil. or larger	10% or higher

Growth Strategy



Progress of Initiatives for Our Growth Strategy

Enhancement of the Ferroalloys business structure

We boosted the annual production capacity for high-carbon ferromanganese from 180,000 tons to 200,000 tons by extending the periodic repair cycle of equipment for manufacturing ferroalloys, etc. As a result, we were able to arrange the system for meeting the needs for stable supply from domestic customers, improving our profitability. Moreover, the initiatives concerning Pertama Ferroalloys (an affiliated company accounted for by the equity method), which produces green ferroalloys using hydroelectric power, such as dispatching our technicians to the company site and inviting employees from Malaysia to the Tokushima Plant for training have been successful. As a result, production volume has been steadily increasing, owing to stable operation.

Sale of functional material products in parallel with the developments in electrification of automobiles

As the global economy grows increasingly unclear, the impact of revisions to the electric vehicle strategy in Europe, etc. has extended to the demand for electronic components and battery materials for the electrification of automobiles. Amid such situation, we will take into consideration the market environment to make an appropriate decision about boosting capacity for zirconium oxide. We have been forging ahead with initiatives for expanding the sale of our one-of-a-kind products, and we are simultaneously working on price revision to match the added value.

Upgrading incineration ash melting furnaces

We are planning to build additional incineration ash melting furnaces as a step toward expanding this business, in order to contribute to the needs for incineration ash recycling in place of landfill disposal, and the realization of a recycling-oriented society promoted by the government.

We aim to start the operation of the furnace No. 5 in 2027, and we have been reinforcing our approach to municipalities and proactively responding to the needs for long-term contracts with municipalities to expand the amount of collected incineration ash, as well as making preparations such as securing personnel.

We plan to make a decision on the investment in the additional construction of the furnace No. 5 during 2025, while observing the results of the aforementioned initiatives.

Investment in a start-up company that aims for recycling through microalgae

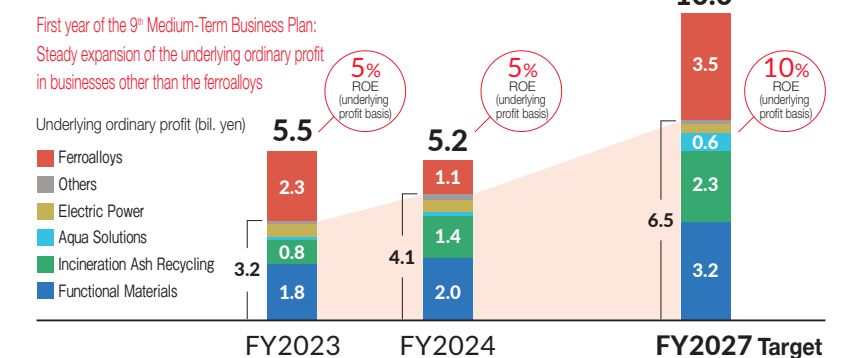
We invested 200 million yen in Galdieria, Co., Ltd., a start-up company where synergy with our Aqua Solutions business can be expected.

This company owns technologies for manufacturing adsorbents by processing microalgae, which enable the recovery of precious metals such as low-concentration gold, palladium and platinum from the factory effluent of coating business factories, etc., which was difficult to achieve using conventional technologies. We will utilize the marketing foundations cultivated through our water treatment business and know-how on the precious metal recovery process to provide new solutions.

Performance

As shown in the right chart, the underlying ordinary profit excluding the Ferroalloys business has grown toward the targets set for 2027, and we have made a progress in building a business portfolio that is not easily impacted by the market situation of ferroalloys. Amid the environment that is severe due to the sluggish market conditions for ferroalloys, which is our mainstay business, we have secured revenues owing to the price formula in Japan, and we are also working on the improvement of our revenues overseas.

Changes in ordinary profit for each business



Financial Strategy



The financial strategy entails concrete measures for providing an even more proactive return to our shareholders while expanding strategic investments indispensable for the Company's growth for the realization of “Our Ideal State in 2030”.

In order to achieve these two, we will work on streamlining the management of current assets such as inventories and cash & deposits on hand in proportion to non-current assets, which will expand in step with strategic investments. In addition, we will proactively utilize external liabilities as we can now change the financial leverage, taking into account the stabilization of revenues brought about by the structural reform of the Ferroalloys business (change of the pricing method and integration of manufacturing bases) in the 8th Medium-Term Business Plan (2021-2023).

We formulated a new shareholder return policy last year under this philosophy. We aimed for a system that will motivate our shareholders to

keep holding shares with peace of mind, by setting the minimum dividend at 10 yen/share and changing the premise for dividend calculation to the underlying profit and loss, while raising the dividend payout ratio from the original 30% to 40%, to realize a more proactive shareholder return.

Moreover, we forged ahead with initiatives for streamlining the management of inventories. As the first step, we visualized the information on the purchase of raw materials, etc., and consequently reduced the necessary cash on hand. We would like to keep reducing our inventories in the current fiscal year in this manner.

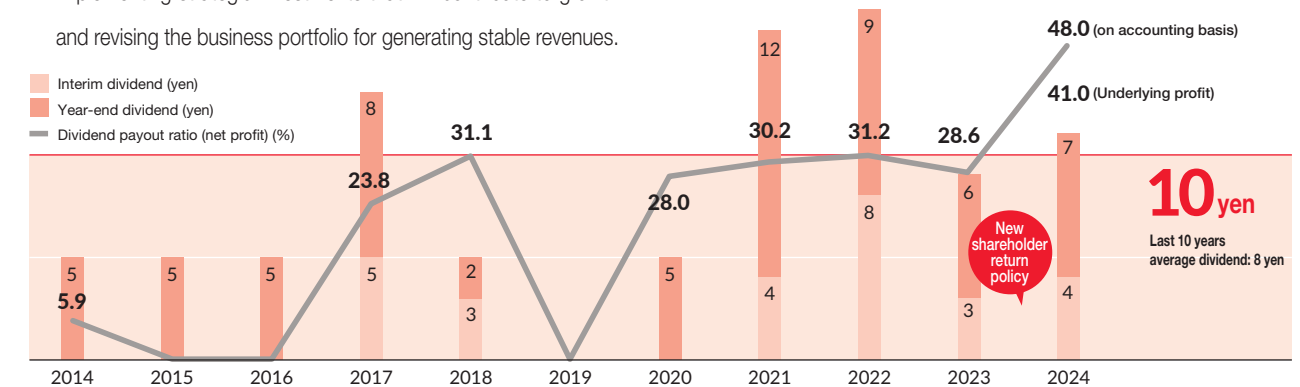
In addition to these measures, we will focus on improving our corporate value and achieving PBR of 1.0 or higher by gradually reducing capital costs through the active utilization of external liabilities in step with strategic investments to be implemented from now on.

New Shareholder Return Policy

We announced a new shareholder return policy in August 2024 under the philosophy of providing a more proactive and stable return to our shareholders.

Changes in dividends

- 10 yen/share, exceeding the average dividend amount in last 10 years, has been set as the minimum annual dividend.
- We will aim for further expansion of shareholder return by implementing strategic investments that will contribute to growth and revising the business portfolio for generating stable revenues.



Progress of the Medium-Term Business Plan (2024-2027)

Reinforcing non-current assets as a source of profits

Except for investment in DX, etc., we made decisions mainly on capital investment, such as the maintenance and renewal, during the last fiscal year. However, from now on we shall increase investments in growth (strategic investments on the scale of 45-50 billion yen in the seven years until 2030). While the environment surrounding the Company has undergone significant changes since the formulation of the plan, such as the recent Trump's assumption of office, we shall estimate its impact and proceed with investments in priority fields. We shall proactively consider the construction of new melting furnaces, etc., especially in the Incineration Ash Recycling business, which has been steadily increasing revenues.

Fixed ratio

2023	68.8%
2024	65.5%

Optimization of net D/E ratio

We aim to realize both proactive capital investment and shareholder return by changing the financial leverage in an appropriate range. Concretely, we shall operate the business to achieve net D/E ratio of 0.30 to 0.45 by 2030. Cash flows from investing activities remained at a low level in 2024 as full-scale strategic investments had not begun yet, and funds were allocated to dividends without increasing interest-bearing liabilities (interest-bearing liabilities were offset by reducing the cash and deposit). While the KPI was unchanged, we plan to fully focus on making decisions concerning strategic investments from 2025 on, and we shall approach our target for net D/E ratio step by step.

Net D/E ratio

2024	0.15
Target	0.30~0.45

Shortening of inventory turnover period

We aim to improve capital efficiency by enhancing inventory management. Inventory turnover period in 2024 was extended in terms of numerical values as the book value of inventories increased due to surging market prices of the manganese ore. On the other hand, we reduced the cash and deposit balance by 2 billion yen through visualizing the information on the purchase of raw materials, etc., as the initial result brought about by enhanced control. From now on, we shall forge ahead with inventory reduction by utilizing digital technologies based on Operation DX, etc.

Inventory turnover period

2023	5.6 months
2024	6.4 months

To reinforce non-current assets as a source of profits

To strengthen non-current assets through proactive strategic investment

Appropriate financial leverage

Net D/E ratio
Approx. 0.30 to 0.45

To proactively return profit to shareholders

High level of shareholder returns based on stable and high revenue

To boost the efficiency of inventories

To improve the efficiency of inventories and reduce the effects of inventory through DX

BS as of the end of December FY2024

Total assets
102.2
bil.
Net D/E Ratio :
0.15

Current assets
53%
Non-current assets
47%

Liabilities
28%
Net assets
72%

Expand by 1.5 times through proactive strategic investments

Projection of BS at the end of FY2030

Total assets: Approx.
¥150 bil.
Net D/E Ratio :
0.3 to 0.45

Current assets
Approx.
40%
Non-current assets
Approx.
60%

Liabilities
Approx.
40%
Net assets
Approx.
60%

Research and Development / Intellectual Property



- ◆ R&D for solving social issues
- ◆ Core technologies for smelting and refining metal and manufacturing chemical products
- ◆ Proactive investments in R&D

Tsutomu Kishikawa
Director and Managing Executive Officer

The Group upholds “building a sustainable society” as the corporate vision, and we view research and development as well as the strategy for intellectual property as the most important challenges when it comes to foundations for achieving this vision. We will contribute to solving social issues especially by focusing on the development of new technologies for reducing environmental burdens and enriching people’s lives, and creating and managing intellectual property that supports these endeavors.

In the 9th Medium-Term Business Plan, we have stated the policy of continuously investing resources in the development of highly unique new products and new technologies while cultivating our core technologies for smelting and refining metal and manufacturing chemical products. We will increase R&D expenses approximately

1.5 times from the 8th Medium-Term Business Plan and take a challenge at the development of a carbon-free process for manufacturing ferroalloys as a step toward the realization of carbon neutrality in addition to accelerating the development of high value-added products by increasing the number of researchers and enhancing cooperation with universities and external institutions.

We treat intellectual property such as patents, trademarks, copyrights and know-how as vital management resources. We will build a flexible and effective policy for intellectual property based on the medium- to long-term R&D strategy, swiftly acquire rights for newly created cutting-edge technologies and promote proactive utilization of intellectual property.

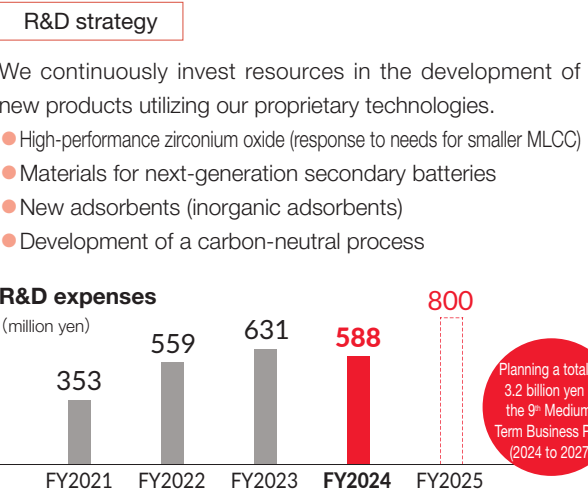
R&D Activities for Meeting Social Needs and Supporting Sustainable Development and Growth

R&D policy

The Nippon Denko Group strives to develop new products on the strength of technology for smelting and refining metal and manufacturing chemical products in addition to researching environmental technologies that promote environmental conservation and resource recycling.

R&D structure

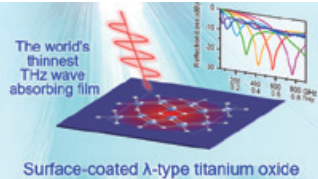
The Group has created an effective research system to create new technologies and products swiftly through collaboration among a “Research Group” that carries out research and development, a “New Product and New Business Group” that anticipates customers’ needs and explores research topics, and the plants that apply the outcomes of the development. We also engage in activities for creating new business in cooperation with customers, universities, research institutes, and venture firms.



Development of High Value-Added Products

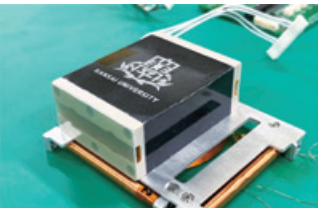
World's Thinnest Terahertz Wave Absorbing Film for 6G

We have developed an ultrathin terahertz wave absorbing film for the 0.1-1 THz range in collaboration with a research group led by Professor Shin-ichi Ohkoshi from the Graduate School of Science, the University of Tokyo. This material is expected to contribute to the prevention of electromagnetic wave interference and the improvement of device sensitivity using terahertz waves in the following fields: Sixth-generation mobile communication systems (6G), digital healthcare (remote and home patient care and health management using non-contact biological information monitoring, such as wearable devices), security sensing including automatic driving and safety systems, and terahertz astronomy and space fields (radio telescopes). The research results were published in the American scientific journal “ACS Applied Materials & Interfaces”.



Vanadium Dioxide Latent Heat Storage Material

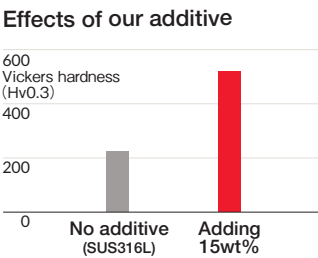
We have confirmed the battery temperature-stabilizing effect of a vanadium dioxide solid-solid phase change material (SSPCM) jointly developed with Kansai University. A vanadium dioxide SSPCM-based battery temperature-stabilizing device for satellites was installed on “DENDEN-01” and successfully demonstrated its functionality in space. The market for CubeSats is growing rapidly, and commercial use is expanding in a wide range of fields, particularly in satellite communications, earth observation, and space technology verification. With the success of this demonstration experiment, we aim to pave the way for new possibilities for the use of the vanadium dioxide SSPCM in space.



Battery Temperature-Stabilizing Device

Additives for 3D metal printers

We have developed a titanium boride-iron composite material that can improve the hardness, strength, and rigidity of 3D-printed products when added to austenitic stainless steel powder (such as SUS316L). When this product is added to SUS316L, the Vickers hardness of the 3D-printed product is doubled or increased further, reaching a level comparable to that of maraging steel, a special steel developed for use in the aerospace industry as a structural material. Weight reduction stemming from the improvement of strength can be expected not only in the aerospace industry, but also in the automobile industry.



Intellectual Property Activities Leading to the Improvement of Our Corporate Value

Intellectual property policy

The Group treats intellectual property such as patents, trademarks, copyrights and know-how as a vital management resources. Focusing mainly on ensuring competitive advantages, we enhance initiatives for effective utilization of such intellectual property by collaborating with other companies and providing licenses, which will directly lead to the improvement of business revenues and corporate value. Moreover, we do not overlook any acts violating our intellectual property rights, and appropriately address such acts. Furthermore, we respect the intellectual property rights of other parties and take care so as not to violate any effective intellectual property rights of other parties.

Intellectual property control structure

At the Group, business divisions and the R&D Department work together to engage in concrete intellectual property activities based on the trinity of strategies for management, R&D and intellectual property. Moreover, the Production Engineering Department proactively manages cross-departmental intellectual property activities, etc. from a company-wide viewpoint. Furthermore, we work toward improving the awareness and skills of all employees with regard to intellectual property through continuous control of information and training on intellectual property.

Intellectual property strategy

As the Group offers diverse products and services from ferroalloys to functional materials, etc., the strategy significantly emphasizes the refinement of individual intellectual property for each product, taking into account the substantial differences in the environment for each product. Concretely, business divisions and the R&D Department work together as one to accurately recognize the environment of the market, technologies and intellectual property while clarifying the business objective. Based on these results, we decide on measures concerning intellectual property, and clearly stipulate and implement them as the strategy for intellectual property.

Ferroalloys

For the stable supply of ferroalloys, which are indispensable for high-grade steel products

The year 2025 marks the 100th anniversary of our founding. We managed to continue with the manufacturing and sale of ferroalloys, which is our original business, for 100 years owing to trust from all our stakeholders, for which we are deeply grateful.

The ferroalloys we handle are commodities traded on the international market, and we have maintained global competitiveness by offsetting the high electricity costs in Japan with technology. As for our recent major initiatives, we are working on the reinforcement of our financial structure by reducing our inventories, in addition to improving our production efficiency by extending the interval for periodic repair (from one year to one year and a half).

In order to achieve sustainable growth of the Ferroalloys business, we view the shift to a decarbonized society as an opportunity, promoting the development of technologies for reducing CO₂ emissions. In Japan, we have conducted a test for a shift from coal cokes, used as a reducing agent, to wood cokes. Outside Japan, we have dispatched our technicians to Pertama Ferroalloys, which produces green ferroalloys using hydroelectric power in Malaysia. This shows how we are forging ahead with the development of carbon-neutral technologies both in Japan and overseas.

Executive Officer
Yoshihiro Miyauchi



Domestic Strength

- Top domestic supplier of manganese ferroalloys
- Competitiveness of the Tokushima Plant, which boasts high utilization rate, high efficiency, and globally high productivity
- Stable earning power based on the price formula

Overseas Strength

- Environmentally friendly ferroalloys (utilization of electric power generated by hydroelectric power plants)

Business Models and Characteristics

Manufacturing and sale of ferroalloys

High-carbon ferromanganese, which is our core product, is an additive used for improving steel's properties, such as strength, toughness, heat resistance, and anti-corrosiveness. We import manganese ores as raw materials mainly from South Africa, and reduce them with an electric furnace, to produce high-carbon ferromanganese. We sell it to steelmakers, mainly Nippon Steel Corporation.



High-carbon ferromanganese

Business opportunity

- Demand for green ferroalloys

Product types

Tokushima plant

High-carbon ferromanganese (production amount: 180,000 tons/year)
Low-carbon ferromanganese

Pertama Ferroalloys

Silicomanganese / Ferrosilicon

Kudumane manganese mining

Manganese ore



Tokushima plant

Risks

- Risk of changes in market prices of raw materials and products
→ Reduce the risk through a price formula in Japan
- Possibility of introducing carbon tax
→ Focus on carbon neutrality

Market Environment

Japan

In the Japanese market, the steel demand for the manufacturing, civil engineering, and construction industries is projected to decline due to the shrinkage and aging of the Japanese population. However, the demand for manganese ferroalloys, which are indispensable for high-grade steel, is expected to remain steady.

