JSW Integrated Report
2024

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JSW
THE JAPAN STEEL WORKS, LTD.

OUR PHILOSOPHY

The corporate philosophy of JSW Group, starting with the Purpose

PURPOSE

Material Revolution,

(Japanese Trademark Registration Number 6650455)

making the world sustainable
and prosperous.

VISION

Benefiting all stakeholders by developing and implementing industrial machinery and new materials that solve social issues.

VALUE CREATION PROCESS

JSW Group will further refine its core competence, develop industrial machinery and new materials that solve social issues, and supply them to the world, thereby simultaneously creating social value and enhancing sustainable corporate value.

▶ For details on the Value Creation Process, see p. 6-7

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Editorial Policy

Since fiscal 2021, The Japan Steel Works, Ltd. has been publishing an integrated report to inform all stakeholders, including shareholders and investors, of its initiatives for sustainably creating social value and enhancing medium-to-long-term corporate value.

We hope that this report provides readers with deeper insight into JSW Group from both financial and non-financial perspectives.

Reporting Period

April 1, 2023–March 31, 2024 ("Fiscal 2023" or "FY2023")

Note: Certain activities and information are included from outside this reporting period.

Reporting Scope

The Japan Steel Works, Ltd. and Group companies

Note: Throughout this report, "JSW" or "the Company" refer to information relating to The Japan Steel Works, Ltd. and "JSW Group" or "the Group" refer to information relating to The Japan Steel Works, Ltd. and its consolidated subsidiaries.

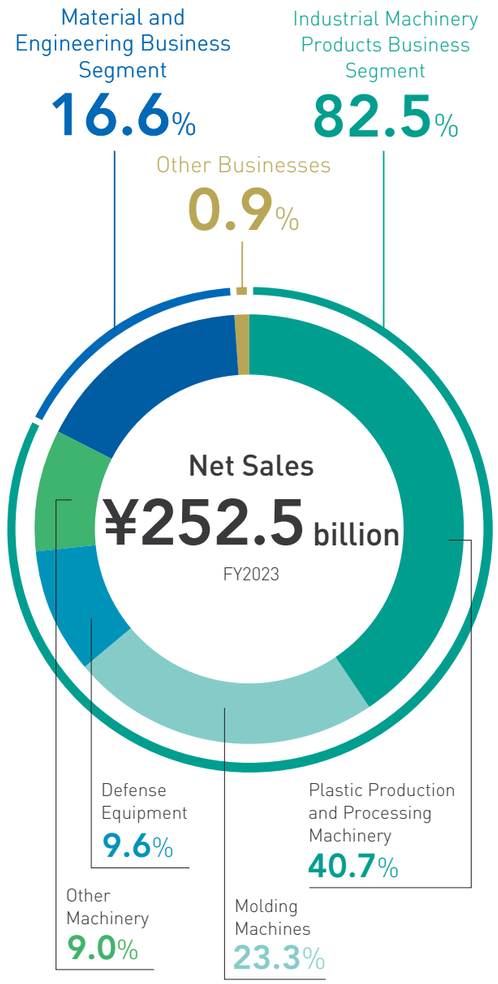
Referenced Guidelines

- International Integrated Reporting Framework, IFRS Foundation
- Guidance for Collaborative Value Creation 2.0, Japan's Ministry of Economy, Trade and Industry
- Environmental Reporting Guidelines 2018, Japan's Ministry of the Environment
- GRI Sustainability Reporting Standards, Global Reporting Initiative

Note on Forward-Looking Statements

The performance forecasts included in this report are judgments based on the information that was available to JSW at the time the report was prepared and are subject to underlying risks and uncertainties. Actual results may differ significantly from these forecasts due to a variety of factors.

At a Glance



Business Segments / Production Bases

Industrial Machinery Products Business Segment

Our Industrial Machinery Products Business Segment comprises four sub-segments: (1) Plastic Production and Processing Machinery, (2) Molding Machines, (3) Defense Equipment, and (4) Other Machinery, and operates from three bases: the Hiroshima Plant, the Yokohama Plant, and the Meiki Plant.

With a lineup of plastic production and processing machinery and plastic injection molding machines for a variety of applications, we offer many products that command a high market share worldwide, such as our separator film manufacturing equipment for lithium-ion batteries, an essential element for the shift to electric vehicles. In this segment, which accounts for 82.5% of JSW Group's net sales, we are working to further expand the scale of our business, especially in the mainstay plastic processing machinery market, by realizing a plastic-resource-recycling society and contributing to a low-carbon and super-smart society.


Hiroshima Plant


Yokohama Plant


Meiki Plant

Material and Engineering Business Segment

Our Material and Engineering Business Segment comprises two sub-segments: (1) Material Products and (2) Engineering Services, and is operated by Japan Steel Works M&E, Inc. (Muroran Plant), which was established as an operating subsidiary in April 2020.

In steel castings and forgings, we are either the world's only manufacturer or have a high market share for products such as large shaft materials for power plants, pressure vessel components for nuclear power plants, and large components for pile-driving machines used in the construction of offshore wind farms. Perceiving the shift toward decarbonization as an opportunity, we are working to strengthen our earnings base through business structure reform.


Japan Steel Works M&E, Inc. (Muroran Plant)

Other Businesses

We have narrowed down our other businesses to the three fields of photonics, composite materials, and metallic materials.

We are working to achieve profitability in each field through the supply of products: in photonics, materials for semiconductors and optical devices such as synthetic quartz, lithium niobate, and gallium nitride (GaN); in composite materials, lightweight and high-strength materials such as carbon fiber reinforced plastic (CFRP) products; and in metallic materials, materials for various electronic devices such as titanium copper.

Markets

Plastics | Mobility | High-Performance Batteries | Electronic Devices | Defense

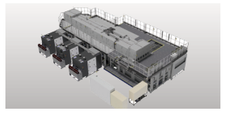
Power Generation Equipment | Renewable Energy | Infrastructure

Photonics

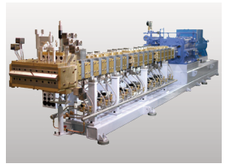
Products

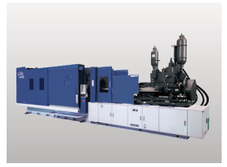

Pelletizers


Film and sheet manufacturing equipment


Excimer laser annealing systems


Vacuum laminators


Twin-screw extruders (TEX)


Magnesium injection molding machines


ECR plasma deposition systems


Defense equipment (Maritime)

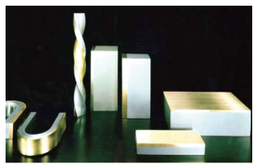

Plastic injection molding machines

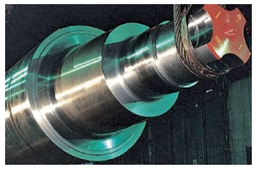

Plastic injection molding machines (Special-purpose machines)


Defense equipment (Ground)


Parts for nuclear reactor pressure vessels


Rotor shafts for generators


Clad steel plates


Steel rolls for steel mills


Components for offshore wind power generation construction (Large anvil for pile driver)



Steel pressure vessels for hydrogen storage









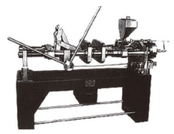


Our History of Creating Value

	1907 Founding (pre-war)	1945 Post-war recovery	1970s Rapid economic growth	2000s Preparation for a new era	2024
Social issues and needs	• Development of defense industry	• Transition to commercial business	• Increasing energy demand • Accelerating adoption of electronics in industry	• Decarbonization-related demand (electric vehicles, use of hydrogen energy) • Increasing LCD demand with the growing use of smartphones • Problem of marine plastic pollution	
Phases in our history	**Launch as a national project**	**Growth based on a portfolio of technologies**	**Becoming a comprehensive company in materials and mechatronics**	**Toward establishing a new future vision for JSW**	
	In 1907, The Japan Steel Works was established in Muroran, Hokkaido, as a joint venture between three companies: Hokkaido Colliery Steamship Company and two U.K. firms: Sir W.G. Armstrong, Whitworth & Co., Ltd., and Vickers, Sons & Maxim, Ltd. By manufacturing armaments as a national project, the Company contributed to the development of the defense industry. Purchasing Hiroshima Seisakusho Co., Ltd., in 1920, JSW established a Hiroshima factory (now known as the Hiroshima Plant) to expand the armaments business.	After the Second World War, the focus of our business underwent a major shift to commercial products. Utilizing the technology cultivated through the manufacture of armaments, we began in earnest to produce large steel castings and forgings, such as rotor shafts for power generation and pressure vessels for oil refineries, and plastic processing machinery, such as injection molding machines and plastic extruders.	We focused on creating new added value in response to market changes such as increasing energy demand and the accelerating adoption of electronics. Among the actions taken were the manufacture of ultra-large components (pressure vessels and rotor shafts) for nuclear power plants, a switch from hydraulic to electric injection molding machines, and the introduction of magnesium molding technology.	To contribute to a society that is demanding products that are friendly to the global environment, we manufacture and supply separator film manufacturing equipment for lithium-ion batteries, molding machines for large plastic parts for automobiles that excel in weight reduction, all manner of resin processing machines adapted to serving a plastic-resource-recycling society, and pressure vessels for hydrogen storage to support the hydrogen economy.	

Lineage of technologies and their provision to customers and markets

Meiki Co., Ltd.



First Japan-produced plastic injection molding machines

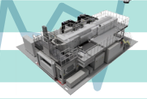


Plastic injection molding machines

Expansion of materials — Magnesium injection molding machines







Mechatronics technology — Excimer laser annealing systems

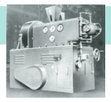
Expansion of product range — Separator film manufacturing equipment for lithium-ion batteries



Expansion to secondary processing equipment

Barrel processing technologies

Plastic extruders



Film and sheet manufacturing equipment



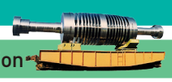
Extruders for chemical and mechanical recycling





Artillery production technologies

Material manufacturing technologies



Rotor shafts for power generation

Manufacturing technologies

High-pressure cylinders, reaction towers (e.g., for fertilizer)

Pressure vessels for oil refining

Manufacturing technologies

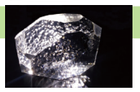
Pressure vessel manufacturing and high-pressure technologies

Pressure vessel technologies

Pressure vessels for use in nuclear power generation



Artificial crystals



Pressure vessel manufacturing and high-pressure technologies



Gallium nitride (GaN) single-crystal substrates

Hydrogen handling technologies

Steel pressure vessels for hydrogen storage



Research on hydrogen in steel

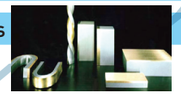
Hydrogen storage alloys

Special steel technologies

Material manufacturing technologies

Thick plate rolling

Clad steel plates and pipes



Net sales

JSW Group Value Creation Process

Purpose

Material Revolution

Material Revolution,
making the world sustainable and prosperous.

Vision

Benefiting all stakeholders by developing and implementing industrial machinery and new materials that solve social issues.

Capital

As of March 31, 2024

Financial capital

- Shareholders' equity: ¥164,155 million
- R&I rating: A (stable)

Manufactured capital

- Capital investment: ¥12,183 million (FY2023)
- Plants: 3 locations + Japan Steel Works M&E
- Test centers: 3 plastic machine locations, 6 molding machine locations
- Sales locations and Group companies covering major market regions in Asia, North America and Europe

Human capital

- JSW Group employees: 5,115
- Non-consolidated JSW employees: 1,901
- Engineering career-track employees (non-consolidated): 843
- Training facilities for skills transfer: 2

Intellectual capital

- Research and development expenses: ¥5,661 million (FY2023)
- Patents held: 973 in Japan, 589 overseas

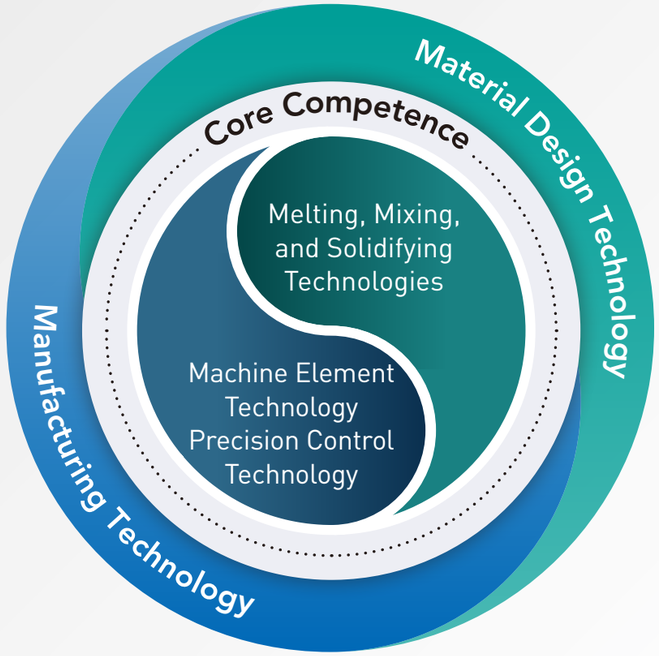
Social relationship capital

- Long-term and stable relationships with customers
- Good relationships with local communities around plants