Overseas

The overseas market is forecast to grow in Asia, including India. Pertama Ferroalloys has a factory in Malaysia, adjoining the growing markets.

Progress of the 9th Medium-Term Business Plan

Japan

Boosting the annual production capacity for high-carbon ferromanganese (from 180,000t to 200,000t)

While we used to cover the deficit in demand caused by production integration in the Tokushima Plant in 2021 through purchases from external sources, we are now working on boosting production volume by extending the periodic repair cycle from approximately one year to one year and a half. Furthermore, we refrain from stopping and repairing the two electric furnaces for high-carbon ferromanganese at the same time, and are working on the streamlining of repair work while avoiding simultaneous repairs.

Establishing a stable supply system

Manganese ore appropriate for the manufacturing of the Group's ferroalloys is a mineral unevenly distributed especially through the South Africa. We are working on the decentralization of material and raw material procurement in preparation for geopolitical risks, and manage inventory based on the country risk in each area where ore is produced. Although the shipment of manganese ore was suspended in March 2024 due to damage caused by a hurricane in Australia, we were able to respond appropriately even during this event, avoiding any impact on our production activities.

Development of a carbon-free process for manufacturing ferroalloys

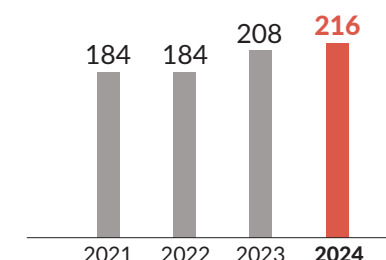
"The Technology Development for Decarbonization and Energy Conservation in the Ferromanganese Production Process" was selected for the incubation R&D phase in NEDO's publicly solicited project, and we are promoting the development of technologies for an innovative manufacturing process that will facilitate the reduction of CO₂ emissions and energy saving. Moreover, the utilization of wood cokes is under consideration. We are focusing on research and development in order to achieve carbon neutrality by 2050.

Overseas

Reinforcement of the production system

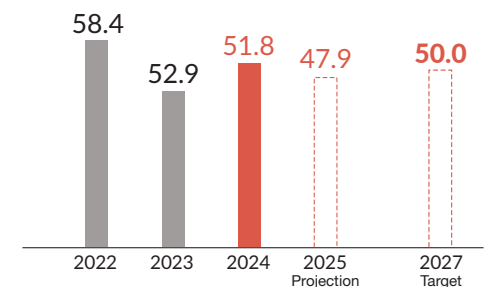
We have dispatched our engineers to the Pertama Ferroalloys in Malaysia and worked on cost reduction in order to realize stable production at the site. Moreover, we have been regularly inviting employees from Malaysia to the Tokushima Plant for training at a world-class plant for ferroalloys since 2023. These results paved the way for continuous stable production, and the production volume has been steadily increasing.

Production volume of Pertama Ferroalloys (silicomanganese, ferrosilicon/ thousand tons)

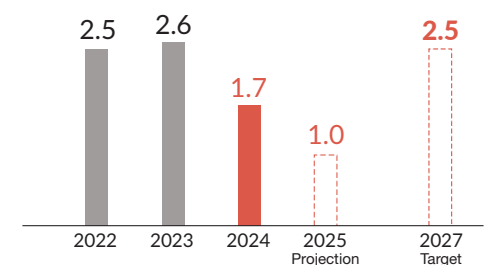


Training of employees of Pertama Ferroalloys at the Tokushima Plant

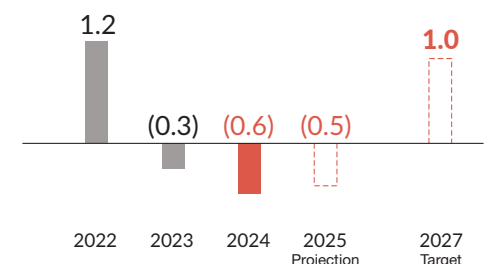
Net Sales (bil. yen)



[Domestic] Underlying Ordinary Profit* (bil. yen)



[Overseas] Underlying Ordinary Profit* (bil. yen)



*Ordinary profit excluding the impact of inventory and one-time factors



Functional Materials



Keiichi Nakazato
Executive Officer

Development of the mobility field

Stable supply of one-of-a-kind products

In the Functional Materials business, we have a lineup of high-performance, high-grade, and distinctive products (such as zirconium oxide, boron oxide, manganese inorganic chemical products, automotive battery materials, and ferroboron) based on our accumulated metallurgical and powder technologies. These products contribute to the development of the mobility field (electrification of automobiles), which is essential for building a sustainable society, and to the promotion of a decarbonized society. Although the popularization of EVs has been recently progressing somewhat slower than expected in the Medium-Term Business Plan, the demand for our functional material products is steadily growing in step with revisions to the evaluation of hybrid cars and expansion of IT data centers. In addition, we would like to further work on promoting sales of our one-of-a-kind products in Japan (manganese inorganic chemical products, ferroboron, etc.) by focusing on enhancing the cost competitiveness, and hope to contribute to solving issues concerning the supply chain, such as lessening geopolitical risks, and reinforcing it.

Strengths

- Metallurgical and powder technologies leading the industry over long years
- Credibility stemming from continuous provision of high-performance and high-grade products
- Lineup including a number of unique original products

Business Models and Characteristics

We manufacture products tailored to customer needs from various raw materials. We strive to ensure a stable supply as some of our products are one-of-a-kind in Japan.

Zirconium oxide

Zirconium oxide is highly regarded for its ultra-fine particles and high purity, and is primarily used as a material for communication devices such as smartphones, as well as for multilayer ceramic capacitors (MLCCs) for automobiles.

Boron oxide

Boron oxide is characterized by its high quality and high purity with very few impurities and is used as a material for glass substrates for large displays such as LCD and OLED and glass fiber for electronic substrates for 5G communication.

Metal hydride alloys

Metal hydride alloys are used as anode materials for nickel-hydrogen batteries for HEVs and are used in cars manufactured by Toyota Motor Corporation, etc.

Ferroboron

Ferroboron is used as a material for neodymium magnets in the motors of HEVs and EVs as well as in steel products such as bridge wires, bolts and nuts.

Manganese inorganic chemical products

We produce a wide variety of manganese inorganic chemical products and possess the technology to refine manganese ore to achieve high purity. They are used as cathode materials for lithium-ion batteries and as additives for MLCCs.

Cathode materials for lithium-ion batteries

OEM from Sumitomo Metal Mining Co., Ltd.



Domestically produced
one-of-a-kind product
in the Japanese market



Zirconium oxide



Boron oxide



Metal hydride alloys

Business opportunities

- Progress of electrification of automobiles
- Expansion of the market for semiconductor electronic components, including AI

Risk

- Fluctuations in the raw material prices and procurement

Market Environment

Purpose	Product	Market
Electrification of automobiles Electronic components for semiconductor	Zirconium oxide	Progress in the electrification of automobiles Increase in parts related to generative AI (data centers, etc.)
	Manganese inorganic chemical products	
	Ferroboron	Increase in demand for neodymium magnets (for motors) due to the growing demand for EVs and HEVs
Glass fiber Glass panels	Boron oxide	Demand for displays is flat Increase in parts related to generative AI (data centers, etc.)
Automotive battery	Metal hydride alloys	Demand for nickel hydrogen batteries is flat (Healthy demand for existing hybrid cars)
	Cathode materials for lithium-ion batteries	While the distribution of EVs has been sluggish, the trend of electrification of automobiles remains unchanged and the automotive battery market is projected to keep growing

Progress of the 9th Medium-Term Business Plan

Increase of zirconium oxide production capacity

Zirconium oxide is used as a material for multilayer ceramic capacitors (MLCC). The use of MLCC spans over a wide range including electronic components for automobiles and electronic parts for consumer products. While the demand for electric vehicles has not been as strong as expected recently, there is no doubt that the field will grow in the future owing to the progress in electrification such as ADAS (Advanced Driver-Assistance Systems) and demand stemming from the shift to the next communication standard. Therefore, we will observe the market environment and make appropriate decisions concerning the boosting of production capacity.

Expansion of sales of one-of-a-kind products in the Japanese market

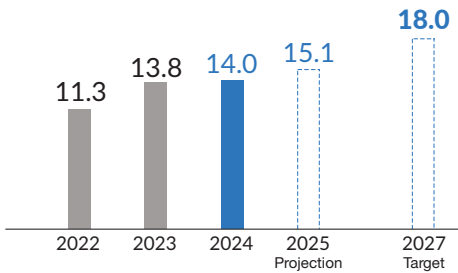
The trend of reshoring procurement to the Japanese market is spreading to avoid geopolitical risks. Amid such environment, we are working on expanding the sale of our one-of-a-kind products in Japan (boron oxide, ferroboron, and manganese inorganic chemical products). Moreover, we are simultaneously forging ahead with price revision to match the added value amid the pressure of rising costs such as labor costs.

Development of new products

Through the development of advanced communication technology, there is a demand for high-performance, high-quality zirconium oxide products that contribute to the high functionality and miniaturization of electronic components. Moreover, features of battery materials need to be improved amid the growth in demand for a broad variety of secondary batteries in addition to the electrification of automobiles. We are engaging in research and development of new products that will contribute to increasing the volume and reducing the size of secondary batteries.

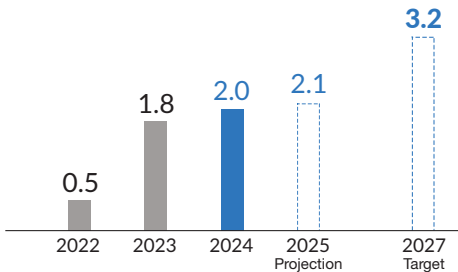
Net Sales

(bil. yen)



Underlying Ordinary Profit*

(bil. yen)



*Ordinary profit excluding the impact of inventory and one-time factors



Ferroboron



Manganese inorganic chemical products



Cathode materials for lithium-ion batteries



Incineration Ash Recycling

Contributing to a recycling-oriented society

This year marks the 30th anniversary of the launch of the Incineration Ash Recycling business, a pioneer among private enterprises. The business has contributed to environmental conservation and recycling in Japan by supplying the society with ECOLAROCK, which boasts quality on par with natural crushed stone as a civil engineering material, and molten metal serving as the material for base metals (gold, silver, copper, etc.), in addition to helping extend the life of municipal landfills as it has been difficult to build new ones lately.

The Ministry of the Environment formulated the “5th Fundamental Plan for Establishing a Sound Material-Cycle Society: Making the Realization of a Circular Economy a National Strategy” last year, aiming for expanding circular economy, i.e. increasing the size of circular economy-related markets from the current 50 trillion yen to 80 trillion yen by 2030 in order to establish a recycling-oriented society based on environmental conservation, which will pave the way for a sustainable society.

Our initiatives for the expansion of this business are consistent with this kind of national policies as well. As the first step, we conducted a merger with Chuo Denki Kogyo, our wholly-owned subsidiary, in July 2024, and we are making steady preparations toward boosting our treatment capacity while launching marketing throughout the country.

We hope to play a part in the realization of a sustainable society based on the establishment of a recycling-oriented society in Japan by successfully expanding this business.

Hayato Matsuda
Executive Officer



Strength

- Possessing the largest melting and solidification capacity in Japan (130,000 tons/year)
- First private company in Japan to commercialize the incineration ash recycling by making use of the electric furnace operation technology cultivated in the Ferroalloys business
- Perfect recycling of incineration ash

Business opportunities

- Elevation of environmental awareness
- Changes in waste-related laws and regulations

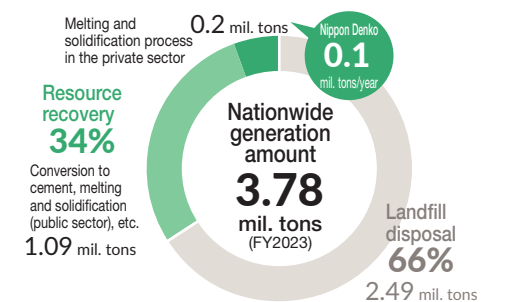
Risks

- Worsening financial situation at municipalities
- Changes in waste-related laws and regulations

Market Environment

According to a study by the Ministry of the Environment, about 3.78 million tons of incineration ash are produced annually in Japan, and 66% is disposed of at landfills. Furthermore, the current remaining life of landfill sites nationwide at the end of FY2023 is estimated to be 24.8 years in this study. Meanwhile, the securing of new landfill sites is becoming increasingly difficult for municipalities, leading to a rise in needs for incineration ash recycling. Given this situation, the Incineration Ash Recycling business is expected to grow.

Nationwide general waste incineration ash volume & disposal status



Progress of the 9th Medium-Term Business Plan

Capacity enhancement

The Company intends to expand the facilities in stages from furnace No. 5 (scheduled to begin operation in 2027) to furnace No. 7 (scheduled to begin operation in 2030), taking advantage of the increase in demand for the melting and solidification process prompted by a decrease in surplus capacity for the disposal of incineration ash as landfill and cement. The treatment capacity of furnace No. 7 will be increased from 130,000 to 220,000 tons per year. The volume of incineration ash treatment in 2024 remained unchanged from the previous year, owing to concerted efforts on price revision. In 2025, however, the Company will concentrate on collecting incineration ash to expand treatment volume and will make a decision about capital investment for furnace No. 5 within 2025.

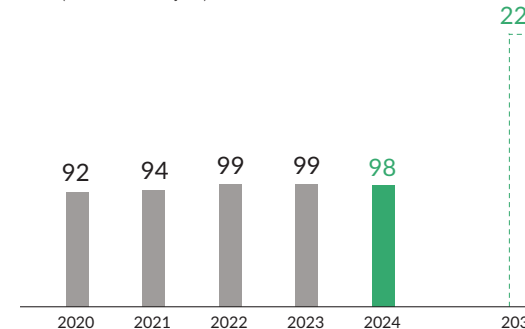
Results of the merger with the former Chuo Denki Kogyo Co., Ltd.

In July 2024, the Company acquired and merged with its wholly-owned subsidiary, Chuo Denki Kogyo Co., Ltd. (the company involved in the Incineration Ash Recycling business). As a result of this integration, the sales base was relocated to Tokyo, with the goal of expanding the sales region throughout Japan. At the same time, we were able to speed up management decisions about when to invest in human resources, as well as business expansion decisions on capital investment.

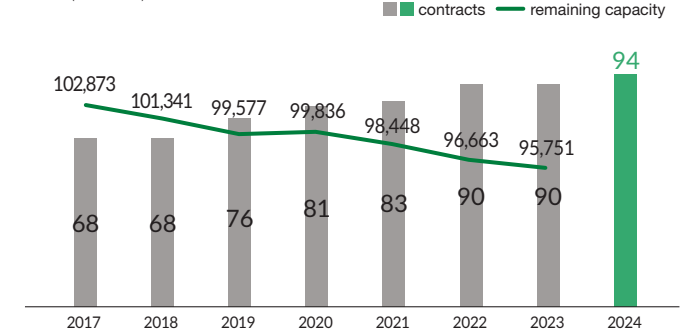
Strengthening sales activities targeted at municipalities (initiatives to increase the collection volume)

By leveraging the largest incineration ash treatment capacity in Japan and our plan to hone our capacity, we are strengthening sales activities targeted at municipalities outside of the Kanto region, where we have so far operated business mainly, and receiving many inquiries from Tohoku, Kyushu, Shikoku, and other locations. We are also actively responding to the needs for long-term contracts from municipalities.

Trends in treatment volume and treatment capacity in 2030 (planned)

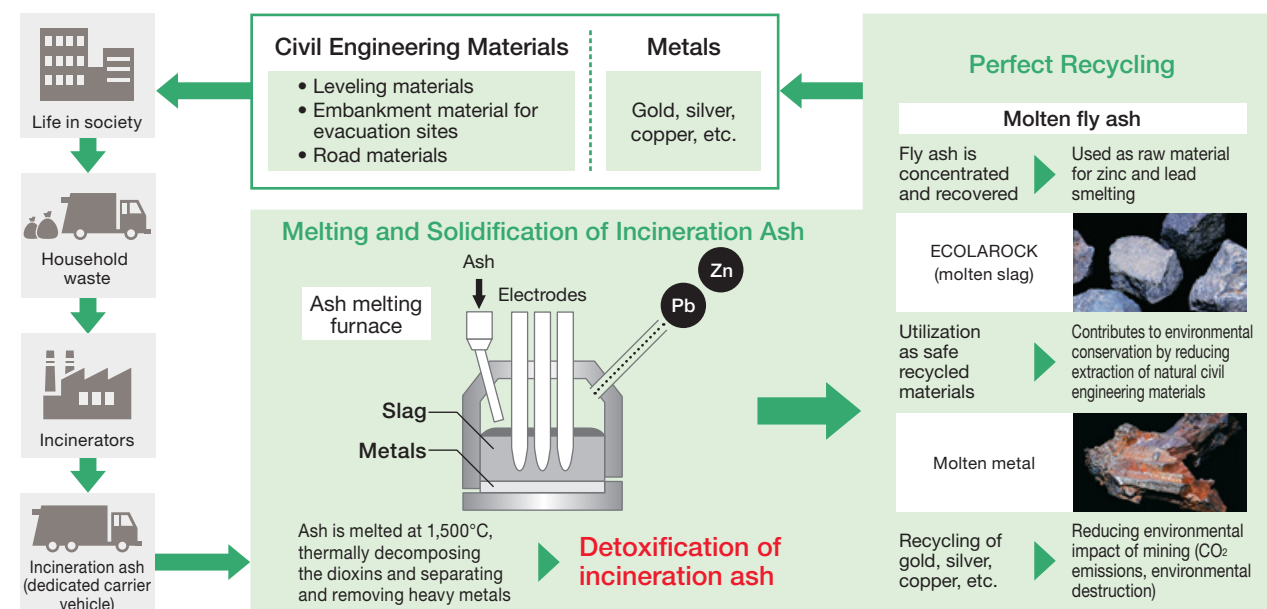


Nationwide remaining capacity of landfill sites and the number of contracts



Business Models and Characteristics

We accept incineration ash which is often disposed of in landfill sites for a fee from municipalities, and melt and solidify incineration ash, thereby rendering it harmless and recyclable. The molten slag produced by melting is commercialized as ECOLAROCK and reused as civil engineering materials. In addition, molten metal containing valuable metals such as gold, silver, and copper is collected and recycled as resources. Through our activities, we not only contribute to the environmental conservation by reducing the extraction of natural civil engineering materials, the reduction of environmental impact through mining, and the recycling of incineration ash from urban mines, but also realize perfect recycling by rendering the whole amount of industrial waste produced during the process (molten fly ash) into resources.





Aqua Solutions



Taketoshi Oka
Executive Officer

Contributing to the development of a recycling-oriented and hydrogen-based society

This business contributes to a recycling-oriented and hydrogen-based society through wastewater treatment equipment and a pure water production system.

We started treating wastewater containing chromium in 1973 and have since expanded our product lineup to include systems for adsorbing and recovering boron, nickel, and fluorine in wastewater, in order to provide wastewater treatment equipment that meets the needs of our customers. Our pure water production system is widely used for hydrogen production, biomass power generation, and general industrial purposes.

In addition, we are currently working on the development of new products through collaboration with partner companies and joint research with universities and other institutions to expand our business domain.

Furthermore, in February of this year, we invested in Galdieria, Co., Ltd., a start-up company, with the goal of providing new solutions by leveraging its technology to recover low-concentration precious metals such as gold and palladium from factory effluent using microalgae, as well as our sales base and know-how in the wastewater treatment business.

We will concentrate on growing our business domain while meeting social needs by leveraging the technology and know-how of wastewater treatment equipment and a pure water production system that have been developed over time.

Strength

- ◆ No need for maintenance work and various chemicals at the customer's side with our mobile equipment
- ◆ Stable and high quality based on advanced ion exchange resin regeneration technology developed over 50 years
- ◆ Rental (subscription model) service, which is easy to adopt at affordable initial costs
- ◆ Recycling the absorbed and collected materials into raw materials for our products

Business Models and Characteristics

This is a business model in which we rent (subscription model) or sell the wastewater treatment equipment and pure water production system.

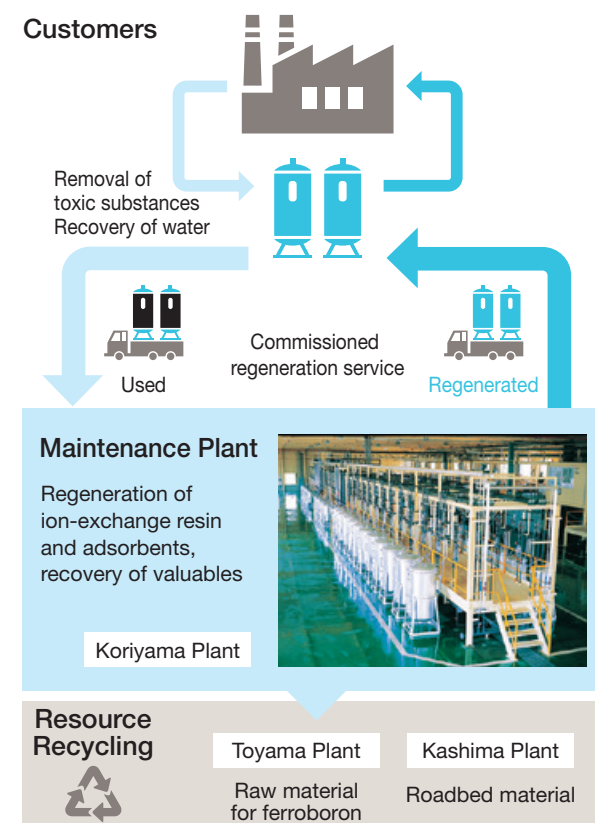
Used ion exchange resin is regenerated at our maintenance plants and then reused. In addition, heavy metals adsorbed during this process are recycled at the Toyama Plant and the Kashima Plant.

Wastewater treatment equipment

Our equipment recovers metals and impurities contained in industrial wastewater from the manufacturing industry such as plating, painting, and automotive ones, and recycles it into deionized water and pure water. The recovered boron is recycled as a boron product (ferroboron), and the recovered nickel is recycled as a raw material for nickel alloys.

Pure water production system

Our system is used to produce hydrogen and is used in approximately 60% of on-site hydrogen stations in Japan. In addition, high-purity water can be easily produced from tap water for use in surface treatment washing and in boilers and air conditioning at biomass power plants. Demand for high-purity water (for cleaning, blending, and inspection) is increasing along with the sophisticated performance of industrial products, and it is also used for the maintenance of biomass power plants and other industrial purposes.



Business opportunities

- Increasing environmental awareness through the development of the circular economy and SDGs
- Stricter wastewater regulations
- Evolution into a hydrogen-based society

Risks

- Shrinkage of the plating market
- Rises in prices of materials and equipment and logistics costs

Market Environment

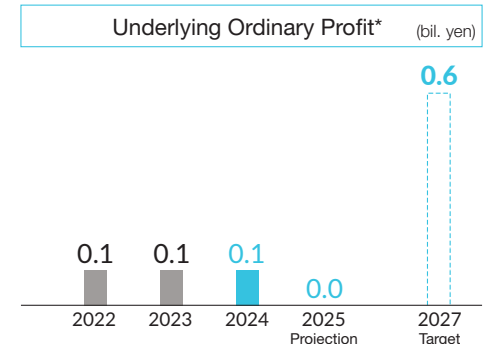
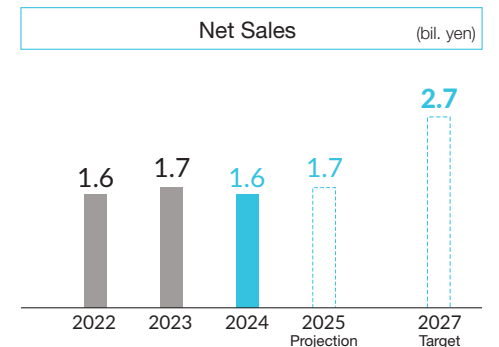
Wastewater treatment equipment

While the number of components has been reduced due to advances in the electrification of automobiles and the demand for plating is also shrinking, demand for boron removal from wastewater has increased. Demand for wastewater treatment is also predicted to rise due to increased environmental awareness and stricter wastewater regulations.

Pure water production system

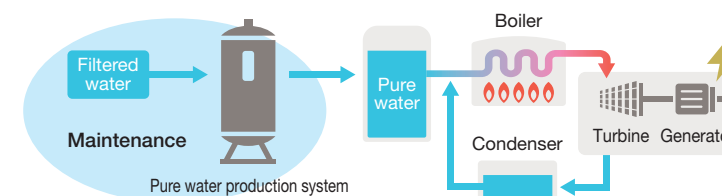
In the hydrogen-related market, demand for pure water is expected to rise due to the increased use of hydrogen stations and for industrial applications.

In other areas as well, there is an increase in demand for pure water for test runs and maintenance of boiler power generation.



*Ordinary profit excluding the impact of inventory and one-time factors

Biomass power generation (maintenance)



Pure water production system (MR-PACK)

Progress of the 9th Medium-Term Business Plan

Enriching the lineup of wastewater treatment equipment

The Company has expanded the product lineup in anticipation of increased demand due to stricter wastewater regulations. We also intend to broaden our business domain by developing new products in collaboration with partner companies and through joint research with universities and other institutions.

Catching up with hydrogen-related demand

We are promoting sales of a pure water production system to meet demand for hydrogen stations and industrial applications.

Developing new business domains

In February 2025, we invested in Galdieria, Co., Ltd., a start-up company aiming to recycle resources with microalgae. Its microalgae-based adsorbent can recover precious metals like gold and palladium from urban mines and factory effluent. The adsorbent can also be used to efficiently recover these metals from low-concentration or difficult-to-treat solutions that were previously difficult to handle using conventional technology. We strive to create innovative solutions by leveraging our sales base for wastewater treatment business and expertise in equipment and heavy metal recovery processes.

Electric Power

Promoting carbon neutrality

In the Electric Power business, we are actively promoting hydroelectric power generation projects with the FIT system to fulfill our responsibility to create a sustainable society. The FIT system, which promotes the broad use of renewable energy, allows our generated power to be sold at a fixed price for a certain period of time. We take full advantage of the FIT system to develop a stable earning structure and secure long-term sustainability of the Electric Power business.

We engage in sustainable operations while utilizing our sophisticated technology and knowledge in order to both reduce CO₂ emissions and ensure a stable hydroelectric power supply. Furthermore, we will continue to try to minimize environmental impact by stressing coexistence with local communities. Going forward, the Company will expand capital investment to maintain an uninterrupted supply of hydroelectric power in a steady manner while simultaneously tackling issues like climate change and water resource management. We will maximize the value of green electricity as a renewable energy source and seek further development to ensure a sustainable future.

Tsutomu Kishikawa
Director and Managing
Executive Officer



Strength

- Stable earning structure through the Feed-in Tariff (FIT) system for renewable energy
- Green electricity produced through hydroelectric power generation that does not emit CO₂ (annual output: approx. 56,000 MWh)

Business Models and Characteristics

We have two FIT-certified hydroelectric power plants that are now in operation on the Horomangawa river system in the Hidaka region of Hokkaido.



No. 3 Power Plant Dam



No. 3 Power Plant Weir

Risk

- Changes in power generation amount due to weather conditions (Over the past five years, there have been no changes that would affect business performance.)

Market Environment

Through the FIT system, the Company has secured revenue that will be stable until 2037.

Progress of the 9th Medium-Term Business Plan

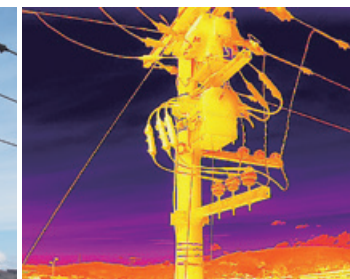
Measures for stable operations

In power generation, which is a project that uses natural capital, it is necessary to perform planned repairs and maintenance on facilities and dams in order to maintain stable operations. Since 2023, the Company has been using drones equipped with thermo-cameras to improve work efficiency. These special drones improve the inspection accuracy of power lines and power distribution lines in premises, which are difficult to inspect with the human eye.

In addition to these devices, in 2025, the Company introduced underwater drones. Given that it was impossible to physically inspect the condition of damage on the dam lake side, concrete spalling, and the repaired section in the water, the water level of the dam had to be reduced when inspecting deeper regions. The use of underwater drones makes it possible to check underwater conditions on land, which has not been possible in the past, leading to stable operations.



Image from a drone equipped with thermo-cameras



Underwater drone

Promoting DX for stable operations

As the working population decreases nationwide, securing human resources, particularly in rural areas, is important for maintaining stable operations. At present, the Company is operating from a remote operation system and is considering the introduction of maintenance support equipment to reduce manpower and improve operational efficiency.

Promoting carbon neutrality

Since the Company supplies green electricity through hydroelectric power generation, stable operation itself is an approach to carbon neutrality. Furthermore, the Koriyama Plant, which serves as the base of the Aqua Solutions business, uses a non-fossil certificate with tracking of the Hidaka Plant, ensuring that all electricity utilized at the plant is carbon-free.

Proposal for Underwater Drones in DC&M Activities*

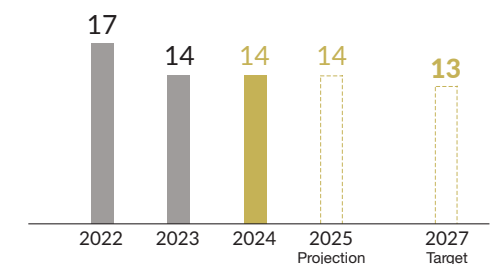


Keita Matsui
Hidaka Office

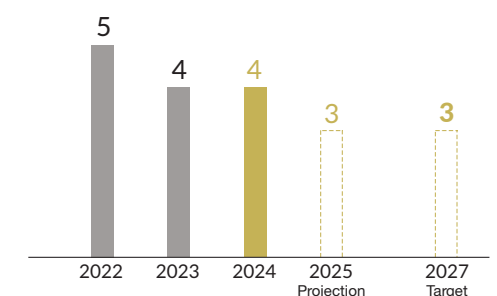
When using an underwater camera to inspect concrete spalling and cracks in the dam, the water level had to be lowered, making it impossible to perform year-round inspection. Against this backdrop, we conducted evaluation with the goal of conducting year-round inspections without lowering the water level in the DC&M activities. As a result, the Company decided to test an underwater drone as a top priority candidate. After confirming all concerns, such as whether the drone could examine without trouble due to water pressure or capture quality photographs underwater, we proved its usefulness. We purchased an underwater drone and use it for our business operations. At present, we can inspect regions that were previously difficult to access, which has helped reduce risk in the Electric Power business.

*See p. 46 for details.

Net Sales (bil. yen)



Underlying Ordinary Profit* (bil. yen)



*Ordinary profit excluding the impact of inventory and one-time factors

Sustainability

Sustainability Management Policy

Our management philosophy is to help create an affluent future through sustainable growth by developing and providing distinctive products, technologies, and services. Under this philosophy, we consider sustainability to be a key management strategy for achieving the dual aims of “contributing to solving social issues through our business activities” and “increasing our corporate value through sustainable growth.” Specifically, we are committed to promoting sustainability in the context of the five material issues listed on the right.

- Tackle challenges to achieve carbon-neutrality in 2050, aiming at the conservation of a sustainable global environment and realization of a decarbonized society
- Provide products, technologies, and services that contribute to decarbonization and circular economy while creating new business opportunities to contribute to the realization of a sustainable society
- Create values through management focusing on human capital, such as DE&I, and human resource development
- Implement fair and equitable purchasing, ensuring the suppliers' commitment for human rights, environmental protection, etc.
- Increase corporate value over the medium- to long-term through constructive communication with the stakeholders

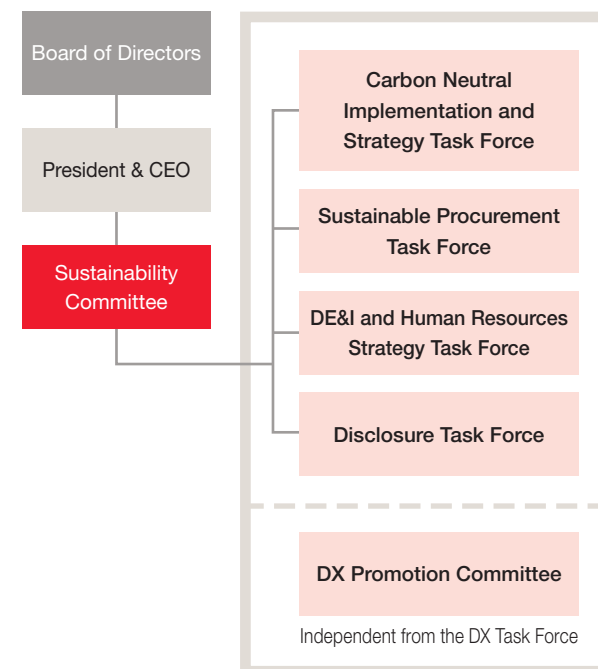
Sustainability Committee

We are committed to sustainability-oriented management in order to solve social issues and enhance corporate value in a sustainable manner. In 2022, we established the Sustainability Committee, which is chaired by the President & CEO. It consists of task forces that work to resolve issues. The Committee formulates policy for sustainable management as part of the Group's management strategies, promotes measures for sustainability by drafting and evaluating the necessary strategies, and verifies and reviews the status of efforts.

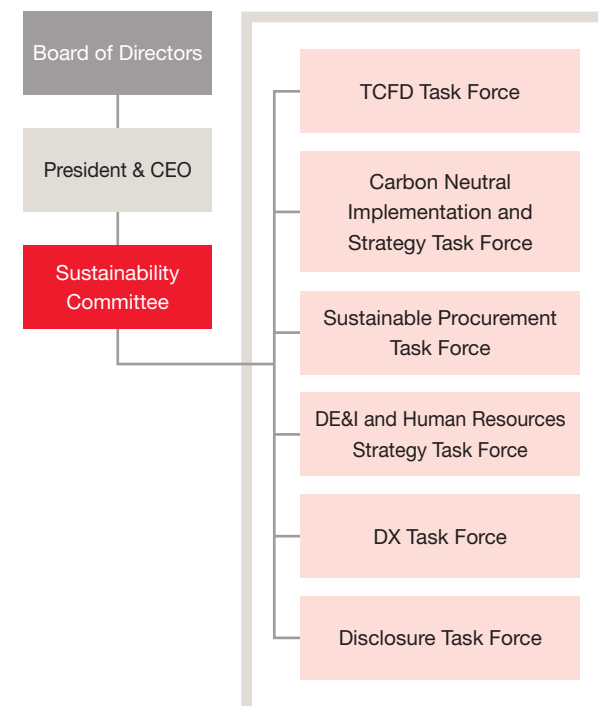
Furthermore, in January 2025, six task forces were reformed to develop a framework aligned with materiality, promoting more functional initiatives to address each of the challenges.

Sustainability Committee Structure

Implementation framework from in 2025



Ref) Previous framework



Activities of the Sustainability Committee

Frequency: 4 times/year

Main activities and agendas

- Achieving carbon neutrality
- Confirming the soundness of the supply chain
- Confirming the robustness of the supply chain
- Confirming progress of each initiative for Production DX, Operation DX, Business DX, and DX infrastructure development
- Initiatives for improving recruitment capabilities
- Initiatives to improve employees' engagement
- Diversity initiatives
- Respect for human rights
- Information disclosure to shareholders and investors
- Information disclosure related to climate change

Materiality

Under the sustainability promotion system, we clarified long-term key issues (materiality) that could impact our corporate value and the course of our management over the long term and identified key opportunities and critical risks.

Identified materiality

- Achieving carbon neutrality by 2050
- Providing products, technologies, and services that contribute to a sustainable society
- Management focused on DE&I and human capital
- Fair and equitable purchasing considering human rights and the environment
- Constructive communication with stakeholders

See p. 41 for details.