Natural capital (FY2023)

- Energy consumption: 1,654 TJ
- Water intake: 16.09 million m^3

Business Model



Materiality

Creating value and solving social issues through JSW Group's businesses

- Realization of a plastic-resource-recycling society
- Contribution to a low-carbon society
- Contribution to a super-smart society

Bolstering JSW Group's management foundation for sustainable growth

- Human capital improvement and DEI&B*
- Investment in the future with innovation management
- Governance reinforcement of JSW Group

* DEI&B: Diversity, Equity, Inclusion, and Belonging

Outputs

Resolution of Social Issues

- Industrial Machinery
- New Materials



Outcomes

Customers

- Contribute to the expansion of our customers' business opportunities
- Resolve issues faced by our customers
- Contribute to reducing environmental impact

Employees

- A work environment with job satisfaction and excitement
- Growth as a highly skilled professional

Business partners

- Treat all business partners fairly and impartially, and always conduct transactions in good faith
- Build partnerships to create corporate value

Shareholders and investors

- Medium-to-long-term enhancement of corporate value
- Stable shareholder returns

Local communities

- Contribution to the local economy through employment and procurement

Global environment

- Energy and resource conservation in production activities (reduction of CO_2 emissions)
- Reduction of CO_2 emissions through our products and businesses

Sustainable society

(Particularly, realizing a plastic-resource-recycling society and controlling plastic pollution)

Prosperous society

(Resolution of social issues such as the health of people, medical care, food, and energy)

Mitigating climate change

Creation of social value



Sustainable enhancement of corporate value



The Environment in Which JSW Operates

The waste plastic problem

- Development of recycling and waste treatment businesses
- Reduction of fossil-fuel-derived plastics
- Conversion to non-fossil-fuel-derived plastics
- Growing discussion about maintaining ecosystems and natural capital

Carbon neutrality by 2050

- Advancement of lithium-ion and other storage batteries
- Expansion of renewable energy
- Expansion of hydrogen and ammonia businesses
- Phase-out of fossil fuels
- Renewed popularity of nuclear power generation

Advancement toward digital transformation, AI, and IoT

- Transformation of our business models and work styles
- Full-scale investment in related infrastructure
- Economies emphasizing intangible assets and human capital

Low birthrates and aging populations in developed countries

- Shrinking domestic market, shrinking workforce

Global population growth

- Expansion and diversification of consumption, especially in emerging countries
- Food supply problems

Message from the President



Full Commitment to the New Medium-Term Management Plan and Resolving Material Issues to Achieve Our FY2033 Vision

Toshio Matsuo

Representative Director & President
The Japan Steel Works, Ltd.

Results of the Previous Medium-Term Management Plan and Future Challenges

This year marks my third as president of JSW Group. I inherited JGP (**J**SW group **G**rowth **P**lan) 2025, a five-year medium-term management plan that commenced in FY2021, when I took over from the previous president. Under JGP2025, we have implemented measures based on four basic policies. As the third year of the plan comes to an end, we will first examine its results and future challenges.

Our first policy in the plan was to move "towards the unprecedented general manufacturer of plastic processing machinery in the world," where we worked to boost our competitive edge and create more complex plastic processing equipment to gain the top global market share for existing products. Recent strong performance for orders and sales of plastic production equipment proves we have achieved this to some extent. However, we recognize the need to increase the number of products able to compete in the global market and see the potential for further growth along with a need to promote global expansion and improve our service business. Expanding production capacity and maintaining or improving our in-house production rate in response to strong performance of orders and sales are also important challenges.

We have also done well in general for our second policy, "making constant profit in Material and Engineering Business." We have set appropriate selling prices, shifted to products with a competitive edge to improve profitability, and are otherwise reviewing our product portfolio. I believe this allowed us to overcome periods of hardship in our business operations. Going forward, we will strive to prevent malfunctions and maintain stable operations through investments to upgrade core production equipment while continually reviewing our product portfolio to ensure stable profits.

For our third policy, "creating new core businesses," we developed and launched products for power semiconductor. We have also commenced operations of major proof-of-concept equipment for producing gallium nitride (GaN) crystal materials.

In our fourth policy, "promotion of ESG management," we have established the ESG Promotion Office and other systems for promotion and identified six material issues, which we regard as major developments.

We take the misconduct in product inspections announced in FY2022 very seriously and are continuing to work on four reforms to restore trust: quality assurance system reform, organizational culture reform, process reform, and governance reform. In particular, as part of our organizational culture reform, we are working to instill JSW Group's purpose and vision and invigorate projects aimed at organizational reform.

The fact that we have surpassed our sales target of 300 billion yen, which we had envisioned as a goal beyond JGP2025, based on orders at the end of FY2023 is profoundly significant, and we believe that JSW Group, which had long maintained sales of around 200 billion yen, has moved to the next stage as a company. In addition to such internal changes as the establishment of a corporate philosophy system and the identification of material issues, the past three years have seen dramatic changes in the business environment, including the emergence of global geopolitical risks. In light of these changes and with our sights set on taking sales to the next level, we have determined that we need a new management plan that clearly proclaims a transition to a new stage in order to fortify our management foundation and have decided to formulate and announce a new medium-term management plan, JGP2028, despite the fact that we are still in JGP2025.

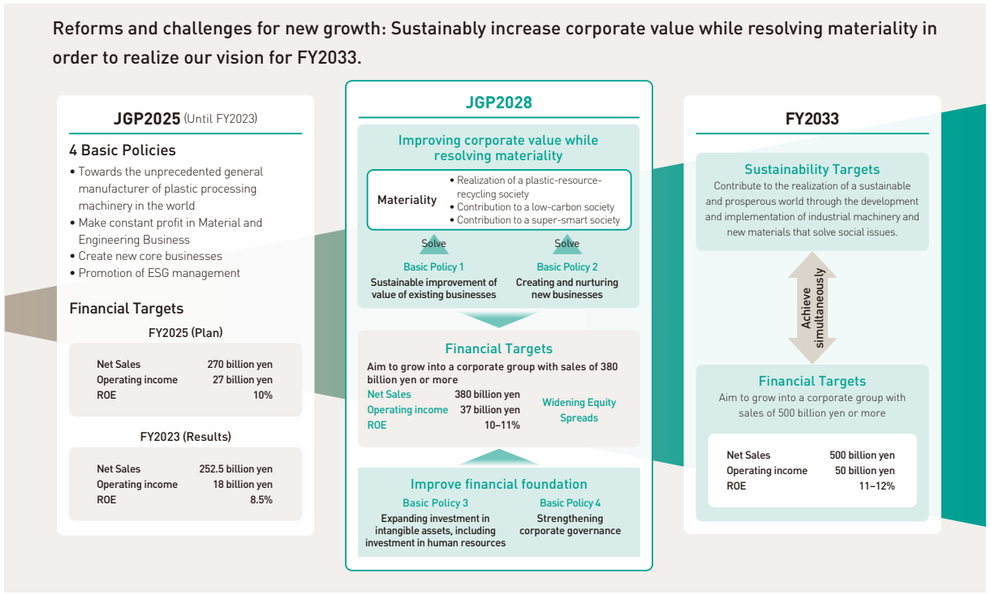
Our Vision and the Place of the New Medium-Term Management Plan

Before creating the new medium-term management plan, we created financial and sustainability targets and made simultaneously achieving both of these our "vision" for the next decade. Our financial target is a sales goal of 500 billion yen, roughly double that of FY2023. While this will be highly challenging for JSW Group, my dream in creating this target was to show our stance and willingness to reincarnate ourselves as a growth-oriented company. Our sustainability target is to "contribute to the realization of a sustainable and prosperous world through the development and implementation of industrial machinery and new materials that solve social issues." Considering future business expansion, we thought that going beyond resolving material issues to achieve our sustainability target through additional means other than simply building up existing businesses would be vital in achieving 500 billion yen in sales.

The five-year plan JGP2028 has been positioned as a stage for reforms and challenges for new growth to achieve our vision for FY2033. I believe that the area most in need of reform is the mind. We are strongly determined to have each employee of JSW Group embrace our purpose as their own and take on the challenge of changing their mindset from stability-oriented to growth-oriented. Over the next five years, we will work to sustainably increase corporate value while resolving material issues to achieve our vision for FY2033.

We will promote JGP2028 through four basic policies. We view the promotion of "sustainable improvement of the value of existing businesses" and "creating and nurturing new businesses" as ultimately leading to the resolution of three key social and material issues (realization of a plastic-resource-recycling society, contribution to a low-carbon society, contribution to a super-smart society). We believe that addressing material issues aimed at solving social issues through business will create both social and economic value (profits), enabling sustainable growth. Fortifying the management foundation necessary for achieving our FY2033 vision requires us to work backward from our goal and start making upfront investments and reinforcing now, and our initiatives based on the other two basic policies, "expanding investment in intangible assets, including investment in human resources" and "strengthening corporate governance," will serve as actions to that end.

Positioning of Medium-Term Management Plan JGP2028 and Basic Policy



Sustainable Improvement of Value of Existing Businesses

We will implement key strategies tailored to each business segment to sustainably improve the value of existing businesses. For the Industrial Machinery Business in particular, we will make major investments in factories and production facilities at the Hiroshima Plant during the JGP2028 period to expand production capacity and maintain and improve our in-house production rate.



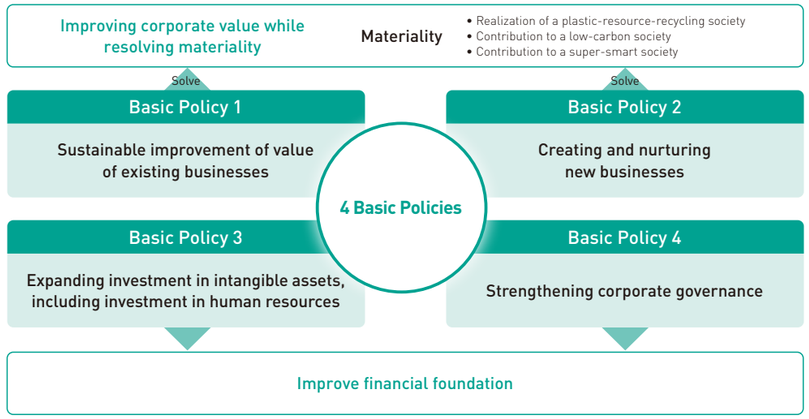
We will also fortify local production as part of our global expansion efforts. Key areas include our European bases in Germany and Poland as well as India. We plan to establish a technical center in India, leveraging and expanding the functions of local companies to capture demand in the growing Indian market.

Creating and Nurturing New Businesses

We will create and nurture new businesses through two approaches: strengthening existing businesses by developing elemental technologies and creating innovative technologies through basic technology research. To strengthen existing businesses through elemental technology development, we will accelerate efforts such as elemental technology development at Muroran (Material Technology Laboratory), Yokohama (Device Technology Laboratory), and Hiroshima (Advanced Technology Laboratory). We will also formulate and implement strategies to create value for each business by leveraging intangible assets as well as focus on continuous training for R&D workers and fortifying our technological capability.

To create innovative technologies through basic technology research, we plan to establish a new R&D center in charge of developing innovative technologies. We will also work on creating innovation by leveraging diverse human resources as well as by examining market trends, the direction of R&D, and our own strengths through IP analysis to efficiently develop new products and markets.

JGP2028 4 Basic Policies



Healthy Risk-Taking to Achieve Sustainable Growth

JGP2028's financial targets include 380 billion yen in sales, 37 billion yen in operating income, and 10–11% ROE in the final year to increase the equity spread. While growing sales and margins is important, our focus going forward will be on improving capital efficiency and increasing the equity spread—the difference between the cost of capital and the return investors expect—over the medium to long term. This is why we set ROE as our financial target indicator instead of operating income margin. The 10–11% ROE target exceeds our estimated 8.0% cost of equity based on CAPM.

Boosting profitability is vital if we are to improve ROE. However, improving profitability even further requires active capital investment. In the Industrial Machinery Business, for example, despite increased orders and sales, our in-house processing capacity, which ought to be our strength, was unable to keep up with business expansion, resulting in increased outsourcing costs and limited profitability growth. The investment in the Hiroshima Plant I mentioned earlier is a measure to overcome this. "Creating and nurturing new businesses," one of our basic policies, will also strengthen our business portfolio and contribute to sustained ROE improvement. We believe that "expanding investment in intangible assets, including investment in human resources" will also lead to sustained ROE improvement. In expanding intangible asset investment, I believe it is vital to view this as an "investment" for medium-to-long-term growth rather than a "cost" that reduces profits for the term. I think this mindset may have been lacking in the Group until recently. Going forward, we must maintain a stance of healthy risk-taking while keeping our vision in mind. We plan to make proactive strategic investments in equipment and intangible assets especially in the first half of JGP2028 to achieve long-term, sustainable growth.