Process for identifying materiality

- STEP1** List the impacts of environmental changes on our businesses, reflecting on our management philosophy
Organize environmental changes closely related to the long-term direction of our business and clarify the material issues for the Group to tackle to realize our management philosophy
- STEP2** Consult guidelines and other resources to create exhaustive lists of material issues to accompany those from Step 1
Guidelines for reference : Sustainable development goals (SDGs), GRI Standards
- STEP3** Discussion and approval by management
Discuss the lists from Step 2 at the Sustainability Committee to identify material issues

Materiality

	Materiality	Risk
Achieving carbon neutrality by 2050	<ul style="list-style-type: none"> ● Conduct initiatives to achieve carbon neutrality (reducing CO₂ emissions) ● Promote energy-saving ● Use renewable energy ● Use carbon offsets flexibly 	<ul style="list-style-type: none"> ● Increased costs due to the introduction of carbon pricing, etc. ● Increased production costs due to the introduction of decarbonization technology ● Increased cost of procuring low-carbon raw materials and fuels
Providing products, technologies, and services that contribute to a sustainable society	<ul style="list-style-type: none"> ● Contribute to society-wide CO₂ reduction through business activities ● Expand eco-friendly products ● Create new businesses toward creating a sustainable society ● Promote R&D to advance our technical capacity and enhance our ability to meet needs 	<ul style="list-style-type: none"> ● Geopolitical risks in raw material procurement (impediments to dependable supply) ● Obsolescence of existing technologies ● Competitive deficits due to delays in accommodating a circular economy
Management focused on DE&I and human capital	<ul style="list-style-type: none"> ● Hire and cultivate human resources, ensuring consistency between medium- to long-term management strategy and human resources strategy ● Provide environments in which a wide variety of people can adapt and find their own ways to work with peace of mind ● Conduct business management with respect for everyone's human rights 	<ul style="list-style-type: none"> ● Reduced production capacity due to turnover and lack of successors ● Lowered social reputation due to delays in accepting diversity ● Lost opportunities due to work-related accidents ● Diminished trust from stakeholders due to a lack of consideration for human rights
Fair and equitable purchasing considering human rights and the environment	<ul style="list-style-type: none"> ● Raw material procurement with consideration for human rights and the environment ● Efforts toward sustainable, dependable procurement 	<ul style="list-style-type: none"> ● Difficulties in procurement (due to delays in response to social/environmental issues) ● Rising commodity prices ● Incidents in supply chains caused by lack of consideration for society and the environment ● Supply chain interruptions and surging raw material prices caused by abnormal/unseasonable weather
Constructive communication with stakeholders	<ul style="list-style-type: none"> ● Enhance information pertaining to business policies, business strategies, sustainability, compliance, etc. ● Improve corporate value through proactive disclosures ● Disclosures to a broad range of stakeholders 	<ul style="list-style-type: none"> ● Reduced corporate value due to insufficient quality or quantity of disclosures

	Opportunity	Key Activity	Related Pages
	<ul style="list-style-type: none"> ● Improvement of business viability through evaluation of corporate initiatives and response to changes in market values ● Promote research and development for decarbonization ● Conduct activities to improve production efficiency ● Environmental contribution activities for carbon offsets 	<ul style="list-style-type: none"> ● Participation in the GX League (Ministry of Economy, Trade and Industry) ● Research on new reduction technologies for ferroalloy production ● Utilization of wood cokes in ferroalloy production 	p.51-52
	<ul style="list-style-type: none"> ● Respond to increased environmental focus in purchasing behavior ● Respond to increased need for recycling technology ● Respond to expanding demand for materials that help save energy ● Respond to expanding demand for relevant materials due to electrification of automobiles ● Provision of products, technologies, and services that contribute to a decarbonized society 	<ul style="list-style-type: none"> ● Allocate resources optimally for creating new businesses ● Stable operations and production ● Quality inspections ● Invest in R&D proactively ● Consider collaboration through M&As and with other companies, universities, and research institutions 	p.27-38 p.55-56
	<ul style="list-style-type: none"> ● Strategic hiring of human resources the Group needs ● Cultivation of human resources capable of adapting to changes in the business environment ● Improvement of retention rates and employees' will to contribute by taking the initiative to exhibit their skills ● Improvement of corporate value by securing diversity and fostering inclusion in human resources 	<ul style="list-style-type: none"> ● Strategically sustain and strengthen the hiring of new graduates and mid-career transferees ● Improve employee engagement ● Establish systems and environments that encourage diverse human resources to succeed ● Efforts to encourage more active participation by women ● Rigorous occupational safety and health ● Establish trust-based relationships between labor and management ● Promote awareness of human rights 	p.43-48
	<ul style="list-style-type: none"> ● Strengthen supply chains ● Increase in opportunities for fair and equitable trade ● Increased demand for eco-friendly products based on awareness of green procurement ● Formation of new markets ● Stronger partnerships with dependable suppliers 	<ul style="list-style-type: none"> ● Request cooperation from suppliers regarding our procurement policy ● Evaluate and select suppliers ● Evaluate procured materials (raw/finished materials) 	p.57
	<ul style="list-style-type: none"> ● Improvement of stakeholder trust through the enriched disclosure materials and enhanced transparency of disclosures ● Improvement of corporate value through appropriate disclosures and dialogue ● Increase in foreign investors through extensive of English language disclosures 	<ul style="list-style-type: none"> ● Briefing sessions for shareholders and investors ● Disclosure regarding "Action to Implement Management that is Conscious of Cost of Capital and Stock Price" ● Expansion of the range of information disclosed in English 	p.57-58

Human Capital Management



Attractive Organization and Culture in Which Each Individual Can Fully Demonstrate Their Abilities

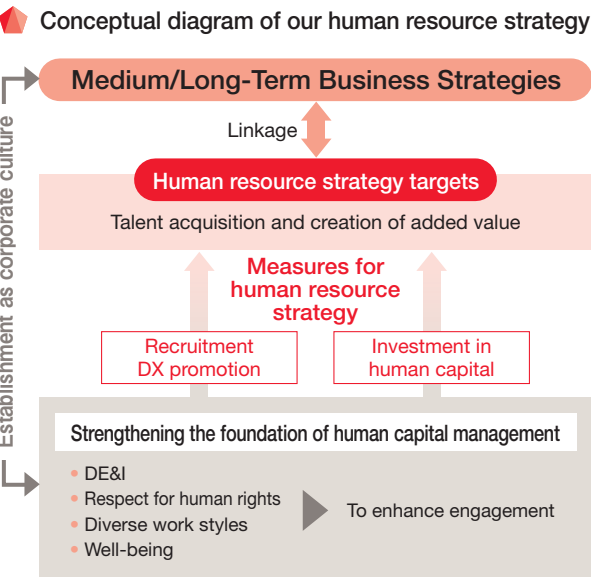
As a manufacturing company, we believe that the employees involved in each operation, including production, equipment maintenance/inspection, R&D, sales, and administration, grow and achieve results by gaining knowledge and skills through experience, which will strengthen our competitiveness and will lead to future development. Therefore, we consider increasing human added value through recruitment, retention, and development to be our important goals and we are taking various initiatives.

In terms of recruitment, the Company has updated our recruitment website and implemented several systems, including a career-track system for a specific area, to acquire necessary human resources by recruiting new graduates and mid-career workers.

Training is based on mainly on-the-job training. In addition to level-based training and assistance in acquiring the skills and certifications required at each job, we promote the development of professionals such as DX professionals. In addition to providing an “opportunity to learn,” we ensure that education and training are given while encouraging each employee to learn deeply.

Improving employees’ engagement is an integral part of human resource strategies, as it leads to job satisfaction and retention of human resources. We strive to improve scores by conducting engagement surveys and providing feedback on the results. Furthermore, we believe that the

implementation of appropriate salary hikes and the improvement of welfare programs are strongly related to improved engagement. Therefore, we will continue to invest in our employees, with the goal of creating an attractive organization and culture in which each individual can fully demonstrate their abilities, as well as engaging in human capital management.



Basic Policy

In an environment where the working population continues to decline, the Group considers that securing human resources to support its medium/long-term business strategy and increasing the value of each employee are the urgent issues to be addressed as our management challenges. We will strengthen recruitment activities while enriching our recruitment methods and tools. At the same time, we increase engagement by promoting DE&I by creating a system which enables diverse work styles. In order to realize “Our Ideal State in 2030”, we will promote initiatives to strengthen the foundation of human capital management, which is a core element of enhancing corporate value through sustainable growth.

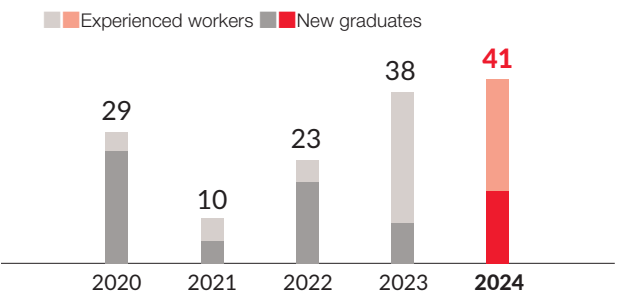
Human Resources Strategy

Our objectives are to secure human resources who can realize our medium/long-term business strategy and business sustainability and to develop human resources capable of creating added value. Therefore, we continue to invest in developing work environments with emphasis on sustainability including DE&I, respect for human rights, diverse work styles, and well-being as well as in human resources, to improve employees’ engagement. By establishing this strategy as part of our corporate culture, we aim to realize our medium/long-term business strategy.

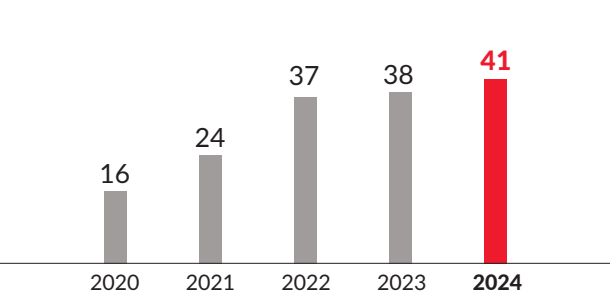
Initiatives on human resource strategy

Talent acquisition	
● Strengthening the brand for recruitment	● Consideration of a support system for scholarship refunds
● Initiatives to improve corporate brand recognition	● Introduction of a referral hiring system
● Introducing a career-track system for a specific area	● Improvement of working conditions
Creating human added value	
● Development and training	● DC&M activities
● Study program at educational institutions in Japan	● Dialogue between managers and the President & CEO
Strengthening the foundation of human capital management	
● Well-being management	● Promoting diversity
● Updating the personnel management system	● Recruiting athletes
● Improving the employee evaluation system	● Improving engagement

Trends in the number of hires (employees)



Trends in education and training expenses (million yen)



Talent Acquisition

Securing skilled human resources is essential for the Group's business growth amid a declining working population. While improving recruitment capabilities by increasing salaries and the popularity of the Company, expanding recruitment methods, and reviewing the personnel system, we are actively engaging in recruitment activities to secure and retain excellent human resources.

Strengthening the brand for recruitment

In a society where the labor market remains favorable for job seekers, we feel that the amount of information and usability of the website, which serves as the first point of contact with job seekers, are important. So, we have released a new special website for recruitment. In December 2024, we created content for clerical, technical, and research positions, and in April 2025, for skilled workers in plant operations and facility management. We also added interviews with employees and round-table discussions with female employees to create content that attracts the interest of diverse human resources, regardless of their technical skills or gender.



Special website for recruitment

Initiatives to raise the popularity of the Company

When job seekers send applications or accept a job offer, the popularity of a company is becoming more and more important. As a BtoB manufacturing company, our popularity is poor when compared to BtoC companies, and we are making efforts to boost it.

- "All Night Nippon" radio commercial (from January 2025)
- Sponsorship contract with the Ibaraki Robots (from December 2024)
- Holding a sponsored Kashima Antlers match (March 2025)

Related page: p. 58

Career-track system for a specific area

In March 2024, we launched a career-track system for a specific area with the goal of attracting and retaining individuals who want to be career-track employees, but are unable to transfer because of specific circumstances. We want them to obtain work experience in their preferred areas and eventually become highly skilled managers. In 2024, one individual was hired as a career-track employee for a specific area.

Support system for scholarship refunds

We plan to introduce a support system for scholarship refunds with the aim of strengthening recruitment and job security for career-track positions. By supporting the employees in reimbursing their scholarship, we will create an environment in which young employees can work with peace of mind for a long time.

Referral hiring system

In April 2025, the Company implemented a referral hiring system with the goal of acquiring human resources by introducing qualified individuals through personal ties. We believe that this will not only increase our recruitment capabilities, but also help us improve retention rate.

Compensation (improvement of working conditions)

The Company believes that it is important to improve working conditions of employees in order to realize a virtuous cycle of securing human resources, investing in human capital, and achieving business growth. In the spring labor offensive of 2024 and 2025, we raised the base pay to fully satisfy the labor union's request. Furthermore, in 2024, we also improved the position and working environment allowances for frontline workers. The Company will strive to realize a virtuous cycle of employees and business growth.

Creating Human Added Value

Recognizing human resources as the source of our competitiveness, we will create added value by providing education and training through mainly on-the-job training and growth opportunities.

Training for development

Level-based training

We conduct a variety of level-based training to develop human resources who will be responsible for the management of the company. Young employees are encouraged to develop the basic knowledge required of working adults, while mid-level employees are encouraged to develop their abilities necessary for cultivating subordinates and achieving organizational and team goals through leadership and management training. We encourage employees to develop themselves through a variety of training programs. Managers regularly undergo training sessions to learn the roles and attitudes appropriate for their respective positions, including training for newly appointed managers and for candidates for general managers. The Company is also working to develop candidates for the senior management who will promote sustainable management in response to changes in the environment. Through such training that involves young employees to managers and senior management, we aim to foster human resources who can put the management philosophy into practice and develop them as integral human resources of the corporate culture.



Training session

Active participation of women (training for female leaders)

In 2016, we established a Committee for the Promotion of the Active Participation by Women. Since then, we have continued to improve our in-house systems, provide training, and raise awareness through in-house public relations. Currently, we have set a target of increasing the ratio of female managers to 2% by 2027 in order to reflect diverse opinions in management. In 2024, we provided training for female leaders who were the candidates for the management. Currently, the ratio of female managers is 1.7%.

Study program at educational institutions in Japan (study at a junior college of industrial technology)

We have established a study program at educational institutions in Japan with the aim of developing human resources useful for the Company's operations.

Comments from a User



Asato Ishii
Engineering Technology Section
Engineering Department
Kashima Plant

After joining the Company, I worked in the ferroalloy manufacturing plant, performing operations, inspections, and maintenance in three shifts. After that, I worked as an apprentice for the inspection and maintenance of electrical equipment. During that time, I learned about the study program at educational institutions in Japan and decided to give it a try, and I studied at a junior college for two years.

This program has great advantages for people who want to learn on their own. Not only can they learn about electricity, but they also interact with people dispatched from other companies, and I think my perspective has changed compared to when I was working on-site two years ago. Of course, there is growth in the field, but it is also largely because I have acquired the habit of learning by having the opportunity to learn at school. While I was studying, I also acquired a qualification as a chief electrical engineer. The Company has not only a system of sending employees to junior college, but it also flexibly supports employees to obtain qualifications and attend training necessary for their work. I want to contribute to the growth of the Company while honing the value I can offer to the Company.

DC&M activities

Maintaining and improving practical capacities is essential to the sustainable growth of a company. Therefore, we have formulated an education and training plan to acquire skills and techniques related to manufacturing and equipment, and competence evaluations are conducted upon completion. Furthermore, with the goal of achieving "continuous improvement" and creating an "autonomous and strong workplace" that promotes growth, we are developing DC&M (Denko Circle & Management) activities on a company-wide scale, which are small-group initiatives with increased active management involvement.

Related page: p. 38

Dialogue between managers and the President & CEO

In April 2025, the President & CEO and all managers engaged in a dialogue, like in 2024. The managers prepared a report in advance on the theme "Questions to the President & CEO and Business Issues in 2025: How to Achieve Our Ideal State" and engaged in dialogue with the President & CEO. The members of the group exchanged their opinions on what should be done. In parallel with these efforts, we are promoting information sharing and active communication through dialogue at each workplace and level.

Strengthening the Foundation of Human Capital Management

Well-being management

Flexible work style

The Company is promoting a flexible work style with no restrictions on time and place. For clerical staff, we have adopted a flex-time work system and a telecommuting system. We have also established a career return system that allows employees who have left the Company due to childbirth, childcare, nursing care, or relocation of their spouses to re-join the Company.

- Telecommuting system
- Flex-time work system
- Career return system

Balancing work with childcare and nursing care

We have designed a system that allows employees to take leave according to their individual circumstances and life stages. We made it mandatory for employees to take at least six days of annual paid leave, which is more than the minimum needed by law, and have established an environment that encourages people to take paid leave. In 2024, 75.6% of employees used paid leave. In terms of childcare leave, we have implemented a system that goes above and beyond the legal requirements by paying salaries for a portion of the leave. When an employee or an employee's spouse becomes pregnant, we conduct an explanatory session on childcare leave and shortened working hours so that employee's whole family can make preparations for childcare. In 2025, we have implemented a paid special leave program for attending school activities. As a result of these efforts, we have obtained "Kurumin" certification for the first time in 2019 and the second time in 2021 and will continue to obtain Kurumin certification.

- System for taking paid leave on a half-day basis and mandatory use of six days per year
- Childcare leave program that goes beyond the legal requirements (partially paid)
- Shortened working hours for childcare (until the end of the third year of elementary school) and work restrictions (overtime, late at night, etc.)
- Allowances for babysitting fees
- Special leave for caring for a child (paid, up to 10 days)
- Special leave for attending children's school events (paid, up to 2 days)
- Nursing care leave program (period of nursing-care leave: 1 year) and leave for nursing (paid, up to 10 days)



Mental and physical health care

We provide allowances for medical checkups and follow up on the results so that employees can work in good physical and mental health and maximize their performance.

- Subsidizing the cost of complete physical examinations in addition to health checkups
- Full subsidies for specific health checkups that lead to early treatment of female-specific cancer diseases
- Allowances for the cost of vaccinations
- Implementing a stress check (establishment of a system to promptly conduct interviews with an industrial physician when it is determined that the worker is overworked)
- Establishing an external consultation service consisting of a group of specialists as a stress reduction measure

Updating the personnel management system

We have updated the personnel management system to improve operational efficiency and visualize human resource information. In the future, we will gradually expand access rights to employees and add new functions to create a more efficient and transparent job execution system.

Related page: p. 50

Improving the employee evaluation system (dialogue sheets)

In November 2024, we have modified the dialogue sheets used in the periodic review and made the evaluation criteria open to employees, with the goal of creating deeper dialogue between superiors and subordinates and achieving "Our Ideal State in 2030." Individual goals related to the realization of "Our Ideal State" are established in the new dialogue sheets at the start of the fiscal year, and progress toward the goals and the process are reviewed throughout and at the end of the fiscal year. We aimed to create an employee evaluation system in which superiors and subordinates can communicate in every situation and share their findings and issues, allowing them to take the next step with confidence.

Diversity promotion

Active participation by people with disabilities

We are working to promote employment and create a productive workplace environment for people with disabilities, as we consider that this is an important social issue. In May 2024, we held an in-house seminar on this theme to deepen awareness of the employment of people with disabilities. We will continue to recruit and maintain those employees and create an environment in which they can play an active role. The employment rate in 2024 was 1.88%.

Active participation by senior talent

The mandatory retirement age has been set at 65 years old so that employees with plenty of knowledge and experience can continue to work after reaching 60 years old, which maintains and strengthens practical capacities and ensures stable life. We have established a consistent employment system in which employees engage in the same work even after turning 60 years old.

Recruiting athletes

Recruiter's Voice



Hiroki Morinaga
General Manager of the
Personnel Department

We have begun recruiting athletes and are pleased to welcome Ibuki Innami (pitcher, Kashima Blue Wings, Nippon Steel Corporation) as an athlete fresh out of college. This initiative goes beyond mere corporate PR and aims to motivate employees and contribute to the local communities through the attitude of athletes who continue to take on challenges. While I appreciate Innami's sports endeavors, I believe his efforts and ideals will bring fresh ideas to the Company's management and work style reforms. Under this policy, we have hired the athlete for the first time and will create an environment in which athletes can balance athletic competition and business activities, in addition to providing a framework to support them in their professional development. We will continue to use sports to improve the vitality of the community and our employees, while also aiming for a sustainable future as a company.

Improving engagement

The improvement of willingness to contribute to a company and attachment to a company is closely related to the retention of human resources and improved organizational strength. Since 2023, we have been conducting regular engagement surveys to visualize issues. In 2024, employees at the Tokyo Head Office and the Osaka Office were individually interviewed about their thoughts and questions, and efforts were made to identify problems in each organization. In the future, we will continue to conduct regular surveys and strive to identify and address issues while improving engagement.

Respect for Human Rights

We recognize that compliance with laws and regulations and respect for human rights are not only social responsibilities companies must fulfill, but also essential ethical standards in realizing our management philosophy. Based on this belief, we have formulated the "Nippon Denko Group" Basic Policy on Human Rights." By creating an open workplace that respects human rights, we aim to be a company in which each employee, regardless of gender, nationality, or educational background, can make the most of his or her individuality and strengths and diverse human resources maximize their various attractions.