Respecting our purpose is a prerequisite for strengthening our business portfolio. We must maintain a strong awareness of our fundamental purpose, "Material Revolution, making the world sustainable and prosperous," while pursuing profitability and growth in all businesses, reviewing our business portfolio, and competing in areas where we excel with products that only JSW Group can create.

Promoting Investment in Human Resources and Investment in the Future

Once again I'd like to explain "expanding investment in intangible assets, including investment in human resources," a basic policy of JGP2028. We will promote "investment in human resources" and "investment in the future" in line with this policy.

Investment in Human Resources

As mentioned earlier, it is vital that Group management view intangible asset investment as an "investment" rather than a "cost." The same goes for "investment in human resources." That is why we will proactively invest in human capital, including raising salary levels and revising our training systems.

Viewing this as an investment means our main goal is to have this generate value in the future and help boost corporate value. Conducting business activities while respecting our purpose requires that we formulate and implement a human resource strategy that addresses the issue of human capital improvement and DEI&B, which we have identified as a material issue. To achieve this, we will implement measures focused on both the "organization" and the "individual."

Achieving results as an organization requires that each employee is able to demonstrate their abilities. Defining the skills employees are to acquire through their careers and promoting individual growth through a variety of HR measures is vital to executing work as an organization. Fostering an organizational culture where employees are able to grow their skills and workers from diverse backgrounds can achieve autonomous growth and play active roles will create synergy between organizational results and individual growth.

What is vital for linking individual growth to organizational results is having diversity. Going forward, we will secure diversity at a variety of levels and encourage growth among diverse individuals to refine our organizational core competencies and maximize organizational results. In concrete terms, we are proactively recruiting and promoting female employees to management positions and also increasing hiring among foreign nationals and career recruits.

The Group is also striving to improve organizational strength by recruiting and developing human resources aligned with our business strategy, where managers play a particularly vital role. For this reason, we will place even greater focus on management training going forward. Here too, "reform" is a key concept. In the training we've conducted as the norm up until this point, we'd like to explain clearly to each and every employee why learning certain skills is important to their growth and what growth we expect from acquiring these skills, then help them set and work toward their own "vision" based on their own idiosyncrasies.

Investment in the Future

One aspect is active investment in research and development. In April 2023, we established the Innovation Management Headquarters to consolidate and strengthen companywide ability to breed innovation. We also restructured the R&D organizations of The Japan Steel Works and Japan Steel Works M&E, establishing the Advanced Technology Laboratory, Material Technology Laboratory, and Device Technology Laboratory as our R&D centers. Along with this, we also abolished the Technical Development Department of the Hiroshima Plant, the Muroran Laboratory at Japan Steel Works M&E's Muroran Plant, and the Technical Development Department of the Yokohama Plant, transferring and integrating their functions into the Advanced Technology Laboratory, Material Technology Laboratory, and Device Technology Laboratory.

I touched on this when discussing "creating and nurturing new businesses," and we envision creating a new research institute for advanced research aimed at providing a future for the young people today distinct from these laboratories. We hope to attract outstanding R&D workers by bringing this concept to life and creating a place where outside researchers would want to conduct research.

Another aspect is investment in DX. We aim to further boost productivity and provide new value to society by promoting a DX strategy based on active investment. In concrete terms, we will reform production processes in our business through manufacturing infrastructure innovation, transform existing businesses through digitalization of operations, and work to provide new value through DX-driven solutions. In management, we will accelerate organizational and operational reform by promoting data-driven operations and increasing IT literacy.

Transforming Governance and Corporate Culture from the Perspective of Long-Term Growth



We also view "strengthening corporate governance" as a key management issue and have made it one of the basic policies in JGP2028. Ensuring diversity to drive future growth and transformation applies to the Board of Directors as well. We truly appreciate the valuable feedback from outside directors with high expertise in their respective fields. Some outside directors are senior business leaders, and their advice has provided many insights. I have felt this myself, and with the ratio of outside directors reaching 50% and multiple women joining as outside directors, I understand that there has been steady improvement in the effectiveness of the Board of Directors.

The executive remuneration system is also undergoing review. In April 2024, a portion of our executive remuneration policy was revised to strengthen incentives for medium-to-long-term improvement of corporate value and further promote shared interests with shareholders. More specifically we added an assessment of ROE achievement rate as an incentive to improve performance for a single fiscal year. We also added an assessment of efforts toward medium-to-long-term measures as an incentive to improve medium-to-long-term corporate value and increased the proportion of long-term incentives (stock-based remuneration) for representative directors. We expect this to take management's awareness of medium-to-long-term corporate value improvement to the next level.

In terms of strengthening governance, we will also work to promote risk management and reduce cross-shareholdings. In addition to selling shares of diminished value, we believe reducing holdings to a level broadly understood by investors is appropriate and will continue aiming for "10% or less of consolidated net assets" as our target.

We will also continue our efforts to reform our organizational culture in response to the misconduct in product inspections mentioned earlier. Two years have passed since the announcement, but we recognize that maintaining strong risk awareness regarding corporate ethics is of the utmost importance. I believe the essential cause of corporate misconduct is a lack of cooperation between departments and business divisions as well as insufficient communication between individuals. We will maintain risk awareness by treating this not as an issue within a single department but as a common challenge across the Group. I personally attend monthly meetings at work sites to engage in dialogue with employees and managers and am adamant about directly conveying our purpose and future management strategy in my own words. Information is of course communicated internally in a variety of ways, but I feel that direct communication with each employee in my own voice is particularly effective in conveying the message strongly, so I plan to continue this straightforward approach.

To Our Stakeholders

Our efforts to achieve the targets set forth in JGP2028 are inseparable from our efforts to address material issues. By combining our efforts to create value through business and solve social issues—realization of a plastic-resource-recycling society, contribution to a low-carbon society, and contribution to a super-smart society—with initiatives to strengthen our management foundation for sustainable growth—human capital improvement and DEI&B, investment in the future with innovation management, and governance reinforcement of JSW Group—we will move closer to achieving the financial and sustainability targets set as our vision. Our efforts to achieve JGP2028 and address material issues are a unified effort between management and employees.

We ask for your continued understanding and support for future initiatives by JSW Group. I hope you'll stay tuned to JSW Group's future efforts toward helping build a sustainable and prosperous world through developing and implementing industrial machinery and new materials that solve social issues.

Transitions and Vision in the JGP* Medium-Term Management Plan

* JGP: JSW group Growth Plan

Under JGP2017, JSW employed "aggressive management" in the Industrial Machinery Products Business to actively utilize and invest in alliances and boost production capacity at major plants. JGP2020 aimed to "build a new foundation for growth," promoting plastic processing machinery complexes in the Industrial Machinery Products Business and establishing Japan Steel Works M&E in the Materials Business. JGP2025 set its sights on the long-term vision of becoming "a company where employees are excited to work" and "expanding and growing business to 300 billion yen," with the goals of growing into the unprecedented general manufacturer of plastic processing machinery in the world and securing consistent profit in the Materials Business. Through these efforts, continuous strengthening of the Industrial Machinery Products Business and improvement in profitability of the Materials Business bore fruit, enabling us to formulate JGP2028 before the final year of JGP2025. JGP2028 is positioned as "reforms and challenges for new growth," aiming to sustainably increase corporate value while resolving material issues to achieve our vision for fiscal 2033.

Purpose

Material Revolution

Material Revolution, making the world sustainable and prosperous

Vision

Benefiting all stakeholders by developing and implementing industrial machinery and new materials that solve social issues

JGP2017 FY2015–FY2017 → **JGP2020** FY2018–FY2020 → **JGP2025** FY2021–FY2023 → **JGP2028** FY2024–FY2028 → **FY2033 Vision**

Position	JGP2017 (FY2015–FY2017)	JGP2020 (FY2018–FY2020)	JGP2025 (FY2021–FY2023)
Basic Policy	● Increase profitability of existing businesses ● Foster new products and businesses and make them competitive as soon as possible ● Reinforce Group management and promote alliances	● Optimization of management resources and strengthening of alliances ● Strengthen service business ● Acceleration in exploration and development of new businesses	● Towards the unprecedented general manufacturer of plastic processing machinery in the world ● Make constant profit in Material and Engineering Business ● Create new core businesses ● ● Promotion of ESG management
Major Results Industrial Machinery Business	● Boosted productivity and improved costs of industrial machinery products (Hiroshima Plant: factory reorganization) ● Acquired of SM Platek Co., Ltd. in South Korea (extruders) ● Business acquisition from Hitachi Plant Mechanics Co., Ltd. (simultaneous biaxial stretching device) ● Joint development of injection molding machines with Toyo Machinery & Metal Co., Ltd. (platform standardization)	● Hiroshima Plant: new factory construction ● Merger with Meiki Co., Ltd. ● Made GM Engineering Co., Ltd. a subsidiary (strengthened film and sheet manufacturing equipment) ● Merger with Nichiyu Machinery Co., Ltd. (strengthened film and sheet manufacturing equipment) ● Hiroshima and Europe: commenced operations of service centers	● Hiroshima Plant: strengthened production capacity for film and sheet manufacturing equipment ● Meiki Plant and M&E: strengthened production capacity for industrial machinery products ● Europe: established production base ● Established JSW Aktina System ● Obtained orders for proposal-based development of defense equipment
Material and Engineering Business	● Restructured Muroran Plant (boosted productivity and more)	● Established Japan Steel Works M&E ("M&E")	● Prospects for improved profitability through proper sales prices ● Increased orders for power generation parts amid global energy policy revisions
Cross-Organizational	● Reorganized Research and Development Headquarters into New Business Promotion Headquarters ● Promoted companywide business development projects	● Established Muroran Copper Alloy Co., Ltd. with JX Advanced Metals Corporation ● Commercialized hydrogen-related business (transfer to M&E) ● Focused on photonics, composites, and metals as new businesses to accelerate early-stage profit generation	● Established Innovation Management Headquarters ● Commenced operations of large-scale proof-of-concept equipment for gallium nitride (GaN) substrates ● Established JSW Group corporate philosophy ● Identified material issues ● Established DX Promotion Office
Major issues still to be addressed	• Delays in developing new businesses • Insufficient efforts to strengthen alliances	• Further promotion of plastic processing machinery complexes • Create new core businesses beyond plastic processing machinery	• Increasing production capacity to meet sharp increases in orders and sales, and maintaining and improving in house production rate • Promoting global expansion • Investing on the aging core production facilities

● Existing businesses ● New businesses ● Investment in intangible assets ● Corporate governance

Reforms and challenges for new growth

Improving corporate value while resolving materiality

Materiality
- Realization of a plastic-resource-recycling society
- Contribution to a low-carbon society
- Contribution to a super-smart society

Solve

● Basic Policy 1
Sustainable improvement of value of existing businesses

Solve

● Basic Policy 2
Creating and nurturing new businesses

Financial Targets

Aim to grow into a corporate group with sales of 380 billion yen or more

Net Sales	380 billion yen
Operating income	37 billion yen
ROE	10-11%

Widening Equity Spreads

Improve financial foundation

● Basic Policy 3
Expanding investment in intangible assets, including investment in human resources

● Basic Policy 4
Strengthening corporate governance

FY2033 Vision

Sustainability Targets

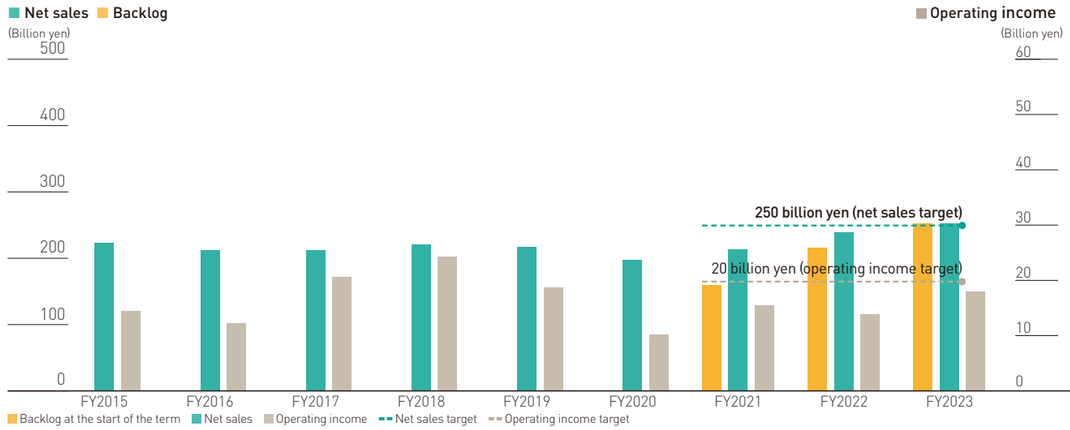
Contribute to the realization of a sustainable and prosperous world through the development and implementation of industrial machinery and new materials that solve social issues.