Nippon Denko Group' Basic Policy on Human Rights

- | | | |
|-------------------------------|--|------------------------------|
| 1. Respecting human rights | 4. Prohibiting forced and child labor | 7. Education and training |
| 2. Eliminating discrimination | 5. Ensuring occupational safety and health | 8. Disclosure of information |
| 3. Prohibiting harassment | 6. Relief efforts | |

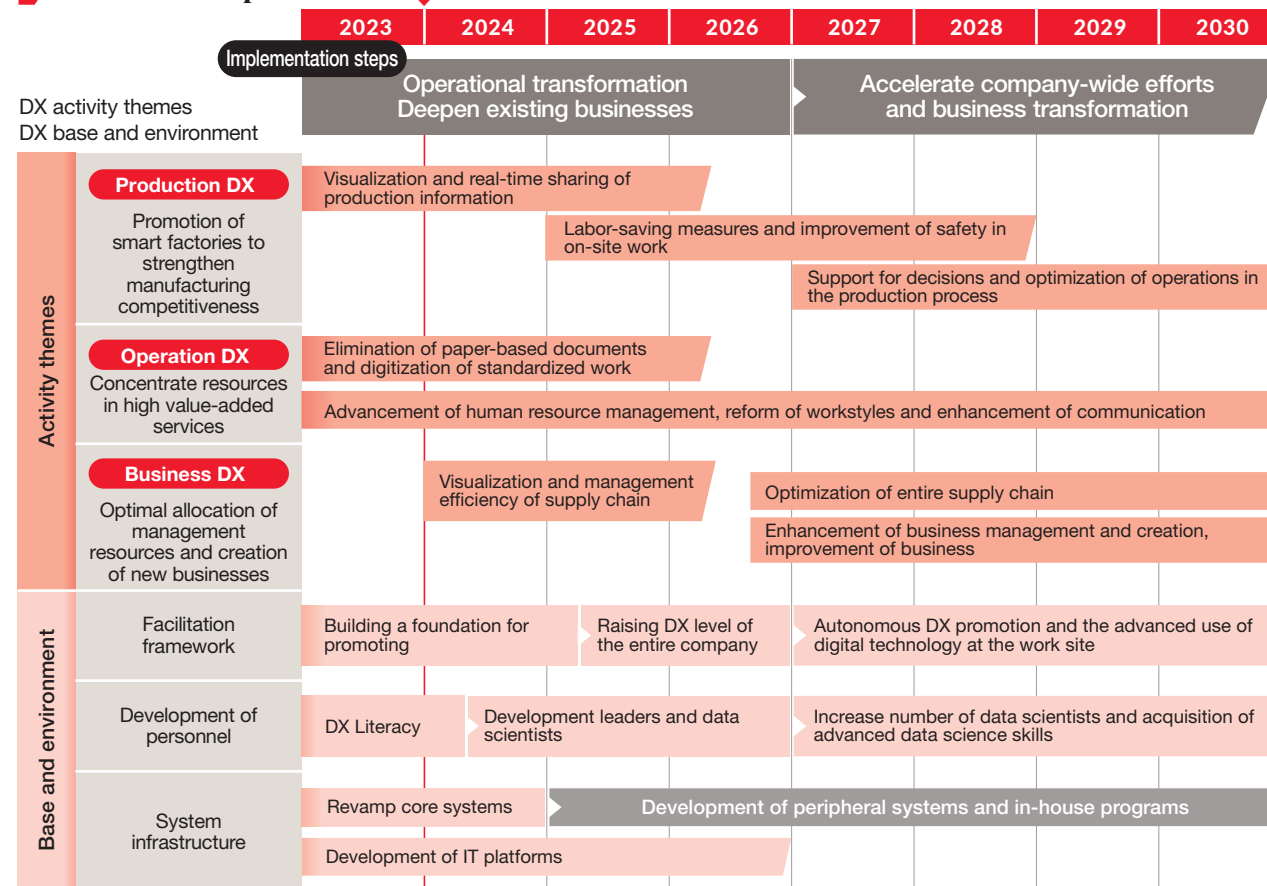
Digital Transformation (DX) Strategy

DX Vision

Realizing optimal manufacturing and creation of new value through digital transformation and self-innovation

The Group has classified the areas in which DX Vision will be realized into the three categories of “Production,” “Operation,” and “Business” and we will create new value in each of these areas. Production DX targets plants and strengthens manufacturing competitiveness through the introduction of smart factories. Operation DX targets back-office operations and focuses resources on high value-added services by improving operational efficiency. Business DX promotes the optimal allocation of management resources and creation of new businesses for business growth. We are also building a foundation for DX promotion by developing a system to improve productivity and quality of work, as well as a promotion system to autonomously realize DX while developing workers with specialized skills.

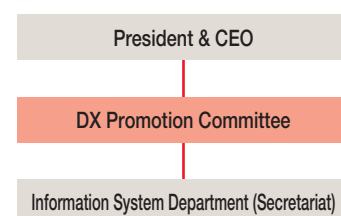
DX Road Map



Pick UP

Establishment of a DX Promotion Committee

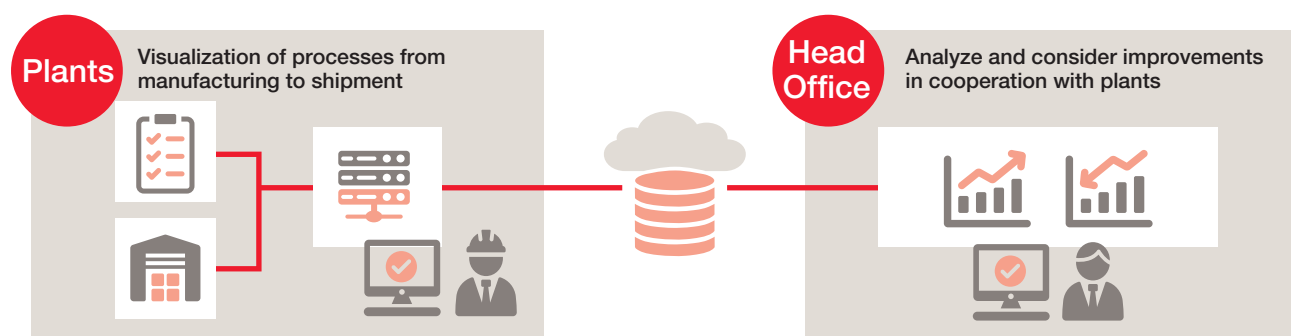
In order to further accelerate DX activities, a DX Promotion Committee was established with the President & CEO as chairperson in January 2025. Based on the company-wide strategy, we plan to hold four meetings a year under the policy of promoting DX while maximizing return on investment and realizing overall organizational transformation. The committee's main activities are following up on DX initiatives in line with the DX Vision and DX roadmap, managing DX strategies and investment plans, and establishing a DX culture.



DX Initiatives

Smart factory development

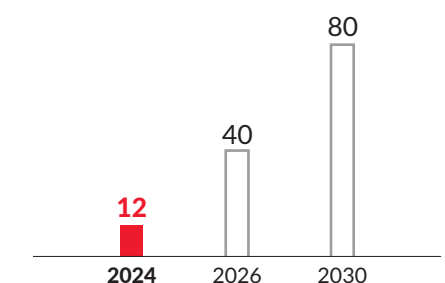
As the first stage (Phase 1) of smart factory development, we aim to improve production efficiency and operational efficiency by visualizing production information. In 2024, investments were made in the Tokushima Plant (zirconium oxide) and the Koriyama Plant (aqua solutions), and in 2025, we will consider installing the system in the Kashima Plant (incineration ash recycling) and the Tokushima Plant (ferroalloys). Specifically, we will adopt a traceability system that enables digital tracking of the entire flow from manufacturing to shipping (manufacturing, inspection, and warehousing). By building a foundation for visualizing and analysing the collected data, we aim to optimize inventory across the entire plant, improve operational efficiency, and strengthen quality control. Furthermore, by creating an environment in which the sales and manufacturing departments can share collected operational data and digital data related to equipment in real time, we aim to improve operational efficiency based on a multifaceted perspective. This information sharing will promote rapid decision-making and strengthened collaboration, and through continuous improvement activities, we will promote the creation of smart factories and strengthen competitiveness.



DX human resource development

We are promoting systematic human resource development with the goal of having 80 advanced DX human resources (DX promotion leaders and data scientists) by 2030. In 2024, we selected personnel based on the previous year's e-learning results and implemented a specialized skill acquisition program and group training. As a result of this initiative, 12 individuals are expected to be certified as advanced DX human resources after passing a qualification exam. In 2025, we will continue the same educational program and promote the development of human resources equipped with the knowledge and skills necessary to lead digital transformation.

Development plan of advanced DX human resources (persons)



Talent management

We are installing a new human resources system (Talent Palette) with the aim of centralizing the human resource information currently managed at each business site and conducting data-based human resource development and personnel management. This will enable us to link and visualize employees' qualifications, work experience, education and training records, thereby clarifying development and transfer plans, and promoting career development of our employees. In addition, creating an environment that allows hierarchical access to centralized personnel information will improve operational efficiency by enabling various application procedures to be carried out in the system. The new human resources system has been operational since April 2025. We will continue to expand the scope of human resource information management as a tool for human resource strategy, linked to the management strategy.



Talent Palette

Response to Climate Change

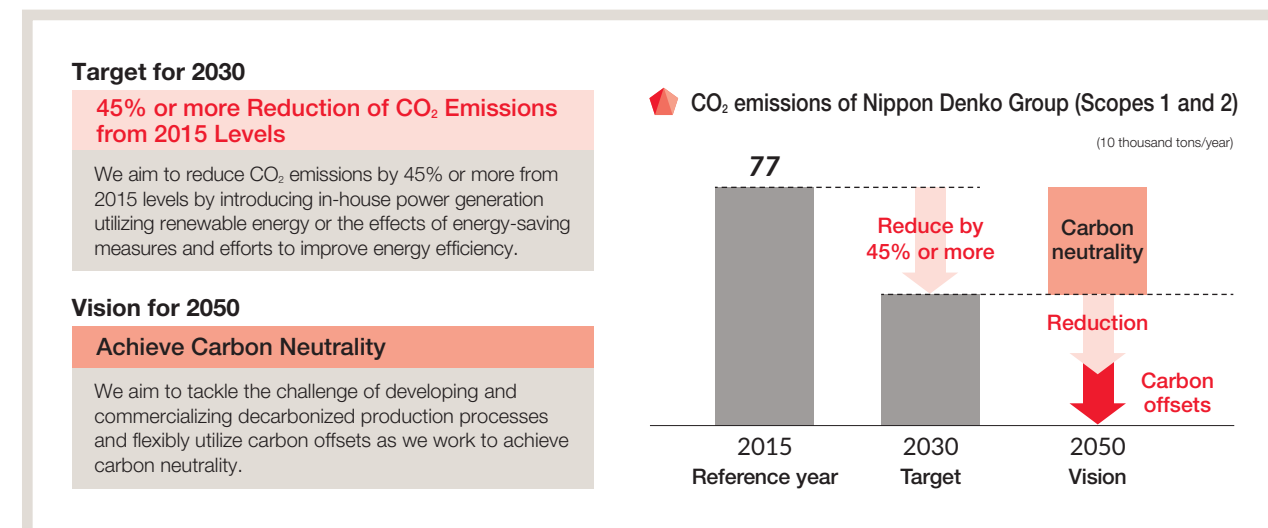
Initiatives to achieve carbon neutrality

The Group recognizes global climate change as a major threat to the survival of humanity, and thus views bold efforts to achieve carbon neutrality by 2050 to maintain a sustainable global environment and realize decarbonization as a key challenge of sustainability management.

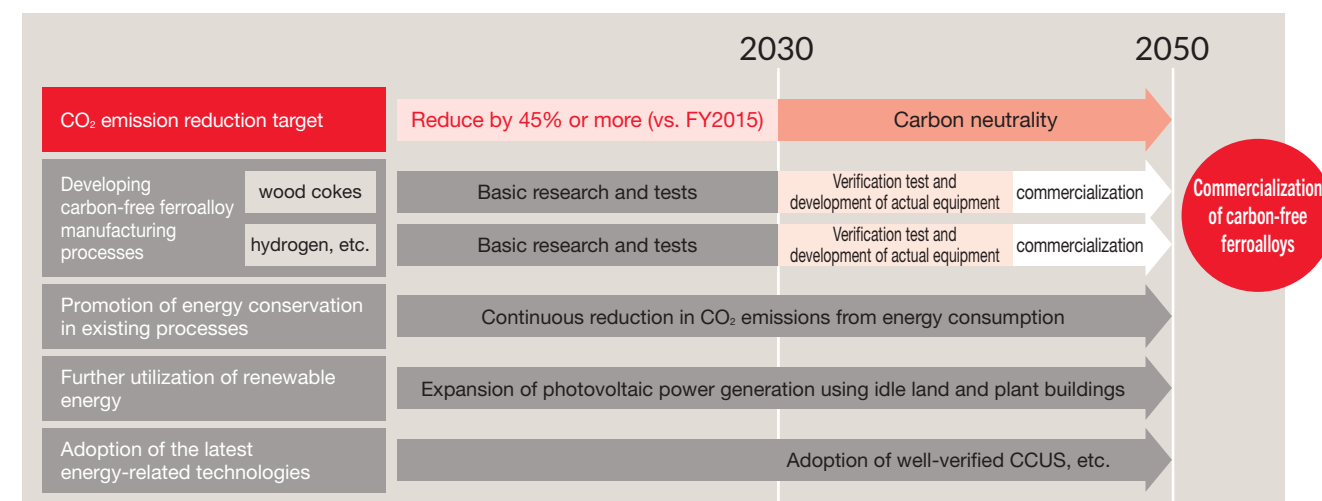
To tackle this key challenge, in 2022, we formulated policy for achieving carbon neutrality by 2050, and are moving forward with business, and R&D to reduce CO₂ emissions.

CO₂ Emissions Reduction Scenario

The Group has up until now engaged in proactive energy-saving activities, transitioned to higher energy efficiency, and made other efforts to reduce CO₂ emissions, and has launched initiatives to achieve the target of reducing emissions by 45% and more from 2015 levels by 2030 in an effort to achieve carbon neutrality by 2050.



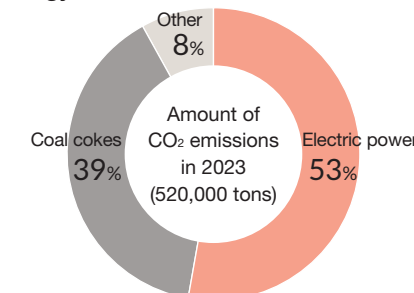
Roadmap Toward Carbon Neutrality



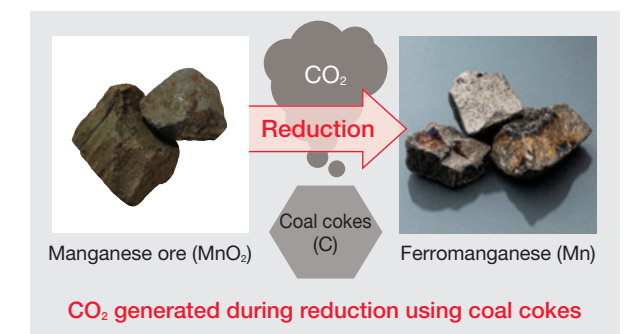
Efforts to Reduce CO₂ Emissions

The Group produces ferroalloys—namely ferromanganese, one of its main products—by using a reduction reaction that removes oxygen from naturally occurring manganese ore. This reduction reaction inevitably produces CO₂ emissions because coal cokes is currently the optimal reduction agent for the process. The Group will continue transitioning to higher efficiency electricity and gas and converting to green energy in addition to tackling the challenge to develop and commercialize an innovative manufacturing process for reducing CO₂ emissions in the process of manufacturing ferroalloys.

CO₂ emissions ratio of the Nippon Denko Group by energy source



Reduction reaction used in ferroalloy production



Initiatives

Research on innovative high-carbon ferromanganese reduction technology

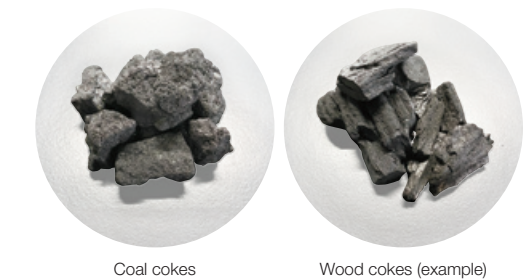
We proposed “The Technology Development for Decarbonization and Energy Conservation in the Ferromanganese Production Process” for the Phase of Incubation Research and Development of the “Program to Develop and Promote the Commercialization of Energy Conservation Technologies to Realize a Decarbonized Society,” which is publicly solicited by New Energy and Industrial Technology Development Organization (NEDO), and our proposal was adopted in June 2024. This proposal is based on the results obtained during the feasibility study research phase of the same program in 2023.

We will promote technological development towards the practical application of an innovative manufacturing process that will lead to reduced CO₂ emissions and energy conservation in the reduction reaction process of ferroalloy production.

Utilization of renewable wood cokes

The use of coal cokes in the reduction of manganese ore generates CO₂. Therefore, we are working to reduce CO₂ emissions by using renewable wood cokes as a reducing agent instead of coal ones.

Our plan is to replace around 15% of coal cokes with wood cokes by 2030. To this end, we are currently promoting technological development for the use of wood cokes. This includes evaluating the quality and cost of wood cokes from multiple production areas, conducting basic research at the laboratory level in collaboration with external research institutions, and carrying out trials using actual electric furnaces at the Tokushima plant.



Promotion of energy conservation measures

We have been working to improve our energy consumption per unit of production, and we have been ranked in the highest S (excellent business operator) class for five consecutive years until 2024 in the business class evaluation system implemented by the Agency for Natural Resources and Energy based on the Act on Rationalization of Energy Use and Shift to Non-fossil Energy. The class S is given to businesses that have achieved the target of reducing their average energy consumption per unit of production by 1% or more over a five-year period. We will continue to promote energy conservation measures, such as updating and renovating the equipment used in the current manufacturing processes in order to reduce energy consumption by 1% or more each year.

Participation in the Green Transformation (GX) League

We support the “GX League Basic Concept” proposed by the Ministry of Economy, Trade and Industry, and have been participating in the “GX League” since 2023. The GX League is a platform for companies taking on the challenge of GX. These companies aim to achieve carbon neutrality and social transformation by 2050, as well as sustainable growth in present and future societies. The GX League enables these companies to collaborate with other companies engaged in similar initiatives, including government and academic institutions. By participating in the GX League, we will accumulate knowledge and know-how on reducing CO₂ emissions and promote sustainability-oriented management.