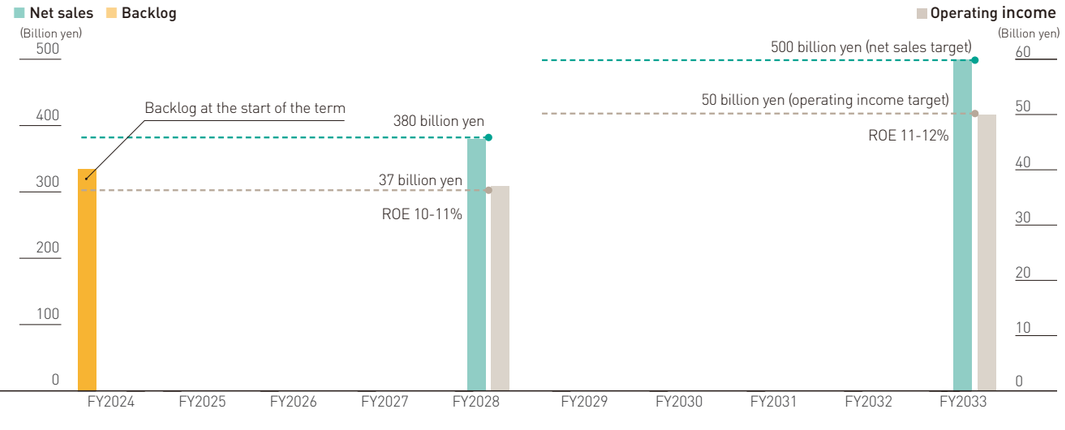
Achieve simultaneously

Financial Targets

Aim to grow into a corporate group with sales of 500 billion yen or more

Net Sales	500 billion yen
Operating income	50 billion yen
ROE	11-12%





Medium-Term Management Plan JGP2028

In response to such internal changes as establishing a corporate philosophy for the Group and identifying material issues as well as the need to formulate strategies that capitalize on changes in the external environment and address order backlogs that have grown faster than planned, we revised JGP2025 before its final year to formulate JGP2028. Under JGP2028, we aim to increase corporate value while resolving materiality and improving our management foundation to grow into a corporate group with sales of 380 billion yen or more.

Internal Environment

Purpose

We established a new corporate philosophy for JSW Group [Our Philosophy]

Vision

Value Creation Process

Identified Materiality

External Environment

Plus (opportunity)

- Stable growth in global plastics demand
- Aggressive investment in plastic and magnesium molding products due to the progress of EVs
- Increased demand for chemical recycling, etc., to meet plastic resource recycling requirements
- Return to nuclear power generation compatible with energy security and decarbonization
- Accelerated introduction of renewable energy generation
- Reinforcement of defense capabilities to respond to the security environment in which Japan finds itself

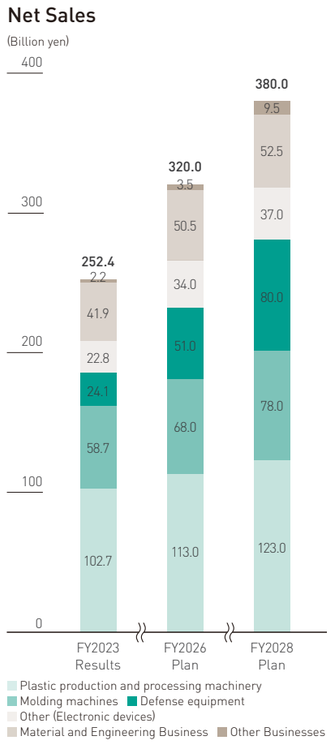
Minus (risk)

- Postponement or cancellation of various investment plans by customers due to inflation or economic slowdown
- Global increases in resource and energy prices due to supply chain disruptions, etc.
- Delays in the procurement of various parts

	FY2023: Results	FY2026: Plan	FY2028: Plan	Change from FY2023
Net sales	252.5 billion yen	320 billion yen	**380** billion yen	+50%
Operating income	18 billion yen	26 billion yen	**37** billion yen	+106%
Operating income ratio	7.1%	8.1%	**9.7%**	+2.6PP
ROE	8.5%	9.0%	**10-11%**	+1.5-2.5PP
Capital investment	8.1* billion yen/year	**20** billion yen/year		**+147%**
R&D investment	5.2* billion yen/year	**8.2** billion yen/year		**+58%**
Dividend payout ratio	30%	35%		+5PP
DOE	2.0%	2.5%		+0.5PP

* Average of three years from FY2021 to FY2023

Net Sales



4 Basic Policies

Improving corporate value while resolving materiality

Basic Policy 1: Sustainable improvement of value of existing businesses

▶ p. 17

- Execute Key Strategies by Business Segment
- Hiroshima Plant
  Increase Production Capacity for Plastic Machinery Products
  - Make large capital investments (plants and facilities) to expand production capacity while maintaining the in-house production rate, which is one of our strengths.
- Increase Production Capacity by Manufacturing in Optimal Locations and Mutual Complementation
  - Maximize production capabilities by optimizing the business and products of each production base in implementing key strategies.
- Promote Global Expansion by Strengthening Local Production

Basic Policy 2: Creating and nurturing new businesses

▶ p. 22-23 (Innovation Management Strategy)

- Strengthen existing businesses by developing elemental technologies and create innovative technologies through basic technology research.

Strengthen management foundation

Basic Policy 3: Expanding investment in intangible assets, including investment in human resources

▶ p. 21 and p. 24-25 (DX Strategy and Human Capital Strategy)

- [Human Capital Strategy] Achieve sustainable growth and increase corporate value by fostering diverse individuals and maximizing organizational results.
- [DX Strategy] Increase productivity and provide new value to society.

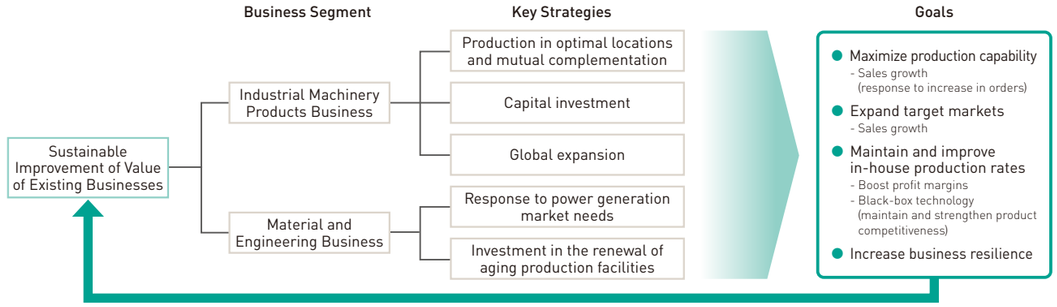
Basic Policy 4: Strengthening corporate governance

▶ p. 50-63 (Corporate Governance)

- Partially revised the officers' remuneration system to strengthen the incentive function for medium-to-long-term improvement of corporate value and to further promote the sharing of interests with shareholders.
- Sustainably increase corporate value by improving the feasibility of the sustainability and financial targets while reducing corporate management risks.

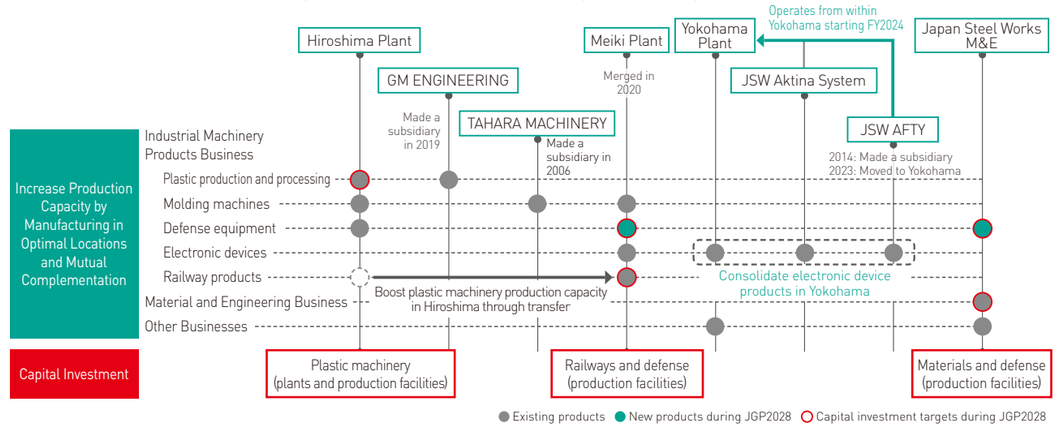
JGP2028 [Basic Policy 1] Sustainable improvement of value of existing businesses

We will develop a key strategy that fits each business segment, then maximize production capability, expand target markets, maintain and improve in-house production rates, increase business resilience, and more to achieve sales growth and higher profit margins. Through these efforts, we will sustainably improve the value of existing businesses.



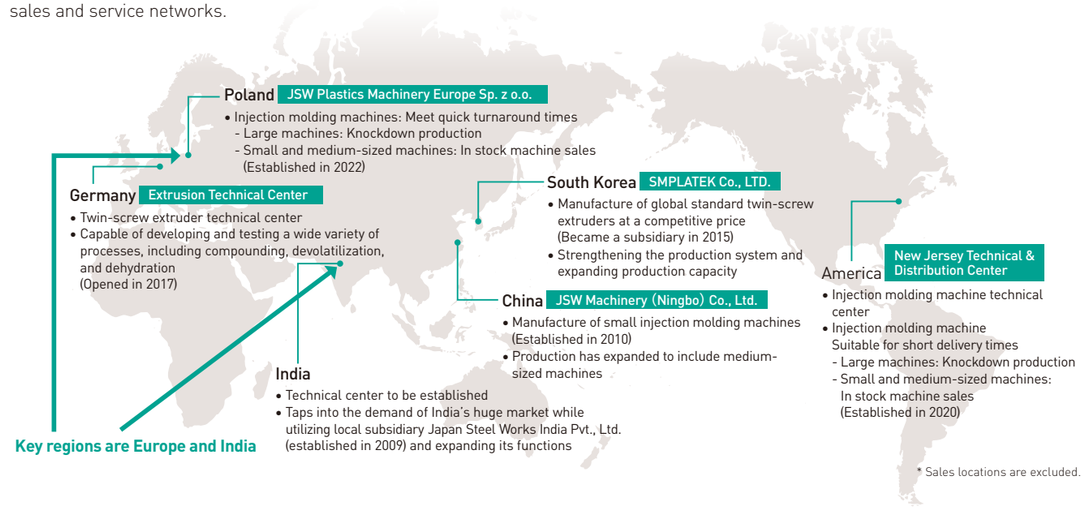
Key Strategies: Production in Optimal Locations, Mutual Complementation, and Capital Investment

We will strengthen manufacturing in optimal locations and mutual complementation by optimizing the businesses and products handled at each production location to expand production capacity, efficiently use management resources, and boost resilience. We will also make capital investments aimed at expanding production capacity and maintaining and improving our in-house production rates.



Key Strategies: Global Expansion

We aim for sustainable growth by expanding global market share, targeting Europe and India as key regions in addition to our current bases in China, the US, and South Korea. We plan to establish a technical center in India to boost our presence and strengthen our sales and service networks.



* Sales locations are excluded.

Financial and Capital Strategy: Message from the CFO

Widening Equity Spreads through Active Investment in Tangible and Intangible Assets while Maintaining Financial Soundness



Hiroki Kikuchi

Representative Director & Executive Vice President, CFO, in charge of Export Control Administration, in charge of Finance & Accounting Department, General Manager of Corporate Planning Office, General Manager of Business Development Office

Vision for FY2033 and JGP2028 New Medium-Term Management Plan

Based on its Purpose of "Material Revolution, making the world sustainable and prosperous," JSW Group aims to simultaneously achieve its sustainability target of "contribute to the realization of a sustainable and prosperous world through the development and implementation of industrial machinery and new materials that solve social issues" and its financial targets of "net sales of 500 billion yen, operating income of 50 billion yen, and ROE of 11–12%" by fiscal 2033. As concrete measures to achieve this vision, the Group has formulated JGP2028, its new medium-term management plan.

Basic Financial Policy in JGP2028

In JGP2028, the Group aims to solve material issues while achieving financial targets of "net sales of 380 billion yen, operating income of 37 billion yen, and ROE of 10–11%" by improving the sustainable value of existing businesses, creating and nurturing new businesses, and strengthening its management foundation. While the Group will actively invest in both tangible and intangible assets to achieve these targets, the basic financial policy in JGP2028 is to "widen equity spreads while maintaining financial soundness."

To sustainably improve the value of existing businesses, major capital investments to expand production capacity and maintain and improve the in-house production rates in the Industrial Machinery Products Business, along with increased investment to boost business sustainability in the Material and Engineering Business, are essential.

The Group will also create and nurture new businesses by bolstering R&D investment while improving its management foundation through expansion of investment in intangible assets, including investment in human resources.

Widening the Equity Spread

Improving ROE and cost of equity

Of the main KPIs the Group has set in JGP2028—net sales, operating income, and ROE—the most important for our financial and capital strategy is ROE, which is why we have made it our policy to widen the equity spread (ROE – cost of equity) as a way to maximize shareholder value. The Group recognizes its cost of equity, which serves as the comparison for ROE, as 8.0% based on CAPM.

The Group recognizes that its ROE of 8.5% in fiscal 2023 exceeded its cost of equity by 0.5%; however, through sustainable improvement in the value of existing businesses and the creation and nurturing of new businesses, we will achieve ROE of 10–11% in fiscal 2028, the final year of JGP2028, and furthermore aim for 11–12% in fiscal 2033, sustainably widening our equity spread.

Specifically, by creating ROIC trees for each business and clarifying process KPIs, the Group will manage its business portfolio down to the level of the SBU to achieve business growth and improved profitability.

To reduce the cost of equity, the Group will provide sufficient data disclosure through dialogue and disclosure of initiatives to improve corporate value as well as share assessments and feedback obtained through this with management and the Board of Directors to boost engagement. Through these engagement activities, the Group aims to reduce information asymmetry and lower its cost of equity.

Business portfolio strategy

Improving the ROIC for each of our businesses is essential to boosting ROE, an indicator of the Group's overall capital profitability.

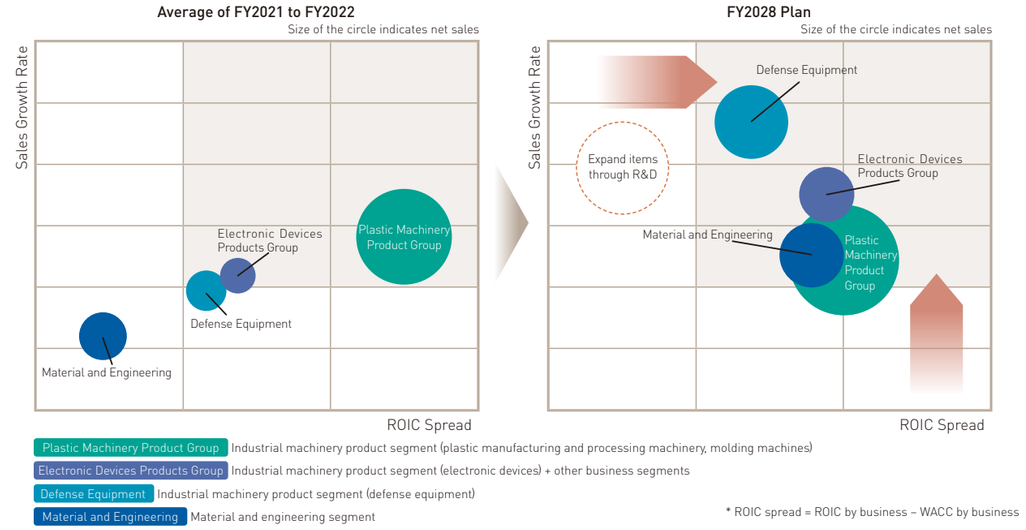
The Group conducts annual Board of Directors discussions and approvals of our basic business portfolio policy and has defined where each business should be positioned in a four-quadrant matrix based on capital profitability (ROIC spread) and sales growth rate by the final fiscal year of JGP2028.

To improve the ROIC for each business, it is essential that all employees involved actively participate and feel that they are contributing. To this end, the Group creates ROIC trees tailored to the characteristics of each business, clarifies process KPIs, and works to instill and operate these within the Company.

For ROIC improvement, it is also vital that individual capital investments contribute to better capital profitability.

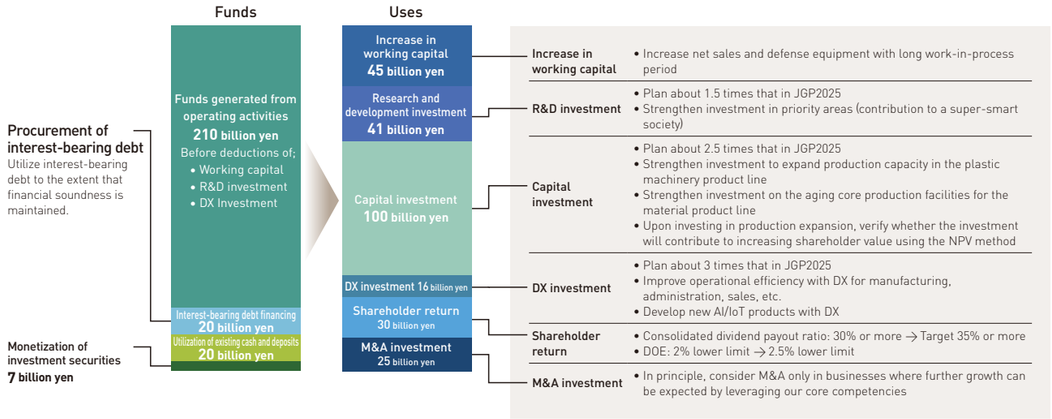
For large-scale production expansion investments that require deliberation by the Executive Board or Board of Directors, the Group mandates verification using the NPV method and determines whether to invest based on whether it will truly increase shareholder value. The discount rate used in the NPV method is the WACC set for each business.

In having business portfolio management and investment selection criteria function as two wheels of a cart, the Group aims to improve companywide ROE by boosting ROIC for each business.



Cash allocation

During JGP2028, the Group plans to make proactive investments that exceed operating cash flow and make up the shortfall using low-yield assets such as existing cash and deposits and investment securities as well as interest-bearing debt. While increasing interest-bearing debt can improve financial leverage, its use is premised on maintaining financial soundness.



Maintaining Financial Soundness

While the Group will actively pursue capital investment, R&D investment, and investment in intangible assets under JGP2028 to sustainably increase corporate value, we will ensure flawless financial soundness.

Equity ratio

The equity ratio is considered an important indicator of financial soundness.

The Group's equity ratio was 48.3% in fiscal 2023, but total assets will increase during JGP2028 due to both proactive capital investment and increased working capital accompanying higher net sales.

While the increase in total assets will push the equity ratio downward, the Group plans to maintain a minimum of around 45% during JGP2028 to ensure financial soundness while maintaining our current issuer rating (R&I) of A or higher to secure fundraising capacity.

The Group plans to increase interest-bearing debt by 20 billion yen during JGP2028 but expects to hold net cash of 14 billion yen at the end of March 2029 and believes this will have no impact on financial soundness.

Optimal level cash and deposits

The Group considers the optimal level of cash and deposits to be the sum of two months' worth of monthly sales plus 10 billion yen for unexpected funding needs and plans to maintain this optimal level throughout JGP2028.

While JGP2028 plans for a 20 billion yen decrease in cash and deposits, the Group plans to secure an optimal level in line with net sales of 400 billion yen by the end of March 2029 as it launches its next medium-term management plan.

Shareholder Return Policy

Our basic policy regarding the return of profits to shareholders is to pay stable and continuous dividends and to improve them.

The Group has traditionally used consolidated dividend payout ratio as its performance-linked dividend indicator and DOE (dividend on equity) as its stable dividend indicator (minimum dividend indicator) and will boost shareholder returns during JGP2028 by raising both ratios.

Specifically, to achieve optimal balance between shareholder returns and proactive investment to increase corporate value, the Group has raised its consolidated dividend payout ratio from 30% to 35% and its DOE from 2.0% to 2.5%. While the annual dividend per share was 59 yen in fiscal 2023, the Group plans to pay an annual dividend of 74 yen per share in fiscal 2024.

To Our Shareholders & Investors

JSW Group aims to achieve its Vision and embody our Purpose by ensuring the smooth function and cycling of the Value Creation Process and simultaneously creating social and economic value.

To ensure the smooth function and cycling of the Value Creation Process, it is essential to both bolster capital—represented by fixed capital and human capital—and boost product and service competitiveness by refining our business model while resolving material issues.

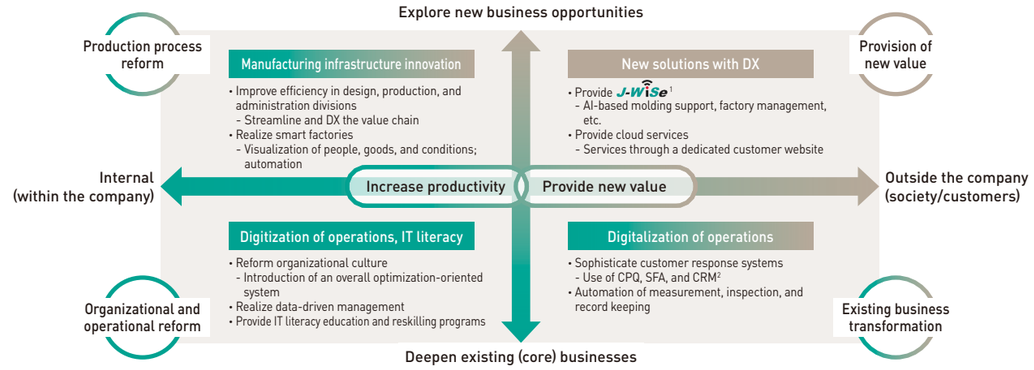
JSW Group will implement proactive investments aimed at sustainably boosting competitiveness while following a basic financial policy of "widening equity spreads while maintaining financial soundness."

The Group also recognizes the great importance of incorporating shareholder and investor opinions on social and economic value creation into Group management. We will continue to actively work to provide information and engage in dialogue with shareholders and investors and ask for your continued support.

DX Strategy

In June 2024, the Board of Directors approved the JGP2028 medium-term management plan. One of the basic policies in JGP2028, "expanding investment in intangible assets, including investment in human resources," is closely tied to "strengthening the management foundation," and one of our strategies to achieve this is our DX strategy.

To achieve sustainability targets, it is vital that we benefit all stakeholders by resolving material issues, which will serve as a compass for resolving social issues, and this requires breaking the status quo to provide new value. It is also vital to improve productivity to meet orders, which are at a historical high. The Group recognizes that achieving financial targets will be difficult without both of these elements. To achieve this, we have classified our DX initiatives into four quadrants along two axes—new and existing businesses, and internal (within the company) and outside the company (society/customers)—and are implementing DX measures aimed at providing new value, transforming existing businesses, reforming production processes, and reforming organization and operations. The Group promotes DX by regularly measuring indicators such as the value-added ratio in IT investment and DX promotion indicators as metrics to gauge progress in the DX strategy aimed at achieving financial targets and, having obtained DX certification in August 2024, continues to work on improving its DX level.



1. J-WiSe is an IoT solution that supports customers in shifting to smart factories. It consists of Production Control, Service/Maintenance, Operation Support, and a Production Automation System.
2. CPQ: Configure Price Quote SFA: Sales Force Automation CRM: Customer Relationship Management

Production process reform

The key initiative here is innovation in our manufacturing infrastructure. By consolidating and upgrading systems based on IT governance, the Group will promote greater standardization of systems at manufacturing sites and maximize factory and machine efficiency, boosted through capital investment. From the perspective of DX, this will also strengthen the measure set forth in the Basic Policy 1 of JGP2028, "increase production capacity by manufacturing in optimal locations and mutual complementation."

We are also working to build smart factories. Visualizing people, goods, and conditions, identifying issues, and then making improvements based on these will boost productivity at each plant, leading to further growth in overall production capacity. This visualization also helps us understand our product CFP (carbon footprint), which has been in the spotlight recently. Preparations are underway based on the presumption that ascertaining and reducing CFP will be closely linked to the value of our products.

Organizational and operational reform

Achieving data-driven management is vital for delving deeper into existing businesses. That is why we process data generated by production and sales systems and deploy it to our information systems so it can be used for management decision-making. As a foundation for this, the Group is replacing systems built for individual optimization at business divisions and plants with systems for overall optimization. To instill the importance of overall optimization and foster a mindset of taking on challenges rather than being satisfied with existing business processes and product types, the Group is creating opportunities for problem-solving through Organizational Culture Reform Projects and revisions to our Code of Conduct.

Meanwhile, in addition to reforming systems and culture, improving IT literacy is essential to maximizing the potential of DX tools. That is why we have implemented such initiatives as providing education for human resources with high potential as well as skill development training through rotation to the DX Promotion Office in addition to basic training.

Provision of new value

The key initiative here is to provide the IoT solution J-WiSe for production control, operation support, service and maintenance, and production automation in the Group's equipment and services. For injection molding machines, examples include AI Molding Navigator, which uses artificial intelligence to prevent and improve molding defects; Remote Connect, which reduces molding defects, downtime, and travel costs by enabling remote monitoring and adjustment of molding conditions; and Repex J-TAC, an AI-based control system for thickness that automatically adjusts the thickness of films output from T-dies in film and sheet manufacturing equipment in place of skilled workers. The Group has also begun developing a predictive maintenance system for twin-screw extruders (TEX). These solutions are expected to provide new value by meeting wide-ranging needs, including the need for measures to address labor shortages, cost reduction, and production streamlining.