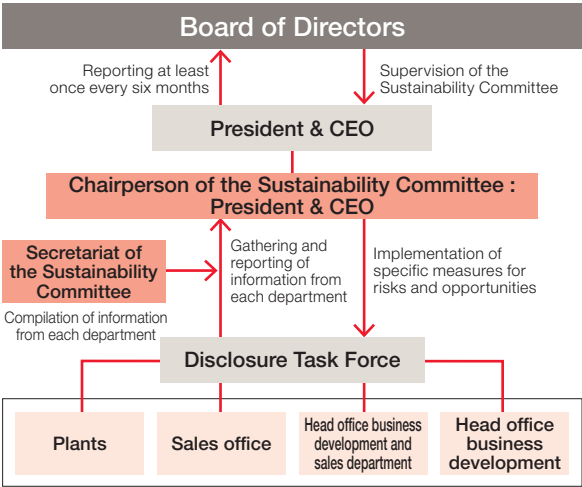
Climate-related disclosures based on TCFD recommendations

The Group recognizes global climate change as a major threat to the survival of humanity, and thus views bold efforts to achieve carbon neutrality by 2050 to maintain a sustainable global environment and realize decarbonization as a key challenge of sustainability management. As part of this initiative, in February 2022, we announced our endorsement of the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and will disclose important information related to climate change in line with the TCFD framework as follows.

Governance

In January 2022, the Group established the Sustainability Committee as an organization directly under the Board of Directors to promote sustainability initiatives, including the response to climate change, and to further enhance corporate value in the medium/long term. This committee meets once a quarter and is chaired by President & CEO. The Sustainability Committee reviews company-wide measures and monitors initiatives (reduction of GHG emissions as a KPI). In addition, the committee chairperson will report on the matters discussed at the committee to the Board of Directors at least once every six months, and the Board of Directors makes recommendations to the Sustainability Committee on issues related to sustainability and climate change that have been discussed at the committee.

Structure for coping with climate change



Strategy

Analysis process

The Group believes that to realize sustainability management, it is important to analyze the impact of climate change on our business by classifying and risks and opportunities and ensure that our corporate management reflects appropriate responses. So, we have taken the following steps to review the risks and opportunities that climate change issues pose to our business. Specifically, using two climate change scenarios, the 1.5°C to 2°C scenario and the 4°C scenario, we conducted analyses related to the transition in policies and market trends (transition risks/opportunities) as well as an analysis of physical changes due to disasters (physical risks/opportunities).



About climate change scenarios

1.5°C to 2°C scenario (decarbonization scenario)

This scenario aims to limit the rise of global average temperature to less than 1.5°C to 2°C compared to pre-industrial times, as efforts to achieve carbon neutrality become more active in order to mitigate the impact of climate change. In the 1.5°C scenario, it is assumed that among the transition risks, the impact of policies and regulatory risks will be greater than in the 2°C scenario.

4°C scenario (high-emissions scenario)

This scenario assumes that no progress will be made in measures against climate change, and that the global average temperature will rise by approximately 4°C by the end of this century compared to pre-industrial times. It is assumed that the impact of extreme weather events and the risk of rising sea levels will increase in terms of physical risk.

Assessment of impacts of risks and opportunities and selection of countermeasures

In the below-2°C scenario, there is a risk of increased costs due to the need to switch to renewable energy and low-carbon materials due to stricter regulations, while in the 4°C scenario, there is a risk of increased costs due to intensifying natural disasters. On the other hand, opportunities are expected to arise from the expansion of environmentally conscious businesses.

Risk	Classification	Factors	Details of the Risk	Timeline	Impact Level	Countermeasure
Transition risk	Policies/Legal regulations	Introduction of GHG emission regulations, carbon taxes, and the like	Profitability compromised by the increased cost of fossil fuels and other elements of manufacturing	Medium term	Large	• Use of renewable energy • Purchase of non-fossil certificates • Promotion of energy conservation
		Increase in the rate of renewable energy (change in power supply structure)	Rise in electricity costs due to measures by electric power companies to increase the ratio of renewable energy	Medium term	Large	• Promotion of energy conservation
	Market	Increase in the cost of procuring manganese ore	Distribution costs increase as mining and transportation are decarbonized	Medium term	Medium	• Price pass-through for product selling prices • Consideration of low-carbon transportation
		Increase in the cost of procuring reducing agents	Increased costs associated with procurement of low-carbon reducing agents (wood cokes, etc.)	Medium term	Medium	• Consideration of procurement sources to reduce procurement costs
Physical risk	Acute	Intensifying natural disasters (flooding and storm surges)	Deterioration in earnings due to suspension of business activities resulting from inundations at plants	Long term	Medium	• Short/medium term: Expansion of drainage facilities • Long term: Reinforcement of disaster prevention measures of plant facilities
		Intensifying natural disasters (typhoons)	Deterioration in earnings due to suspension of business activities resulting from typhoon damage	Long term	Medium	

Opportunity	Classification	Factors	Details of the Opportunity	Timeline	Impact Level	Countermeasure
Opportunity	Products and services	Consumer preference for low-CO ₂ products	Growth of demand for green ferroalloys (Pertama Ferroalloys, an equity-method affiliate, manufactures ferroalloys [green ferroalloys] using hydroelectric power only)	Medium term	Medium	• Continuation of stable operations
		Evolution into a hydrogen based society	Growth of demand for pure water production system used in hydrogen production	Medium/long term	Small	• Strengthening R&D
	Market	Spread of EVs	Growth of demand for batteries and electronic components due to the spread of EVs (battery materials, boron oxide, zirconium oxide, ferroboron, etc.)	Medium term	Medium	• Continuation of stable operations • Strengthening R&D

• Scenarios used: [Transition risks] IEA WEO2023 NZE2050 [Physical risks] IPCC RCP8.5 and IPCC AR6 SSP5-8.5
• Timeline: [Short term] within 1 year [Medium term] till 2030 [Long term] till 2050
• Impact level: [Large] Profit before income taxes of 1 billion yen or larger [Medium] Profit before income taxes of 100 million to less than 1 billion yen [Small] Profit before income taxes of less than 100 million yen

Risk Management

Process for identifying and assessing climate-related risks

After the TCFD identifies risks associated with climate change and we report them to the Sustainability Committee, the committee discusses the risks once a year. Risks that are deemed particularly important are reported to the Board of Directors once a year.

Process for controlling climate-related risks

The Sustainability Committee will monitor the identified climate change risks and deliberate countermeasures. After reviewing the countermeasures, the Sustainability Committee will share them with relevant departments and take action to mitigate the risks.

Integration process for company-wide risk management

We have established an Internal Control Committee to manage non-climate-related company-wide risks identified by each department and group company in a unified manner. The Sustainability Committee reports transition risks, physical risks, and countermeasures to the Internal Control Committee, which then reports to the Board of Directors.

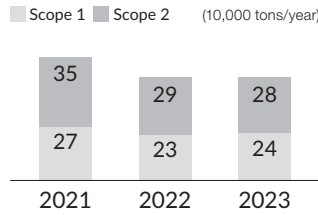
Risk review process



Metrics and Targets

The Group has announced a target to reduce CO₂ emissions by 45% and more from 2015 levels by 2030 as described on p. 51. We will continue working to reduce CO₂ emissions by introducing in-house power generation utilizing renewable energy, implementing energy-saving measures, and striving to improve energy efficiency. We will also start fundamental research on innovative decarbonized processes for manufacturing carbon-free ferroalloys, continue the transition to green-energy fuels, and make other efforts to proactively introduce the latest equipment and technology to dramatically improve productivity.

CO₂ emissions



CDP Score: “B” rating for climate change in 2024

CDP is a UK charity-controlled non-governmental organization (NGO) that operates a global information disclosure system to help investors, companies, nations, regions, and cities manage their own environmental impact.

Safety / Environment / Disaster Prevention / Product Quality

Safety and Health

The Group is augmenting its occupational safety and health management system and engaging in activities to ensure the safety and health of its employees under the safety and health basic policy.

Basic Policy

- Respect human life in the execution of all operations under the assumption that ensuring safety and health is the utmost priority
- Strive to prevent work-related accidents under the belief that prevention is the foundation of safety and health management activities

Creating a Secure and Safe Workplace

We believe that it is important to predict and mitigate risks in order to prevent work-related accidents, and we consider “reliably predicting hazards” and “identifying and addressing risks” as important measures for safety activities. However, five disasters that forced the injured employees to take days off occurred in 2024 due to insufficient risk awareness and an inadequate response to changes in work procedures. In response to this, the plant and the head office worked together to review the inspection system including management, identify potential risks in the workplace, and re-establish work standards with the aim of creating a more secure and safer workplace environment.

In addition, we have introduced video-based work instructions on a trial basis for workplaces that are unable to secure sufficient on-site training periods due to operational circumstances, as these are highly effective for learning. We are setting up a system that enables employees to receive training anywhere anytime by using mobile devices. We will continue to develop video-based work instructions and efficient implementation methods. Then, we will proceed with the full-scale adoption at each location, focusing particularly on high-risk tasks.

Furthermore, last year, we implemented risk experience training using VR (virtual reality) that focused on themes directly related to serious accidents in an effort to increase the risk sensitivity of employees. This year, we will expand our range of experiential scenarios focusing on past disaster trends and familiar risks, while introducing low-floor oscillation devices to enable more effective experiences, with the aim of further improving risk sensitivity. We will actively continue measures for securing the safety of employees.



Video-based work instructions

Target Number of disaster response incidents: 0

Comments from participants who experienced the VR-based risk experience device

- The visuals were superb and the sound quality was high, giving me a sense of a real-life experience.
- VR was more realistic than educational videos, allowing me to feel the danger more vividly.
- I realized that injuries can happen in an instant, and I recognized the importance of disaster prevention measures.

Acquiring Certification from Third-Party Organizations

The Group uses its ISO 45001 management system to create a structure for eliminating work-related accidents and other forms of risk with the aim of creating work environments where employees can work with a sense of safety and security. We obtained the certification for the Myoko Plant in August 2023 and for the Toyama Plant in April 2024 for a total of 4 plants including the already certified the Tokushima Plant and the Kashima Plant. We will make continuous efforts to get the certification for all of our plants.



Creating Comfortable Workplaces and Promoting Physical and Mental Health

The Group promotes new 5S training and makes other efforts to ensure and maintain comfortable work environments, and steadily implements measures to improve facilities with the aim of preventing occupational diseases. We also promote employee health care through measures such as coordinating with industrial physicians to accommodate work style reform, conducting stress checks and promoting measures for mental health, and raising awareness about the many ways to prevent lifestyle-related illnesses, lower back pain syndrome, and the loss of physical capacity.

Environment

The Group is undertaking activities to contribute to the development of a sustainable society by striving for regional environmental conservation through proper responses to environmental risks under our Basic Environmental Policy and in compliance with laws and regulations.

Environmental Risk Management

The Group uses its ISO 14001 Management System to undertake proper responses to environmental risks in addition to continuously promoting environmental conservation activities. Regarding the air, water, land, waste disposal, and other relevant matters, we conduct environmental impact assessments tailored to the materials we handle, our facilities, and more, and undertake necessary and proper measures to reduce environmental impact.

Environmental education

We make efforts to enhance education and training to prevent accidents, for example by regularly providing our employees with education and practical training on environmental management. We aim to decrease the number of environmental incidents to zero through these initiatives.

Target Number of environmental incidents: 0

Disaster Prevention

The Group has established systems for disaster prevention management and disaster response and banded together to engage in other disaster prevention activities to enhance each and every employee’s capacity for disaster prevention with the aim of eliminating disaster response incidents.

Disaster Risk Prevention Activities

The Group has established manuals and conducts drills for responding to typhoons, earthquakes, tsunami, and other natural disasters, and also takes steps to reduce risk in responding to fires, explosions, and other plant disasters, specifically by conducting risk assessments in each location to identify disaster risks, deploying technical and organizational measures to reduce the risks and managing any residual risks, and conducting various drills (e.g. general disaster prevention drills, first-response drills for fires).

Target Number of disaster response incidents: 0

Product Quality

Under our Basic Quality Policy, the Group promotes activities to improve quality and enhance trust with the aim of providing products and services that satisfy customers.

Basic Policy

- Comply with laws and regulations
- Consistently provide products and services satisfying each customers’ requirements
- Reduce risks of improper cases regarding quality assurance
- Continuously improve quality management systems

Quality Management

The Group has established a quality management system based on ISO 9001, and all employees involved in manufacturing and services work together to promote its implementation. By utilizing this system and appropriately managing the entire process of providing products and services to our customers, we aim to continuously deliver high-quality value.

Quality management activities are led by the product quality assurance departments at each plant, which promotes autonomous operations. When issues arise, we work closely with our head-office divisions to ensure a swift and appropriate response. We also implement a continuous training program to ensure that all employees are familiar with the importance of complying with quality standards and basic rules. Furthermore, we identify and correct quality risks through internal quality audits and quality patrols, thereby raising employee’s awareness of quality and working to prevent quality issues before they occur.

In addition, we are actively addressing issues such as standardization, systematization, and automation. This allows us to improve the reliability of testing and inspection related to product shipment and strengthen our system for providing peace of mind and trust to our customers.

Stakeholders Engagement

We have defined “constructive communication with stakeholders” as one of our materialities and aim to improve our corporate value by disclosing more information.

	Approach	Means of Communication
Shareholders and Investors	<p>The Company discloses important information for investment decisions in a timely and appropriate manner, and promote understanding of the Group through various engagement activities.</p> <p>We disclose the reference material of a financial results briefing session, which is held twice a year, and upload related videos and transcripts onto the website.</p> <p>In 2024, we held our first company information session for individual shareholders. We plan to continue providing opportunities for individual investors to learn about the Company also in 2025.</p>	<ul style="list-style-type: none">● Financial results briefing session (February and August)● 1-on-1 meetings (21 times in fiscal 2024)● Briefing for individual shareholders (held on October 9)
Employees	<p>Human resources are the source of our competitiveness and we promote initiatives in human capital management.</p> <p>Please refer to p. 44 for more details on the basic policy on human capital management.</p>	<ul style="list-style-type: none">● Engagement survey● Enhancement of education and training● Dialogue with labor unions
Business Partners	<p>The Group promotes collaboration, coexistence, and mutual prosperity throughout its supply chains based on the “Partnership-Building Declaration,” and engages in fair and equitable trade based on its management philosophy. Additionally, based on our basic policy for procurement, we work with our suppliers to engage in procurement activities that account for compliance, reducing environmental impact, respecting human rights, labor standards, and other social responsibilities, and to promote efforts to combat climate change and other environmental issues, respect human rights, and resolve other social issues.</p> <div><p>Basic Policy for Sustainable Procurement</p><ul style="list-style-type: none">● Rigorous compliance● Consideration for reducing the environmental impact of procurement activities● Respecting human rights, consideration for work environments● Providing opportunities for competition through fair and equitable trade● Ensuring the safety and competitiveness of our products and services● Responsible mineral procurement● Establishing trust-based relationships<p>Please visit our website for further details. https://www.nippondenko.co.jp/en/sustainability/society/</p></div>	
Local Communities	<p>For the Company, which has plants and offices at six locations in Japan, communication with local communities is extremely important for smooth business operations. Furthermore, given the declining birth rate and aging population, which are leading to a decrease in the younger generation, it is important for the Company, which provides products and services to businesses, to increase its presence in each region in order to secure human resources. As we celebrate our 100th anniversary of our founding, we will actively engage in communication with the local community more than ever before.</p>	<ul style="list-style-type: none">● Participation in local events● Measures to raise awareness in areas where we operate our plant

(Specific examples)

Shareholders and Investors

Briefing session for individual shareholders

On October 9, we held our first company information session for individual shareholders, with a total of 43 shareholders participating in person and online. On the day of the briefing, President & CEO Aoki presented an overview of the Company, its structural reforms and growth investments, and its new shareholder return policy. Shareholders then asked a number of questions. The Company is involved in the B2B materials industry, which is unfamiliar to the general public, and it can be difficult to understand all aspects of our business. However, in the follow-up survey, we received many positive comments saying that the briefing session helped them better understand our business through communication. A video and transcript of the event are available on our website under “To Individual Investors” page.



Scene of the briefing session for individual shareholders

Local Community

Sponsoring the Kashima Antlers match and inviting high school students

We have been supporting the Kashima Antlers as a club partner since 2023. In commemoration of the 100th anniversary of our founding in 2025, we sponsored a match on March 29 during the 7th round of the 2025 Meiji Yasuda J1 League. On the day of the event, we decorated the stadium and held a kick-off ceremony led by President & CEO Aoki to promote the Company's name and logo. We were also able to communicate directly with many Antlers supporters at our outdoor booth. In addition, in order to raise popularity of the Company in recruitment activities, we are currently implementing a project to invite ten high school students to every Kashima Antlers home game in 2025. This project has been well received, and we have received many applications from interested students.



Scene of the stands at the sponsored Kashima Antlers match

Sponsorship agreement with the Ibaraki Robots

In December 2024, we signed a bronze sponsorship agreement with the Ibaraki Robots of the B. LEAGUE B1 professional basketball league. The Ibaraki Robots is a club based in Mito City and Tsukuba City, with activities throughout Ibaraki Prefecture. Our Kashima Plant is responsible for the Incineration Ash Recycling business, which plans to increase its electric furnaces as part of our Medium/Long-Term Business Plan. It is also essential to raise popularity in terms of recruitment activities. By supporting the Ibaraki Robots, we will raise our profile in the prefecture and contribute to the regional revitalization through communication with many supporters and local residents.



Ibaraki Robots logo mark

Myoko City 20th anniversary event

We sponsored the first “Myoko Fireworks, Shumisen Festival” held in January 2025. This festival was held to commemorate the 25th anniversary of Michi-no-Eki (roadside station) Arai and the 20th anniversary of Myoko City, and it was also a milestone event for the Company, which has a plant in Myoko City and is celebrating its 100th anniversary. On the day of the event, handheld fireworks and other performances were held, entertaining the many visitors to the roadside station. In addition, we conducted PR by displaying products and installing panels that showcased the history of the Myoko Plant, in a company introduction space set up in part of the roadside station.