Existing business transformation

The first measure here is to create more advanced customer response systems. Increasing sharing of data between business divisions through system consolidation and upgrades as well as utilizing CPQ, SFA, and CRM in sales systems will allow us to respond quickly and accurately to customer needs. This is expected to improve customer satisfaction and increase repeat rates. Strengthening the system to provide solutions through sharing and cooperation on requests across multiple business divisions will allow us to significantly improve efficiency and competitiveness across the entire Group and establish market advantage through digitalization.

The second measure is the digitalization and automation of measurement, inspection, and record creation. In addition to improving measurement accuracy, this will allow us to provide highly reliable inspection results to customers. Productivity will improve through increased throughput and maximized operating time, with labor savings and reduced worker load leading to improved well-being. This will allow for the transformation of existing businesses from multiple angles.

* "J-WiSe," "J-WiSe AI Molding Navigator," "J-WiSe Remote Connect," "Repex J-TAC" and "TEX" are Japanese registered trademarks.

Innovation Management Strategy

With "reforms and challenges for new growth" as its theme, JGP2028 aims to sustainably increase corporate value while resolving material issues to achieve our fiscal 2033 vision, strengthen the management foundation, and grow to a corporate group with sales of 380 billion yen or more. Creating new businesses and products is essential for this, which is why JGP2028 includes "creating and nurturing new businesses" as a basic policy. The innovation management strategy is crucial for achieving this.

The Innovation Management Headquarters was established in April 2023 to encourage companywide innovation and comprises the Innovation Planning Department (Tokyo Head Office), Advanced Technology Laboratory (Hiroshima), Material Technology Laboratory (Muroran), and Device Technology Laboratory (Yokohama). This organization will drive companywide innovation, which includes strengthening existing businesses through the development of elemental technology using our core competencies, pioneering new markets and innovative technology as a source of sustainable future growth for the Company, acquiring diverse human resources (with diverse values) and cultivating R&D workers, all while focusing on "creating and nurturing new businesses," in order to achieve the JGP2028 targets.



Shigeki Inoue
Director & Senior Managing Executive Officer
CTO, in charge of Quality Management, in charge of Intellectual Property Department, in charge of New Business Promotion Headquarters, General Manager of Quality Management Office, General Manager of Innovation Management Headquarters

JGP2028 [Basic Policy 2] Creating and Nurturing New Businesses

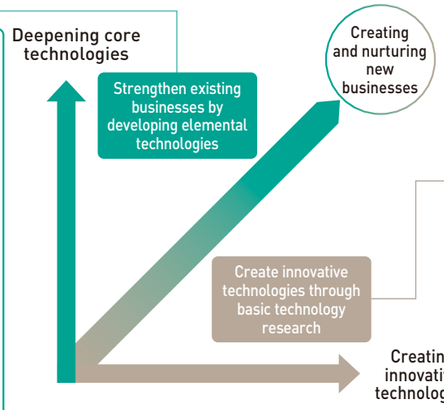
Strengthen existing businesses by developing elemental technologies and create innovative technologies through basic technology research

Development of elemental technologies in laboratories established at the three plants
Strengthen existing products and resolve materiality by deepening core technologies through elemental technology development in close collaboration with plants.

Formulation and implementation of a business specific intellectual property strategy
Formulate and implement a strategy that creates value in each business from an intangible asset utilization perspective through a companywide IPE structure.[1]

Sustained development of R&D personnel and strengthening of technological capabilities
Strengthen partnerships with universities and research institutes in Japan and overseas to promote sustainable human resource development and technological advancement by earning a doctorate degree, etc.

1. Intellectual Property Executive (IPE) System: A system in which an intellectual property manager is assigned to each business division to formulate an intellectual property strategy based on the business strategy



Planning to establish a new R&D center to develop innovative technologies
Establish a new laboratory within the medium-term plan period that is not attached to a plant, and that conducts research and development of innovative technologies that do not adhere to existing products or core technologies.

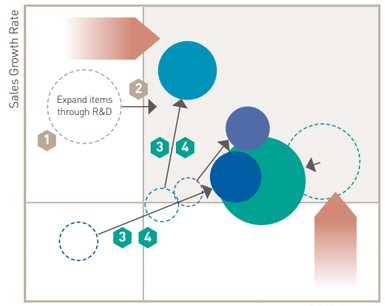
Creating innovation by leveraging diverse human resources
Encourage the creation of innovative technologies and new businesses through the accumulation of diverse human resources (values) from inside and outside the company and the promotion of entrepreneurship.

Efficient new product and market development through IP analysis[2]
Examine the company's strengths, market trends, and R&D direction through IP analysis to efficiently develop new products and new markets.

2. IP analysis: IP landscape analysis of management and business information incorporating IP information

1. Incorporation of R&D products as-is into the business portfolio, making them candidates for new businesses and products
2. Widening the ROIC spread (improving profitability) by permeating new businesses and products in markets
3. Increasing sales growth rate by transforming products in line with market trends through performance improvements, new feature additions, etc.
4. Improvement of profitability by strengthening differentiating technologies in existing businesses, products, and services

Business Portfolio FY2028 Plan (Dotted circles show average from FY2021 to FY2022)



Plastic Machinery Product Group
Industrial machinery product segment (plastic manufacturing and processing machinery, molding machines)

Defense Equipment
Industrial machinery product segment (defense equipment)

Electronic Devices Products Group
Industrial machinery product segment (electronic devices) + other business segments

Material and Engineering
Material and engineering segment

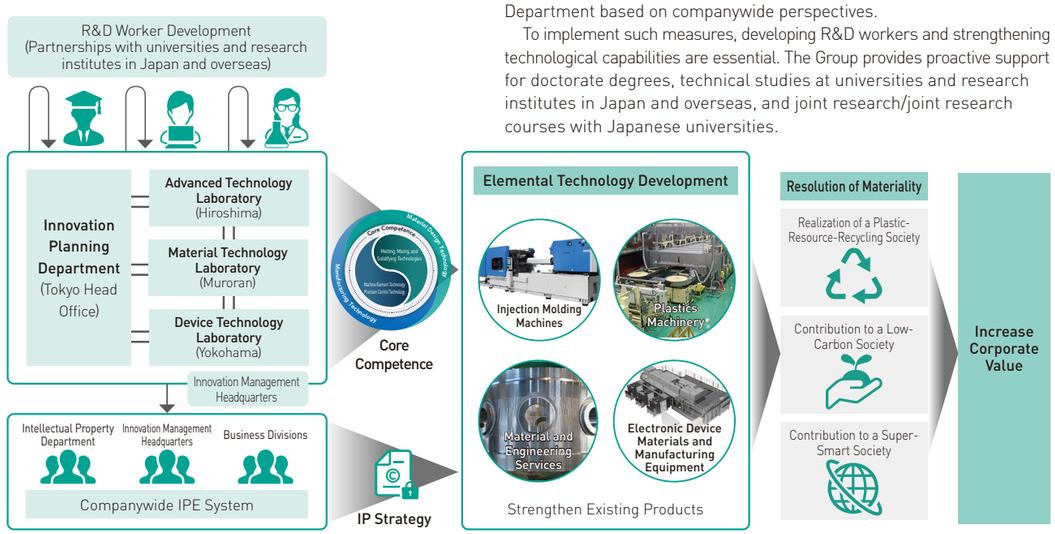
Strengthen existing businesses by developing elemental technologies

- Development of elemental technologies in laboratories established at the three plants
- Formulation and implementation of a business specific intellectual property strategy
- Sustained development of R&D personnel and strengthening of technological capabilities

To help strengthen existing businesses and products, the Advanced Technology Laboratory, Material Technology Laboratory, and Device Technology Laboratory have been established respectively within the Hiroshima Plant, whose main business is products in the industrial machinery product segment; Japan Steel Works M&E, whose main business is material products; and the Yokohama Plant, whose main business is electronic device products, each of which is well-versed in their respective products. These laboratories develop elemental technologies to improve basic performance and add new functions to existing products using AI/IoT technology as well as heat-resistant and corrosion-resistant metal materials to precisely meet market needs.

These also support the creation and implementation of intellectual property strategies for each business division. Under the IPE system, IP strategies are formulated in partnership with the Intellectual Property Department based on companywide perspectives.

To implement such measures, developing R&D workers and strengthening technological capabilities are essential. The Group provides proactive support for doctorate degrees, technical studies at universities and research institutes in Japan and overseas, and joint research/joint research courses with Japanese universities.



Create innovative technologies through basic technology research

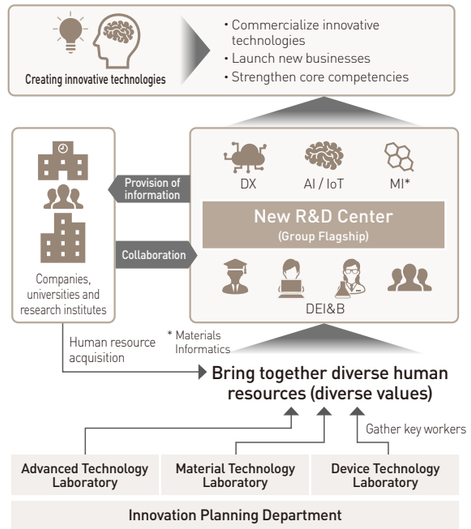
- Planning to establish a new R&D center to develop innovative technologies
- Creating innovation by leveraging diverse human resources
- Efficient new product and market development through IP analysis

Creating new products and businesses is essential to achieve our vision for fiscal 2033. That is why we plan to establish a new R&D center to explore markets and create technology beyond our existing products and core technologies from a concentrated, medium-to-long-term perspective as well as to serve as a flagship center to communicate the results of cutting-edge research to the outside world.

We believe communicating research results will also help attract talent from outside. This, combined with bringing together human resources from within the Company, will help secure diverse human resources (values) and create a research environment that practices DEI&B.

For technology, we will incorporate advanced technologies from areas including DX, AI/IoT, and MI (Materials Informatics). These will be used to create innovative technologies, which will then be commercialized, leading to the launch of new businesses as well as stronger and broader core competencies.

Contributing to a super-smart society is cited as a material issue expected to become a future megatrend. That is why we have commenced research aimed at achieving robotics using generative AI and control technology as well as interactive automatic operation systems for industrial machinery. These are expected to serve as solutions to such social issues as the declining working population and insufficient succession of technical skills.



Human Capital Strategy

Based on the belief that human capital—that is, everyone, including management and employees—is a key factor in practicing sustainability management to embody our Purpose and achieve our Vision in the future, the Group has identified "human capital improvement and DEI&B" as a material issue. We recognize that the individual and organization are equals and have formulated a human capital strategy to resolve this material issue. Ensuring and increasing diversity underlies our human capital strategy, and we plan to achieve autonomous growth of diverse individuals and maximize organizational results by linking recruitment, assignment, training, evaluation, and treatment in human resources to achieve sustainable growth and increase corporate value.

To achieve this, the Group will work to create an environment where diverse individuals can acquire and fully demonstrate the skills needed to embody our Purpose according to their needs while also transforming the organization through higher engagement and fostering a culture of taking on challenges. By enabling all officers and employees with different personalities to maximize and demonstrate their potential, increasing psychological safety, and encouraging healthy clashes of opinion, the Group will foster an environment where creativity can thrive and use this as a driving force for improving productivity and breeding innovation.

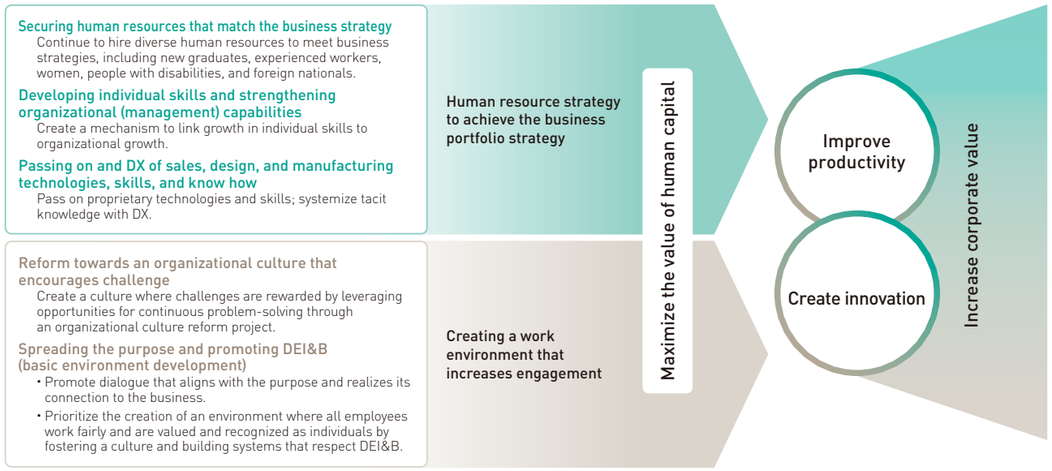
The corporate image we seek through this human capital strategy is a company where "individual self-realization" and "sustainable growth of the organization" mutually circulate, and the individual and organization continue to thrive together. The Group will implement a variety of measures to achieve this corporate image and resolve material issues so that our daily efforts help solve social problems, so that the Group maintains the social value it has in the world, and so that we can feel this for ourselves.