Scene of Myoko Fireworks, Shumisen Festival

Corporate Governance

Executive Management (as of April 1, 2025)

Directors



Yasushi Aoki
President & CEO

Apr. 1983 Joined Nippon Steel Corporation (the former company of the current Nippon Steel Corporation before business integrations; English name remains the same)

Apr. 2007 Head of Bangkok Representative Office
Jun. 2009 Seconded to Nippon Steel (Thailand) Co., Ltd.
Apr. 2011 Head of Raw Materials Division-I of Nippon Steel Corporation (the former company of the current Nippon Steel Corporation before business integrations; English name remains the same)

Apr. 2015 Executive Officer and Head of Raw Materials Division-II of Nippon Steel & Sumitomo Metal Corporation (currently Nippon Steel Corporation)

Apr. 2018 Managing Executive Officer, Raw materials
Mar. 2020 Director and Executive Vice President of the Company
Jan. 2021 President & CEO (current position)



Jiro Kobayashi

Director
Senior Managing Executive Officer
In charge of matters relating to corporate planning and overseas business management, and President & CEO's special assignment

Apr. 1988 Joined Nippon Steel Corporation (the former company of the current Nippon Steel Corporation before business integrations; English name remains the same)

Apr. 2013 Head of European Office of Nippon Steel & Sumitomo Metal Corporation (currently Nippon Steel Corporation)

May 2017 General Manager of Corporate Planning Department

Apr. 2019 Executive Counselor and Head of Raw Materials Division-II of Nippon Steel Corporation

Apr. 2023 Executive Officer and in charge of raw materials, machinery and materials; Head of Raw Materials Division-II

Mar. 2024 Director and Senior Managing Executive Officer; in charge of matters relating to corporate planning and overseas business management of the Company

Jan. 2025 Director and Senior Managing Executive Officer; in charge of matters relating to corporate planning and overseas business management; President & CEO's special assignment (current position)



Masakazu Tsumoda

Director
Managing Executive Officer
In charge of matters relating to personnel, general affairs, and internal control
Appointed as General Manager of Human Resources Development & Personnel Recruitment Center

Apr. 1986 Joined the Company
Mar. 2010 General Manager of Secretary and Human Resources Department
Mar. 2015 Associate Director appointed as General Manager of Human Resources Department
Jan. 2018 Executive Officer appointed as General Manager of Environment System Business Department
Jan. 2020 Executive Officer appointed as General Manager of Human Resources Development & Personnel Recruitment Center
Jan. 2024 Managing Executive Officer and in charge of matters relating to personnel, general affairs, and internal control; appointed as General Manager of Human Resources Development & Personnel Recruitment Center
Mar. 2024 Director and Managing Executive Officer; in charge of matters relating to personnel, general affairs, and internal control; appointed as General Manager of Human Resources Development & Personnel Recruitment Center (current position)



Tsutomu Kishikawa
Director
Managing Executive Officer

In charge of matters relating to production engineering, capital investment planning, safety and environment, research and development, information system, and the Electric Power business

Apr. 1985 Joined Japan Metals & Chemicals Co., Ltd.
Jan. 1998 Seconded to Hunan JMC Co., Ltd. as General Manager of Technology and Quality Assurance Department
Jul. 2003 Head of Takaoka Plant, Battery Materials Department of the Company
Jan. 2019 Associate Director and Head of Toyama Plant
Jan. 2021 Associate Director appointed as General Manager of Production Engineering Department
Jan. 2022 Executive Officer appointed as General Manager of Production Engineering Department
Jan. 2024 Managing Executive Officer and in charge of matters relating to the Electric Power business; appointed as General Manager of Production Engineering Department
Jan. 2025 Managing Executive Officer and in charge of matters relating to production engineering, capital investment planning, safety and environment, research and development, information system, and the Electric Power business
Mar. 2025 Director and Managing Executive Officer and in charge of matters relating to production engineering, capital investment planning, safety and environment, research and development, information system, and the Electric Power business (current position)



Yasuhide Miyake

Director
Executive Officer
In charge of matters relating to accounting
Appointed as General Manager of Corporate Planning Department

Apr. 1991 Joined Nisshin Steel Co., Ltd. (currently Nippon Steel Corporation)
Apr. 2016 Head of Accounting & Finance Division
Apr. 2020 Head of Accounting & Finance Division of Nippon Steel Corporation
Apr. 2022 Head of Accounting & Finance Division and Deputy Head of General Administration Division and Human Resources Division
Apr. 2023 Executive Officer of the Company
Jan. 2024 Executive Officer and in charge of matters relating to accounting and overseas business management; appointed as General Manager of Corporate Planning Department
Mar. 2024 Director and Executive Officer; in charge of matters relating to accounting; appointed as General Manager of Corporate Planning Department (current position)



Kazutoshi Ohmi

Outside Director
(Independent Officer)

Apr. 1977 Joined Mitsubishi Corporation
Dec. 2004 Senior Operating Director of Melho Facility Works Limited
Jun. 2006 Representative Director and CEO
Aug. 2011 Representative Director and CEO of Yamagiwa Corporation
Mar. 2014 Representative Director and CEO of JSR Life Sciences Corporation
Apr. 2015 Representative Director and CEO of JSR Trading Co., Ltd.
Jun. 2019 Advisor
Jan. 2020 Representative Director and CEO of My Taste Co., Ltd. (current position)
May 2020 Part-time Audit & Supervisory Board Member of ATEX Co., Ltd.
Mar. 2021 Outside Director of the Company (current position)
Jun. 2022 Outside Member of the Board of ATEX Co., Ltd. (current position)

Executive Officers

Kiyooki Nishio Managing Executive Officer
Appointed as the Head of the Tokushima Plant

Keiichi Nakazato Executive Officer
In charge of matters relating to the Functional Materials business and the Incineration Ash Recycling business

Atsushi Hirata Executive Officer
Appointed as the Head of the Kashima Plant

Toru Tanaka Executive Officer
Appointed as the General Manager of the General Affairs Department
Assists Managing Executive Officer Tsumoda with Personnel

Yoshihiro Miyauchi Executive Officer
In charge of matters relating to the Ferroalloys business
Assists Senior Managing Executive Officer Kobayashi with overseas business management

Taketoshi Oka Executive Officer
In charge of matters relating to the Aqua Solutions business and the Osaka Office
Appointed as the General Manager of the Aqua Solutions Business Development and Promotion Department

Hayato Matsuda Executive Officer
Appointed as the General Manager of the Incineration Ash Recycling Sales Department

Directors Who Belong to the Audit and Supervisory Committee



Kentaro Ono

Outside Director as Audit & Supervisory Committee Member
(Independent Officer)

Apr. 1988 Joined Nippon Steel Corporation (the former company of the current Nippon Steel Corporation before business integrations; English name remains the same)

Oct. 2012 General Manager of Group Companies Planning Division of Nippon Steel & Sumitomo Metal Corporation (currently Nippon Steel Corporation)

Apr. 2016 General Manager of General Administration Division, Muroan Works
Apr. 2019 Executive Officer of Osaka Steel Co., Ltd.
Jun. 2019 Director; in charge of matters relating to corporate planning, accounting & finance, general administration, and group companies planning
Jun. 2021 Director and Executive Officer; in charge of matters relating to corporate planning, accounting & finance, general administration, and human resources
Apr. 2022 Director and Managing Executive Officer; in charge of matters relating to corporate planning, accounting & finance, general administration, and human resources
Mar. 2025 Outside Director [Full-Time Audit & Supervisory Committee Member] of the Company (current position)



Kazunari Itami

Outside Director as Audit & Supervisory Committee Member
(Independent Officer)

Apr. 1981 Joined Nippon Steel Corporation (the former company of the current Nippon Steel Corporation before business integrations; English name remains the same)

Apr. 2005 Head of General Affairs Division, Kamaishi Works, Bar & Wire Rod Unit
Apr. 2007 Head of Personnel and Labor Relations Division
Apr. 2012 Managing Director of Nippon Steel Techno Research Co., Ltd. (currently NIPPON STEEL TECHNOLOGY Co., Ltd.)
Apr. 2013 Managing Director and Head of Personnel and Labor Relations Division of Nippon Steel & Sumikin Technology Co., Ltd. (currently NIPPON STEEL TECHNOLOGY Co., Ltd.)
Jun. 2015 Managing Director commissioned as Head of Corporate Planning Division
Jun. 2019 Director and Managing Executive Officer; in charge of Planning and General Affairs, and Personnel and Labor Relations of NIPPON STEEL TECHNOLOGY Co., Ltd.
Mar. 2021 Outside Audit & Supervisory Board Member of the Company
Mar. 2024 Outside Director [Full-Time Audit & Supervisory Committee Member] of the Company
Mar. 2025 Outside Director [Audit & Supervisory Committee Member] of the Company (current position)



Hokuto Nakano

Outside Director as Audit & Supervisory Committee Member
(Independent Officer)

Apr. 1983 Joined The Industrial Bank of Japan, Ltd. (currently Mizuho Bank, Ltd.)
Jun. 1998 Deputy Head of the London Office, International Funding Department, The Industrial Bank of Japan, Limited
Apr. 2002 Senior Vice President of Europe Treasury Department of Mizuho Corporate Bank, Ltd. (currently Mizuho Bank, Ltd.)
Apr. 2010 Executive Officer and General Manager of Forex Division
Jul. 2013 Executive Officer and General Manager of Forex Division of Mizuho Bank, Ltd.
Oct. 2015 Managing Executive Officer and Head of East Asia of Mizuho Financial Group, Inc.
Apr. 2016 Managing Division of Mizuho Securities Co., Ltd.
Mar. 2018 Director of ASICS Corporation
Mar. 2020 Managing Executive Officer
Mar. 2021 Outside Director of the Company
Jun. 2021 Outside Member of the Board of Penta-Ocean Construction Co., Ltd. (current position)
Mar. 2024 Outside Director [Audit & Supervisory Committee Member] of the Company (current position)



Masahiro Tani

Outside Director as Audit & Supervisory Committee Member
(Independent Officer)

Apr. 1985 Joined Ajinomoto Co., Inc.
Jul. 2006 General Manager of Mojokerto Factory of P.T. Ajinomoto Indonesia
Jul. 2008 Vice President
Jul. 2012 General Manager of Kyushu Plant of Ajinomoto Co., Inc.
Jun. 2013 Corporate Executive Officer and General Manager of Kyushu Plant
Jun. 2015 Corporate Executive Officer and General Manager of Food Production & Technology Administration Center
Jun. 2017 Corporate Executive Officer and General Manager of Group Procurement Center
Jul. 2020 Corporate Executive Officer and General Manager of Digital Transformation Department
Jun. 2021 Advisor
Mar. 2022 Outside Director of the Company
Mar. 2024 Outside Director [Audit & Supervisory Committee Member] (current position)



Aogi Suemura

Outside Director as Audit & Supervisory Committee Member
(Independent Officer)

Oct. 1992 Joined Asahi Shinwa & Co. (currently KPMG AZSA LLC)
Apr. 1996 Registered as certified public accountant
Aug. 1999 Joined GOLDCREST Co., Ltd.
Jan. 2002 Joined Sumitomo Shoji Financial Management Co., Ltd.
Nov. 2004 Joined Deloitte Touche Tohmatsu (currently Deloitte Touche Tohmatsu LLC)
Jun. 2008 Partner
Jan. 2022 Established Aogi Suemura Certified Public Accountant Firm (current position)
Jun. 2022 Outside Director [Audit & Supervisory Committee Member] of RIKEN TECHNOS CORPORATION (current position)
Mar. 2023 Outside Audit & Supervisory Board Member of the Company
Mar. 2024 Outside Director [Audit & Supervisory Committee Member] (current position)
Jun. 2024 Outside Director [Audit & Supervisory Committee Member] of Nomura Real Estate Holdings, Inc. (current position)

Skills Matrix

Field	Outside Director as Audit & Supervisory Committee Member (Independent Officer)	Corporate planning Business strategy	Finance/accounting Finance/economics	Personnel/labor Human resources development	Governance/risk management Legal/compliance	Production/technology Research and development	Sales/purchasing Marketing	Global	Environment Sustainability
Name									
Yasushi Aoki		●		●			●	●	●
Jiro Kobayashi		●					●	●	
Masakazu Tsumoda				●	●		●		
Tsutomu Kishikawa						●		●	●
Yasuhide Miyake		●	●						●
Kazutoshi Ohmi	●	●					●	●	
Kentaro Ono	●	●	●	●	●				
Kazunari Itami	●	●		●	●				●
Hokuto Nakano	●		●				●	●	
Masahiro Tani	●			●		●		●	
Aogi Suemura	●		●	●	●				

Corporate Governance

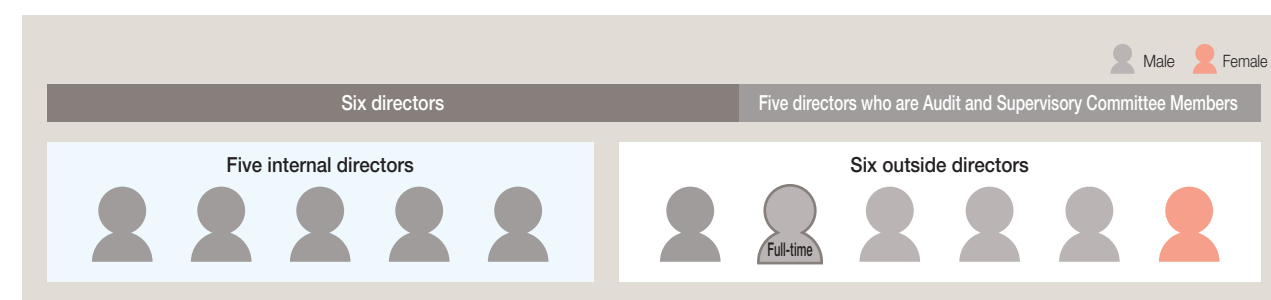
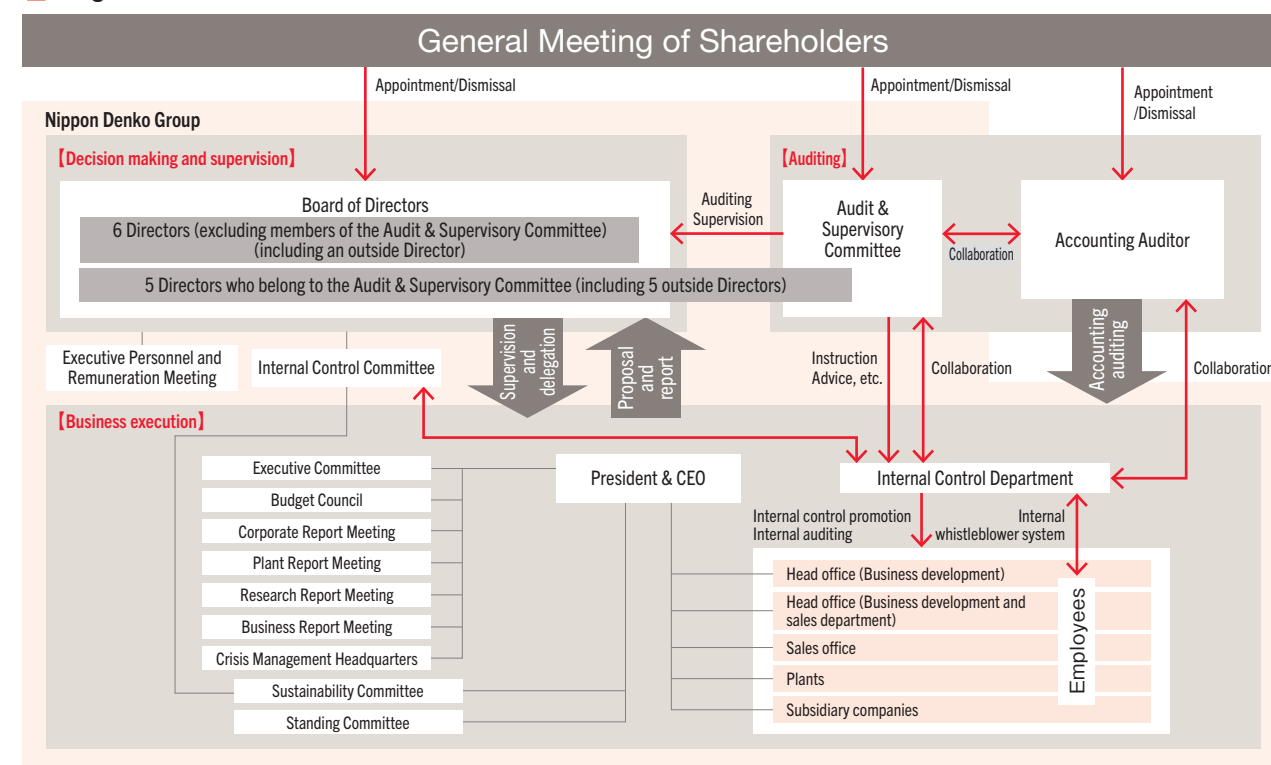
Basic Views

The Company is enhancing its corporate governance by seeking sustainable growth and striving to improve its corporate value over the medium/long-term through the establishment of systems that facilitate transparent, fair, rapid, and resolute decisions and the demonstration of entrepreneurial spirit based on the Management Philosophy, all without losing sight of its fiduciary responsibility as an entity entrusted by its shareholders with business management in addition to its responsibilities to them as well as its employees, customers, business partners, creditors, local communities, and other stakeholders.

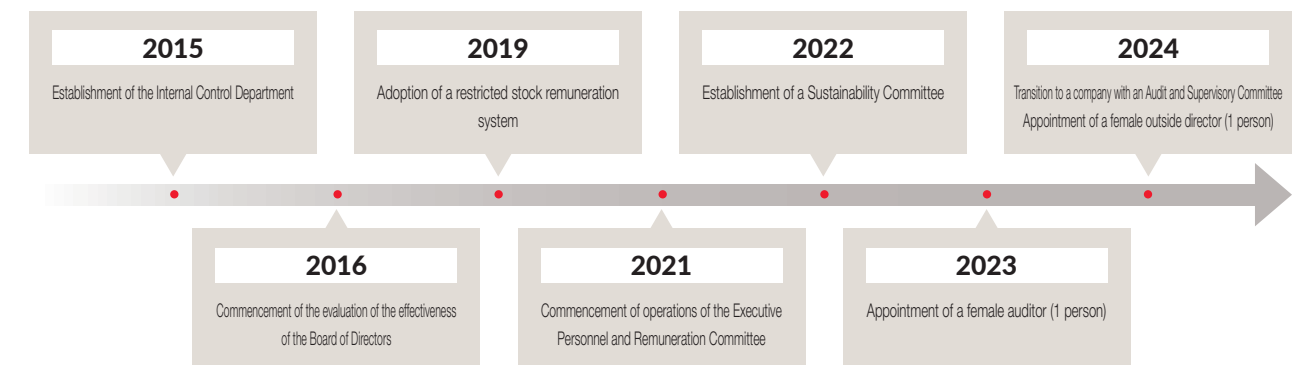
Corporate Governance System

The Company makes continuous efforts to tighten corporate governance with the aim of achieving sustainable growth and improving corporate value. We chose to be “a company with the Audit and Supervisory Committee” in order to streamline decision making and business execution processes by transferring part of decision-making authority for the execution of important operations from the Board of Directors to Directors, deepen discussions on medium/long-term management policies, and strengthen the supervisory functions of the Board of Directors, thus tightening corporate governance and improving corporate value further.

Organizational structure chart



Changes in the Strengthening of Corporate Governance



Board of Directors

In Nippon Denko, the Board of Directors, which is composed of 11 Directors (including 6 Outside Directors), makes important decisions about overall business administration and supervises overall business execution. So that the Board of Directors could make decisions appropriately from diverse viewpoints and strengthen the supervising function, 6 Outside Directors were appointed at the 125th Annual General Meeting of Shareholders held on March 27, 2025, and all of them were registered as independent officers at Tokyo Stock Exchange. We believe that corporate governance can be tightened by enhancing the supervising and overseeing functions of independent Outside Directors.

Main Topics of Discussion and Activities

- Revision of relevant rules and regulations accompanying the transition to a company with an Audit and Supervisory Committee
- Absorption-type merger agreement with Chuo Denki Kogyo Co., Ltd.
- Important matters for business execution
- Progress of sustainability initiatives
- Report on the execution status of each business
- IR and SR activity reports

Audit and Supervisory Committee

The Audit and Supervisory Committee monitors the economic activities of Directors and the status of governance from neutral and fair perspectives, to secure the sound growth of the Nippon Denko Group based on an appropriate corporate governance system. The Audit and Supervisory Committee is composed of 5 Directors, all of whom are Outside Directors. All of them were registered as independent officers at Tokyo Stock Exchange.

Main Topics of Discussion and Activities

- Formulation of audit policies and plans
- Status of execution of duties by directors
- Progress in the creation of medium/long-term corporate value
- Progress of sustainability initiatives
- Development and operation of internal control systems
- Appropriateness of business reports, etc.
- Appropriateness of audits by accounting auditor
- Evaluation and appointment of an accounting auditor

Evaluation of the Effectiveness of the Board of Directors

Analysis and evaluation process



Through the above analysis and evaluation process, it was confirmed that all of the operation of the Board of Directors, resolutions, reports, and deliberation time were appropriate. With the transition to a company with an Audit and Supervisory Committee in March 2024, open and lively discussions based on diverse perspectives from both internal and external directors have deepened even further. Apart from the Board of Directors, we have established an executive roundtable forum for more in-depth discussions on issues.

Issues identified for the fiscal year ended December 2024

- Strengthening of the supervision of the business portfolio and the deepening of discussions thereof
- Strengthening of the supervision of sustainability and the deepening of discussions thereof
- Further sharing of IR and SR activities with the Board of Directors and promotion of initiatives
- Increase of opportunities for discussion on overall risks, etc.

▶ Training for Directors

The Company holds training about necessary items for fulfilling the roles, responsibilities, and duties of inside and outside Directors. For Outside Directors, the Company explains the management philosophy, business activities, etc. of the Company when they are appointed, and makes efforts to deepen their understanding of the Company's business even after the appointment. The Board of Directors confirms whether these measures are appropriately taken through the Directors' evaluation of the effectiveness of the Board of Directors.

▶ Sharing of information with Outside Directors

So that Outside Directors of the Company can polish their information gathering skills with no effect on their independence, the Audit and Supervisory Committee shall allow them to attend regular meetings of the Audit and Supervisory Committee, meetings with the President & CEO, etc. when necessary, while a Director who is a standing member of the Audit and Supervisory Committee makes efforts to share necessary information he has obtained, to ensure the cooperation with Outside Directors.

▶ Remuneration

◆ Remuneration determination policy

As a basic policy, remuneration for senior management and Directors (excluding Directors who belong to the Audit and Supervisory Committee and Outside Directors) shall be an appropriate level based on the position in charge and performance of the Company. Remuneration consists of three components: "fixed remuneration (money)," "performance-linked remuneration (money and bonuses)," and "stock remuneration (restricted stock remuneration)." Fixed remuneration is paid monthly based on criteria while taking into account the job position and performance. Performance-linked remuneration is calculated based on the underlying ordinary profit (consolidated ordinary profit excluding the impact of inventory and one-time factors), which is set as an indicator that accurately reflects the Company's performance, and bonuses are paid at a fixed time each year. Stock remuneration is determined based on our standards with the aim of improving corporate value and promoting further value sharing with shareholders, and is paid at a fixed time each year. Fixed remuneration (money) is paid to Directors who belong to the Audit and Supervisory Committee and Outside Directors. Remuneration composition is centered around fixed remuneration, with performance-linked remuneration and stock remuneration incorporated at appropriate ratios. With regard to cash and stock remuneration, the total amount of remuneration was determined at the 124th Annual General Meeting of Shareholders held on March 28, 2024. In the remuneration determination process, monetary remuneration is determined by the President & CEO under the supervision of the Board of Directors, while non-monetary remuneration is determined by the Board of Directors. In addition, we have established the Executive Personnel and Remuneration Committee, which is composed by a majority of Outside Directors, to discuss the appropriateness of each remuneration while referring to external data, and to review remuneration levels and calculation methods as necessary.

▶ The Board of Directors' Policy and Procedures for Nominating Candidate Directors, Appointing and Dismissing Senior Management

◆ Nomination, selection and dismissal policy

When **appointing senior management and nominating candidate directors** of the Company, the Board of Directors conducts deliberations and makes decisions while taking into account the details of the Nippon Denko Group's businesses, issues to be addressed, and the experience, knowledge, etc. of each person, to realize optimal scale and composition for the consolidated management of the Company from the viewpoint of improvement in medium/long-term corporate value. The Board of Directors of the Company is composed of Directors who had worked for the Company and possess specialized capabilities and knowledge for each business of the Company and Outside Directors who possess the experience and knowledge of diverse businesses, expertise, insight, and a neutral, objective perspective, so as to realize diversity and a good balance. We think that the current scale is appropriate for making decisions swiftly in response to changes in the business environment and developing an effective corporate governance system.

The nomination of candidate directors and appointment of directors at executive posts shall be determined by the Board of Directors, while comprehensively considering abilities, qualities, leadership, past business performance, etc.

The nomination of candidate directors who belong to the Audit and Supervisory Committee shall be determined by the Board of Directors while comprehensively considering fairness, universality, independence, the composition of the Audit and Supervisory Committee after appointment, etc. in addition to the above-mentioned items after obtaining the consent of the Audit and Supervisory Committee.

The appointment of executive officers (excluding directors at executive posts) shall be determined by the President & CEO who was authorized by the Board of Directors in accordance with the Regulations for Executive Officers, while comprehensively considering abilities, qualities, leadership, past business performance, etc., and the results shall be reported to the Board of Directors.

Internal regulations stipulate the requirements for **dismissing senior management**. When a senior management member satisfies said requirements, he/she will be dismissed through a resolution of the Board of Directors.

As an **organization for broadly discussing items regarding personnel affairs of the senior management and Directors**, the Company established the Executive Personnel and Remuneration Meeting, which is composed of independent Outside Directors and the President & CEO. Said meeting shall be chaired by the President & CEO, who collects appropriate opinions from independent Outside Directors when necessary.

▶ Internal Control

◆ Internal control system

We established a Corporate Conduct Charter and Employee Conduct Guidelines to establish corporate ethics, to comply with domestic and overseas laws and their spirit and to gain trust as a good corporate citizen. We established a permanent Internal Control Committee, and in addition to promoting compliance activities throughout the company, we created a whistleblower line and are working on early detection and correction when illegal acts are found.

As part of our risk management system, the permanent Internal Control Committee is responsible for managing and mitigating management risks, and for various risks that may arise in overall business activities, we share information with the Audit & Supervisory Board and submit risk analysis and countermeasure studies as well as reports and written opinions to the Board of Directors regularly or as needed. In the unlikely event of a business crisis that could result in significant losses, we will immediately set up a Crisis Management Headquarters and put in place procedures to promptly take the necessary actions to minimize damage and impact.

◆ Autonomous internal control activities

We identify two agendas for developing internal controls as a foundation for value creation:

1. Establish an infrastructure to promote fair, transparent, and legal business activities

2. Establish an infrastructure where employees can work with peace of mind in accordance with the rules

To achieve these, we promote autonomous internal control activities. Autonomous internal control is the concept of building one's own internal control system tailored to one's business type, and the person most familiar with the business performs checks. Generally, deficiencies and errors are identified and corrected through audits conducted by specialized departments. However, in the Nippon Denko Group, rather than following instructions from the management department, we proactively engage in activities as follows. By continuing these activities, we will build a sound corporate foundation and maintain a company free of misconduct and scandals.

PDCA report	Internal control managers at the Company and group companies establish annual internal control plans for their respective organizations and implement continuous improvement through annual PDCA cycles.
Self-assessment of internal control	We perform voluntary inspections annually using checklists reflecting the latest risks. The Internal Control Department will confirm the results of the assessment during the on-site audit.
Similar risk inspection	Four times a year, we inspect for similar risks using case studies of accidents and incidents that occurred at other companies. We utilize this to prevent occurrence by sharing reference material and reviewing them together.
Employee awareness survey	We conduct an employee awareness survey once a year. By listening to the honest opinions of our employees, we are able to identify risks early and confirm the effectiveness of company measures.
Field-specific training	Vocational organizations regularly conduct field-specific training. Repeated training in various fields helps employees accumulate knowledge and enhance their awareness of compliance.

▶ Policy on Cross-Shareholdings

Nippon Denko holds cross-shareholdings (all shares other than the Company's shares) for the purpose of improving corporate value of the Company over the medium/long-term by maintaining and strengthening business relationships, maintaining and developing partnerships, and ensuring smooth execution of business activities. Regarding the cross-shareholdings, the Board of Directors evaluates the performance and financial strength of the investee company as well as their significance of shareholding regularly on an annual basis and examines the appropriateness of shareholding including its reduction.

Financial and Non-Financial Highlights (Changes in 11 Years)

Financial

		(Fiscal Year) 2014	2015	2016	2017
Net sales	Millions of yen	75,864	82,902	58,486	71,346
Operating profit	Millions of yen	2,720	2,046	1,717	9,639
Ordinary profit	Millions of yen	2,286	211	1,614	9,239
Profit attributable to owners of parent	Millions of yen	10,807	(14,181)	(116)	7,988
Total assets at end of period	Millions of yen	116,511	92,827	84,563	98,447
Equity at end of period	Millions of yen	78,372	63,596	61,232	70,702
Interest-bearing debt at end of period	Millions of yen	13,468	10,630	7,891	7,230
Equity ratio at end of period	%	67.3	68.5	72.4	71.8
Total number of issued shares	Thousands of shares	146,741	146,741	146,741	146,741
Number of treasury shares	Thousands of shares	304	306	306	308
Net assets per share	Yen	535.20	434.30	418.16	482.83
Net income per share	Yen	85.17	(96.84)	(0.80)	54.55
Dividends per share	Yen	5.00	5.00	5.00	13.00
Return on equity (ROE)	%	16.1	(20.0)	(0.2)	12.1
Return on assets (ROA)	%	9.3	(15.3)	(0.1)	8.1
Return on sales (ROS)	%	3.0	0.3	2.8	13.0

Non-Financial Indicators

		(Fiscal Year) 2014	2015	2016	2017
Number of employees (consolidated)	People	1,322	1,039	953	957
Number of female employees (consolidated)	People	70	70	82	90
Number of employees (non-consolidated)	People	443	455	475	480
Average years of service (non-consolidated)	Years	16.4	15.7	15.3	18.1
Percentage of employees with disabilities (non-consolidated)	%	—	—	—	0.7
Rate of paid holidays taken (non-consolidated)	%	—	58.3	60.0	63.9
Percentage of childcare leave taken (consolidated)	%	—	—	—	—

	2018	2019	2020	2021	2022	2023	2024
	73,944	70,477	54,004	65,978	79,341	78,390	78,235
	1,701	(5,572)	5,434	8,436	8,815	4,696	6,856
	1,947	(6,426)	3,063	6,870	10,367	2,420	4,859
	2,352	(14,240)	2,615	7,768	7,949	4,330	3,144
	99,786	85,224	86,171	95,888	104,943	100,750	102,200
	69,009	54,206	56,367	64,256	69,187	71,436	73,677
	12,749	18,704	19,354	17,759	21,052	18,554	17,076
	69.2	63.6	65.4	67.0	65.9	70.9	72.1
	146,741	146,568	146,775	146,853	146,931	137,217	137,295
	309	1	2	8	7,092	2	4
	471.28	369.84	384.04	437.58	494.76	520.62	536.65
	16.06	(97.20)	17.83	52.91	54.45	31.50	22.91
	5.00	—	5.00	16.00	17.00	9.00	11.00
	3.4	(23.1)	4.7	12.9	11.9	6.2	4.3
	2.4	(16.7)	3.0	8.1	7.6	4.2	3.1
	2.6	(9.1)	6.5	10.4	13.1	3.1	6.2

	2018	2019	2020	2021	2022	2023	2024
	994	977	976	943	950	937	950
	123	127	133	129	129	132	135
	722	783	767	740	616	625	783
	13.5	13.4	14.7	15.1	15.4	16.3	16.5
	1.5	2.0	2.1	2.5	2.5	2.2	2.1
	66.6	66.9	62.0	71.8	74.5	76.0	75.6
	—	92.3	92.6	90.9	82.4	90.5	90.9

Company Overview

Company profile (as of December 31, 2024)

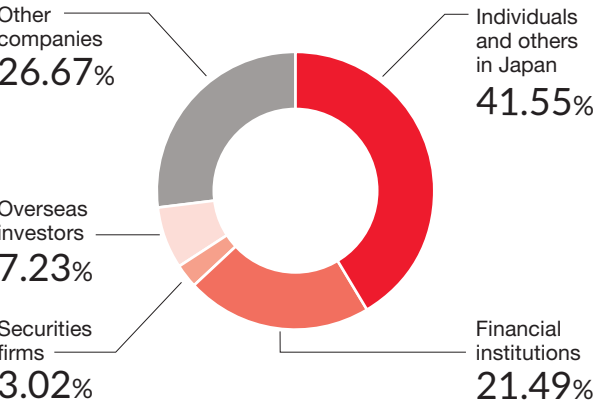
Name	Nippon Denko Co., Ltd.
Incorporated	founded in October 1925
Head office	4th Floor, Tokyo Tatemono Yaesu Building, 1-4-16, Yaesu, Chuo-ku, Tokyo, 103-8282, Japan TEL: +81-3-6860-6800 (main) FAX: +81-3-6860-6832

Number of employees	950
Capital	11,108 million yen
Lines of business	● Ferroalloys ● Functional Materials ● Incineration Ash Recycling ● Aqua Solutions ● Electric Power

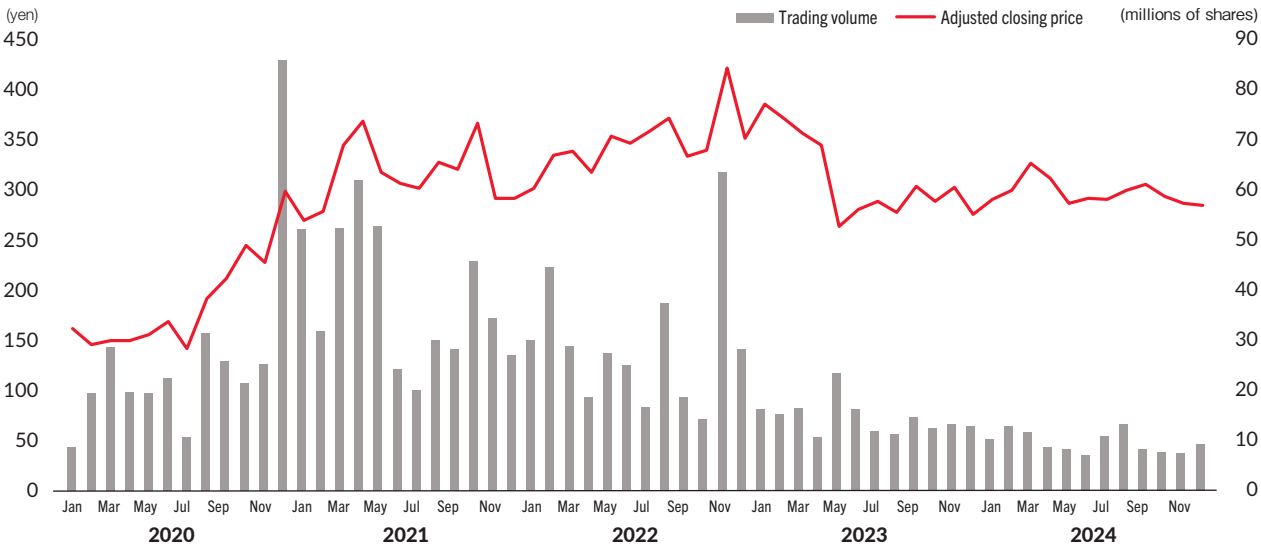
Matters related to company shares (as of December 31, 2024)

Total number of shares authorized to be issued	300,000,000 shares
Total number of issued shares	137,295,472 shares
Number of shareholders	32,965


Composition of shareholders (as of December 31, 2024)



Variations in share price and trading volume




Locations



Myoko Plant

Main production items


Metal hydride alloys
Cathode materials for lithium-ion batteries
Manganese inorganic chemical products



Toyama Plant (Imizu area)

Main production items


Boron oxide
Ferroboron



Tokushima Plant

Main production items


High-carbon ferromanganese
Low-carbon ferromanganese



Research Laboratory

Main production items


Zirconium oxide
Boron oxide



Kashima Plant

Line of business

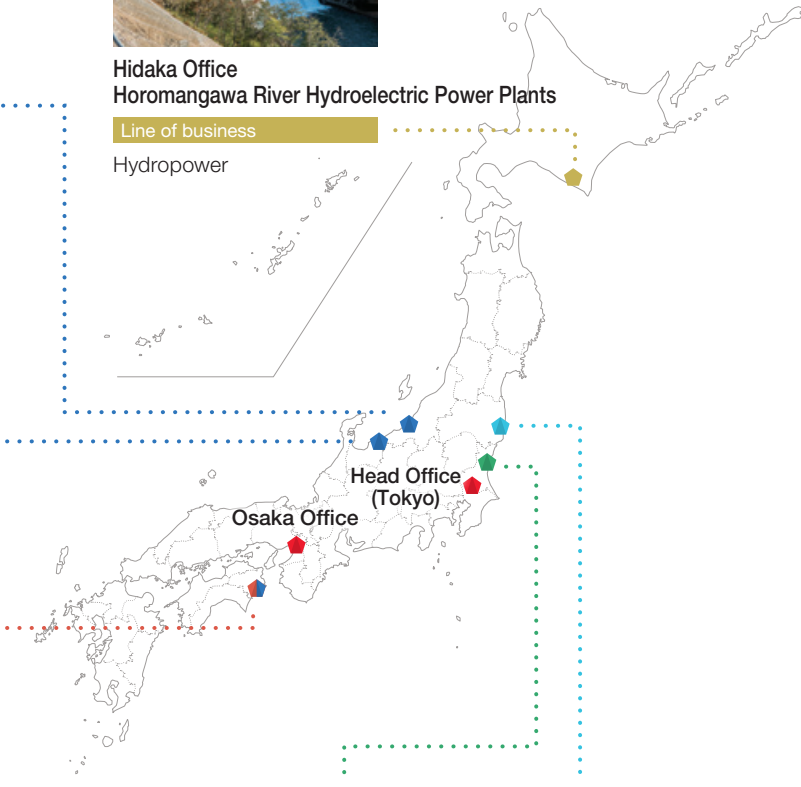
Incineration Ash Recycling



Koriyama Plant

Main production items

Wastewater treatment equipment
Pure water production system



Hidaka Office
Horomangawa River Hydroelectric Power Plants

Line of business

Hydropower

Group companies

Subsidiary Companies	Lines of Business
Riken Kogyo Co., Ltd.	Temperature and component measurement, electrical instrumentation, control and related operations of blast furnaces, converter furnaces and electric furnaces
Denko Kosan Co., Ltd.	Transportation, warehousing, and sale of materials for steelmaking
Kuriyama Kosan Co., Ltd.	Production and sale of polyethylene pipes, bags, nets, sheets, and PVC pipes
Nichiden Tokushima Co., Ltd.	In-plant and transport services, ship agency services, and sale of fuels
Chuden Kosan Co., Ltd.	Collection and haulage of industrial waste, industrial waste subject to special control and general waste General motor truck transport (Kanjishin No. 2397) and warehousing (Kanuso No. 342)
Group Affiliates	Lines of Business
Pertama Ferroalloys Sdn. Bhd.	Production and sale of ferroalloys
Kudumane Investment Holding Ltd.	Ownership of manganese mine interests