Motoyuki Shibata
Director & Managing Executive Officer
CISO, in charge of Export Control Administration,
in charge of CSR & Risk Management,
in charge of Health & Safety Management,
in charge of the Personnel Department

JGP2028 [Basic Policy 3] Expanding Investment in Intangible Assets, Including Investment in Human Resources (Human Capital Strategy)

Achieve sustainable growth and increase corporate value by fostering diverse individuals and maximizing organizational results



Human Capital Strategy Indicators and Targets

Human Capital Strategy Indicators and Targets		
	FY 2023 Results	FY2028 Targets
Organizational culture reform project	In progress	Reduce workload, improve engagement, and select young high performers early
Percentage of female managers/percentage of women among assistant managers	2.0% / 9.9%	5.0% / 15.0%
Percentage of male employees who took childcare leave	88%	80% or more continuously

Human resource strategy to achieve the business portfolio strategy

Securing human resources that match the business strategy

To execute our business strategy, we consider our most important human resources to be our mid-level workforce, which bridges junior and senior employees while driving the workplace. That is why continuously hiring young employees to grow into this mid-level group is vital for sustainable growth. Attracting experienced workers from diverse backgrounds who can increase diversity in the Group is also critical. To achieve this, we actively conduct year-round recruitment through a wide variety of channels to attract a diverse range of talent, including recent graduates, experienced workers, women, people with disabilities, and foreign nationals.

Developing individual skills and strengthening organizational (management) capabilities

We believe that leveraging diversity and having workers autonomously take on challenges breeds innovation and maximizes organizational results. In our human capital strategy, which aims to achieve this, we focus first on developing the abilities of the individual. We define individual abilities as portable skills—foundational skills required regardless of role or position—and technical skills—specialized abilities acquired through work experience—and aim to boost these skills through HR initiatives.

To connect increased individual skills to organizational success, increasing management ability in the workplace is vital. That is why, starting in fiscal 2024, we have begun implementing training for all organizational managers to drive organizational transformation and promote management skills that encourage workers to take on challenges by ensuring psychological safety.

Portable skills (basic skills required for any job title/position)	
Openness to diversity	Openness to diverse values and ideas, capable of leveraging them to boost team performance
Ability to identify issues	Capable of identifying and raising issues proactively to keep the organization's awareness of issues current
Capacity to take on challenges	Able to take on challenges without being constrained by precedent, and capable of involving others in the process
Autonomous learning ability	Capable of adapting flexibly and promptly to changes in the environment, of learning autonomously, and of growing throughout their career

Technical skills (specialized skills acquired through work)	
Technological capacity	High-level specialist knowledge that reinforces the Company's core competences (melting, mixing, and solidifying technologies)
Management skills	Ability to maximize organizational performance and support management strategies and corporate foundations
Global business skills	Skills that enable the individual to extend and grow the Company's business on a global scale

Creating a work environment that increases engagement

Reform towards an organizational culture that encourages challenge

In a rapidly changing business environment full of volatility, uncertainty, complexity and ambiguity, called VUCA, achieving sustainable growth for the Group requires ongoing innovation. To breed such innovation, we must transform our organizational culture into one where employees feel encouraged to take risks and pursue challenges without fear of failure, backed by a high level of psychological safety.

That is why, starting in fiscal 2023, we launched the Organizational Culture Reform Project Team that comprises employees who answered our call with a passion for driving change, which plays a leading role in advancing cultural reform efforts within the Group. In these efforts, the team works closely with management, promoting effective, rapid cultural reform through a combination of both bottom-up and top-down approaches.

To promote cultural reform within our human capital strategy as well, we are working toward a transformation in mindset among officers and employees through revisions to the evaluation system. We also have managers set "challenge goals" in their annual performance targets to support strategic action.

Spreading the purpose and promoting DEI&B

The Group established a corporate philosophy for JSW Group based around its Purpose in fiscal 2022. Efforts are currently underway to help the Purpose resonate with all officers and employees, starting with organizational managers. At workplaces, organizational managers lead workshops to discuss the connection between the Purpose and daily operations to instill this among workers.

The Group also recognizes that leveraging diverse talent to connect different perspectives and ideas to new value is essential in executing its management strategy. To further embody our Purpose requires that we expand the breadth of this diversity. To achieve this, it is vital to bolster efforts to create a work environment where workers can fully express their individuality as well as create training programs tailored to idiosyncrasies. This is why the Group has added "E" and "B" to the existing definition of diversity, previously termed "D&I," to create the new term "DEI&B."

Materiality Management

In November 2022, the Company's Board of Directors identified six key issues (Materiality) to prioritize in order to embody our Purpose. Before formulating the new medium-term management plan JGP2028, we established sustainability targets as a scenario for achieving sales of 500 billion yen in fiscal 2033, a decade from now. We believe resolving material issues is vital to achieving this.

Of JGP2028's four basic policies, we view "sustainable improvement of value of existing businesses" and "creating and nurturing new businesses" as leading to the resolution of three material issues, "realization of a plastic-resource-recycling society," "contribution to a low-carbon society," and "contribution to a super-smart society." We believe that attempting to solving social issues through business will create both social and economic value, allowing for sustainable growth.

As shown under "State of major initiatives" in the table to the right, we have already provided multiple products that can resolve those three material issues. For "contribution to a super-smart society," we will strengthen efforts, as doing so is expected to help solve such social issues as environmental problems and an aging population with a declining birthrate (including labor shortages). Specifically, we will accelerate the development of robotics using AI and make the Group's industrial machinery products more intelligent.

Meanwhile, we will also bolster the management foundation needed to achieve our vision for fiscal 2033. Our efforts toward the basic policies of "expanding investment in intangible assets, including investment in human resources" and "strengthening corporate governance" will serve as actions to this end.

Regarding the material issue of human capital in particular, we have changed "D&I" to "DEI&B" based on our belief that "E" and "B" are essential in addition to traditional "D&I" for each employee to reach their full potential.

Identification Process

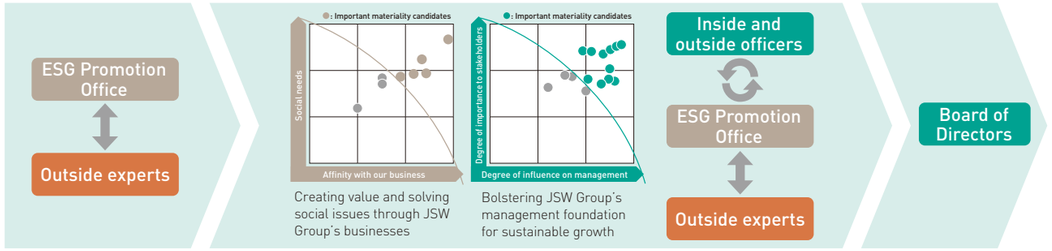
STEP 1
Identifying potential issues
After exhaustively identifying potential social issues from megatrends, international guidelines, etc., a short list was compiled based on an importance assessment.

STEP 2
Refining the candidate list
Using the short list, internal discussions were held to narrow down important candidates for Materiality.

STEP 3
Grouping
Similar important Materiality were grouped after being broadly categorized as either "creating value and solving social issues" or "bolstering management foundation."

STEP 4
Discussion by management
Over a period of six months, several discussions were held at the upper management level to check candidate issues' importance to the Group's businesses and management foundation.

STEP 5
Finalization
Finalized the Materiality and received approval from the Board of Directors.



Assumed External Environment and Related Risks and Opportunities

External environment
- Global plastic pollution
- Worldwide climate change (CO_2 emissions)
- Japan's 2025 digital cliff
- Japan's declining birthrate and aging population
- Economic and population growth in emerging countries
- Evolution of governance

Risks
- Decline in demand for plastics
- Difficulty in making products more energy-efficient, rising product costs
- Decrease in the Group's market competitiveness due to delayed action
- Difficulty in maintaining and strengthening human capital
- Degradation of trust and reputation among stakeholders due to delayed action

Opportunities
- Demands for recycling and lesser use of plastic resources
- Global spread of electric vehicles (EVs)
- Spread of power generation from renewable energy
- Digital infrastructure development for 5G and 6G communications, demand for energy-saving infrastructure overall
- Activation and diversification of markets

Materiality	Reasons why considered to be of high importance	State of major initiatives	Related SDGs
Creating Value and Solving Social Issues through JSW Group's Businesses			
Realization of a Plastic-Resource-Recycling Society	As a general manufacturer of plastic processing machinery, JSW Group believes it extremely important to supply society with all manner of plastics processing machinery that achieves the 3Rs and is renewable. Leveraging our core competence to the maximum, we can demonstrate our strengths in the development and creation of plastic processing machinery that meets the demand of society. This is also a high-priority business expansion opportunity.	Currently being provided **Renewable** – Twin-screw extruder (TEX) for non-fossil-fuel derived plastics **Reduce** – TEX for biocomposites – Physical foaming injection molding machines **Recycle** – TEX for chemical and mechanical recycling – Injection and blow molding machines for recycled plastics – Film and sheet manufacturing equipment for recycled plastics Under development **Recycle** – Twin-screw extrusion dechlorination system – Mono-material film manufacturing equipment	9, 12, 14
Contribution to a Low-Carbon Society	The realization of a low-carbon society is one of the most important challenges worldwide. Products created by JSW Group's industrial machinery and products featuring its new materials have contributed to the reduction of CO_2 emissions. Demand for such products is expected to increase in the future, which makes it a matter of high importance for the Group. In addition, our responsibilities include the reduction of energy consumption of our industrial machinery products and the curbing of CO_2 emissions from the operations of our manufacturing sites.	Currently being provided **Zero CO_2 emissions** – Separator film manufacturing equipment for LiB in electric vehicles – Pelletizers for solar panel protection film materials – Materials for major nuclear power generation components – Materials for offshore wind turbine construction **Reduce CO_2 emissions** – All-electric plastic injection molding machines (reduced power consumption) – All-electric rubber injection molding machines (reduced power consumption) – Materials for high-efficiency GTCC power generation key components (GTCC: Gas Turbine Combined Cycle) – Reduce CO_2 emissions from business activities (Scope 1, 2) Under development **Reduce CO_2 emissions** – Large injection molding machines for large automotive parts (plastic/Mg)	7, 13
Contribution to a Super-Smart Society	In a super-smart society, such social issues as environmental problems and declining birthrates are expected to be resolved. JSW Group's industrial machinery and new materials are involved in the manufacturing of electronic devices that make up digital infrastructure. Robotics with AI and intelligent industrial machinery will also play a central role in a super-smart society. That is why the Group's product lines could serve as an essential part of a super-smart society. This is also considered to be a highly important business expansion opportunity for the Group.	Currently being provided **Electronic Devices** – Excimer laser annealing (ELA) systems for displays – 3-stage vacuum laminators for package substrate manufacturing – Laminators and presses for circuit boards – Laser heat treatment equipment for power semiconductors – Micro LA systems for sensors – Deposition systems for 5G-compatible LCP flexible substrates **Industrial Machinery** – J-Wise equipped injection molding machines, film and sheet manufacturing equipment Under development **Electronic Devices** – Gallium nitride (GaN) crystal materials – Lithium niobate (LN), synthetic quartz materials – Substrates for optical communication and optical modulators **Industrial Machinery** – AI robotics and industrial machinery	11
Bolstering JSW Group's Management Foundation for Sustainable Growth			
Human Capital Improvement and DEI&B	The diversification and expansion of our human capital, including the human resources capable of driving the Group's growth, generating innovation, and creating value, is a matter of the highest priority and importance for strengthening JSW Group's management foundation. It is also important to create a work environment that enhances engagement.	Human resource strategy to achieve the business portfolio strategy **Securing human resources that match the business strategy** – Year-round hiring of young employees and experienced workers with different backgrounds and attributes **Developing individual skills and strengthening organizational (management) capabilities** – Management training focused on strengthening organizational ability to promote "taking on challenges" Creating a work environment that increases engagement **Reform towards an organizational culture that encourages challenge** – Include challenge targets in managers' annual goals (revision of evaluation system) **Spreading the purpose and promoting DEI&B** – Strengthen DEI&B initiatives such as creating work environments where workers can demonstrate individuality in work and development measures to accommodate individuality	5, 8
Investment in the Future with Innovation Management	In order for JSW Group to continue contributing to society, it is essential to maintain and strengthen its technological superiority by refining its core competence and expanding its business. Innovation is an essential factor for sustainable growth. It is important to promote digital transformation which supports data-based, rapid decision-making, business model innovation, and the creation of new value.	Innovation management **Established Innovation Management Headquarters (April 2023)** **Strengthen existing businesses through elemental technology development** – Build companywide system for formulating business-specific IP strategies – Partner with domestic and international universities and research institutes, obtain doctoral degrees (develop human resources, strengthen technological ability) **Create innovative technologies through basic technology research** – Formulate plans to establish new R&D centers for developing innovative technologies – Strengthen IP landscape system for efficient new product and market development Promote DX – Continue promoting DX strategy following DX certification acquisition in August 2024	12, 17
Governance Reinforcement of JSW Group	For the sustained growth of JSW Group, it is important not only to further strengthen compliance and governance, but also to engage in dialogue with stakeholders. And supplying society with industrial machinery and new materials of high quality and superior reliability is the very foundation of JSW Group's business and important to the further strengthening of its quality assurance structure and system.	Corporate governance – Review officers' remuneration system – Increase diversity of Board of Directors and Audit & Supervisory Board (outside officers and female officers) – Establish Risk Management Group in Corporate Planning Office – Reduce cross-shareholdings Strengthen quality assurance system – Continue implementing measures for quality assurance system reform, organizational culture reform, process reform, and governance reform	10, 16

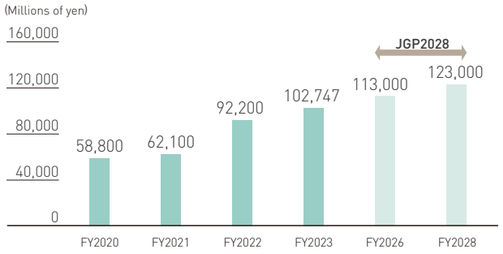
Plastics Machinery Business

Business Overview

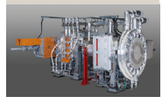
The Plastics Machinery Business Division manufactures, sells, and provides maintenance services for plastic production machinery including pelletizers and twin-screw extruders (TEX) that produce plastic pellets, and as well as for plastic process machinery including film and sheet manufacturing equipment which are used for primary processing, that heats and shapes plastic into films. We take pride in our high global market share for pelletizers and separator film manufacturing equipment.

Plastics are used in a wide array of products, from IT products like smartphones to electronic components like capacitors and semiconductors, lithium-ion batteries, automotive parts, food packaging, medical equipment (e.g., catheters), and solar cells. Recently, we have expanded our focus to machinery that can recycle used plastics and produce films that can be easily recycled. Through those business activities, we are targeting for realization of a plastic-resources-recycling society, contribution to a low-carbon society (e.g., enhance EV development, boost fuel efficiency through mobility weight reduction, social implementation of renewable energy power generation), and secure stable sales of 100 billion yen, all while enhancing social value and increasing corporate value.

Trends in net sales for plastic production and processing machinery



Large pelletizer



Share (Global): 40%

Separator film production equipment



Share (Global): 60%

Twin-screw extruder (TEX)



Share (Global): 20%
Share (Domestic): 80%

Recycling Technical Center (Located at Hiroshima Plant)



Technology development, equipment development, and testing

Analysis of Current State: SWOT Table for FY2024

S Strengths
- Our technical centers in Japan and abroad have developed a unique technology for melting, mixing, and molding control, showcasing a robust capability to meet customer demands
- Support for PP, PE, and LDPE pelletizers (high coverage rate)
- High rate of in-house production (confidentiality: proprietary technology)
- Ability to manufacture high-quality films cultivated through separators
- Availability of skilled service technicians with a wealth of experience

W Weaknesses
- Longer delivery times due to small-lot production and customization
- Global Standard (GS) machines were introduced later than at other companies
- The in-house production rate for film manufacturing equipment is not very high
- Service system in Europe and the United States has room for improvement (film)

O Opportunities
- Growth in plastics demand, driven by rising living standards and population growth
- Revitalization of markets in India and the Middle East
- Growing demand for plastics recycling, 5G/6G-compatible infrastructure
- After-sales service demand based on long track record of deliveries
- Mono-materialization of packaging films

T Threats
- The possibility of tighter global restrictions on plastics use
- Slowing Chinese market and promotion of Chinese domestic production
- Growing geopolitical risks (Iran, Russia)

Analysis of Current State: Sources of Strengths and Challenges

We are proud to possess the world's most advanced melting, mixing, and solidifying technologies for plastics. One of our key strengths is our in-house capability to design, manufacture, and process all the main components of our equipment. The confidentiality of our proprietary technology through in-house production underpins our ability to maintain and enhance our product competitiveness. Additionally, we collaborate with Japan Steel Works M&E to develop materials (metallic materials) with exceptional wear and corrosion resistance for our core components, the screw and cylinder. This unique capability sets our Group apart.

We offer innovative products and services by integrating our profound knowledge of equipment and processes with advanced software, including numerical analysis technology like resin flow analysis, and AI/IoT technology, alongside the abovementioned cutting-edge hardware.

With this foundation, we offer equipment and services tailored to meet customer needs, and several of our products boast top-class market shares.

We are proactively addressing our weaknesses, particularly in correcting long delivery times, by promoting digital transformation (DX) and capital investment to enhance production efficiency. While most of our capital investment is directed toward plastic production machinery, increasing the productivity of our pelletizers and twin-screw extruders will also enhance the production capacity of our film manufacturing equipment and boost the rate of in-house production. Additionally, we will implement measures based on TOWS analysis.

TOP Message



Masayuki Aoyama
Executive Officer
In charge of Hiroshima Plant,
Director of Plastics Machinery Business Division

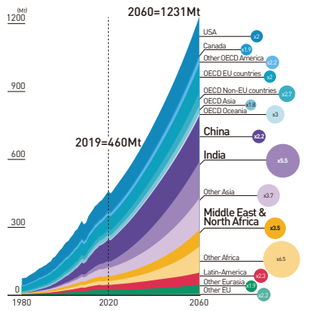
Message from the Head of the Division

Plastic plays an essential role in our lives due to its ease of processing and versatile properties. In our Plastics Machinery Business, we leverage our world-leading technical center to develop technologies for recycling, energy conservation, and weight reduction, contributing to the realization of a plastic-resource-recycling society and a low-carbon society. In fiscal 2023, despite fluctuations, we maintained our overall strength, achieving orders and sales exceeding 100 billion yen. Under the new medium-term management plan, JGP2028, we are actively investing in facilities such as the 10th assembly plant, the 2nd and 4th machinery plants, aiming for sales of 123 billion yen. We expand our production capacity for medium- and large-sized extruders, enhance our service business, and simultaneously strengthen ties with affiliated companies, increase our share of the current product lineup, and grow through alliances and M&A.

Operating Environment

Plastic production machinery

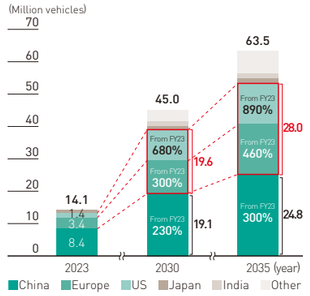
It is estimated that global plastic consumption will rise from approximately 460 million tonnes in 2019 to around 1.2 billion tonnes by 2060. The regions expected to see the highest growth rates are India (5.5 times) and the Middle East and North Africa (3.5 times). While China's growth rate is projected to be 2.2 times, it will continue to hold the largest market share.



Source: Created by JSW based on OECD "Global Plastics Outlook"

Plastics processing machinery

It is estimated that approximately one-fifth of the world's CO_2 emissions originate from transportation and related industries. While the growth rate of electric vehicles (EVs) is currently experiencing a period of adjustment, the International Energy Agency (IEA) predicts that the medium- to long-term growth trend will persist, albeit with increased polarization between North America, Europe, and China.



* The figures include PHEV as well as BEV.
Created by our company based on Global EV Outlook 2024, IEA

Strategy, Measures, and Prospects for Growth

1. Accelerate growth with focused investments

(1) Plastic production machinery (pelletizers, twin-screw extruders)
- Achieve both sales growth and improved profitability by increasing production capacity.
- Capture growth markets, such as India, by strengthening global expansion.

(2) Film and sheet manufacturing equipment
- Capture separator film demand, which will grow in the medium to long term.
- Expand the lineup of functional materials and packaging materials.

2. Expand the service business
- Increase production capacity and expand sales in focused regions (India, Middle East, China, Japan).

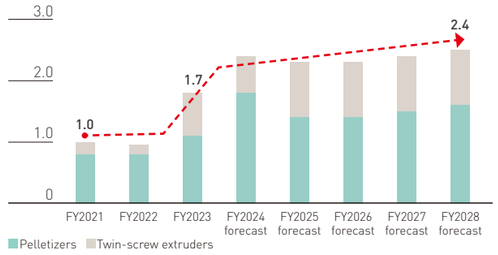
3. Promote the expansion of the plastic processing machinery complex

Enhancing the sales and after-sales service of film and sheet manufacturing equipment

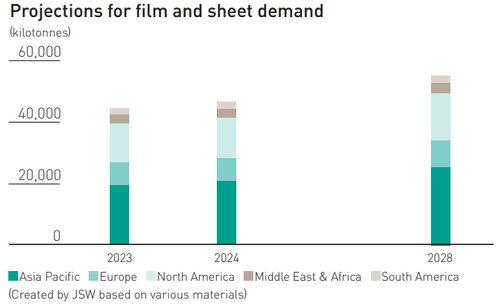
We anticipate robust sales of plastic production machinery, driven by growing demand for plastics. To meet this demand, we are bolstering our production capacity through capital investments and other strategic initiatives. To enhance our global presence, we have expanded the capabilities of our local subsidiary in India and are considering establishing a technical center there. These measures will help us capture demand in this vast market.

We anticipate that sales of separator film manufacturing equipment will remain steady during the JGP2028 period. During this time, we will focus on enhancing our overall capabilities in plastic processing machinery by expanding sales of film and sheet manufacturing equipment for applications beyond separators, such as functional and packaging materials. Additionally, we will bolster our after-sales service and aim to improve our overall capabilities in plastic processing machinery.

Sales trends and forecasts for plastic production machinery (pelletizers, twin-screw extruders)



Projections for film and sheet demand



(Created by JSW based on various materials)

Injection Molding Machinery Business

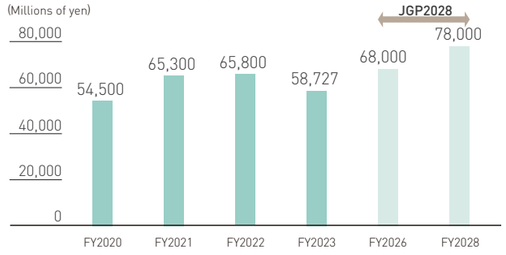
Business Overview

The Injection Molding Machinery Business Division manufactures, sells, and provides maintenance services for plastic injection molding machines and blow molding machines, which shape plastic materials (pellets) into three-dimensional forms. Additionally, we provide injection molding machines for magnesium alloys, known for being the lightest practical metals with the highest specific strength.

Our plastic injection molding machines feature: (1) electrically powered machines with excellent environmental performance; (2) a range of sizes, from compact models with a mold clamping force of 30 tonnes to extra-large models with a mold clamping force of 3,000 tonnes; and (3) the industry's top lineup, including vertical injection molding machines and special-purpose machines to meet the diverse needs of our customers. Magnesium injection molding machines utilize the thixomolding method, allowing the molding of high-precision, high-density parts. Both plastics and magnesium contribute to the weight reduction of automobiles, particularly EVs, as in-vehicle parts. We are also working to meet the needs for monolithic molding and larger components to improve productivity.

We are proud to have the highest shipment value of plastic injection molding machines in Japan. We are the top manufacturer of one-of-a-kind magnesium injection molding machines, and blow molding machines with over 80% share of the direct blow molding machine market in Japan.

Trends in net sales of molding machines



Plastic injection molding machines

Domestic shipment value: 1st place
Domestic market share by units: 3rd place





Direct blow molding machines

Domestic market share: over 80% (industry leader)

Magnesium injection molding machines

Exclusive product line
—THIXOMOLDING—
(Japanese Registered Trademark No. 2685598)



Analysis of Current State: SWOT Table for FY2024

S Strengths	• In-house development and manufacturing of numerous key components and materials • Capable of mass customization production • Ability to respond and offer recommendations with medium-sized and large machines, backed by extensive experience, especially in the automotive field • Well-developed domestic and international sales and service network
W Weaknesses	• Limited international recognition • Adaptability to economic fluctuations in Japan and overseas where the company's products are • Ability to handle large orders • Lack of experience in supporting overseas standards for some models
O Opportunities	• Increase in new capital investment with the shift to electric vehicles • Growing demand for replacing to energy-efficient electric machines due to rising energy costs and the need to reduce CO_2 emissions • Increasing demand for plastics and rising interest in sustainable plastic products, particularly in India
T Threats	• Disruption of international supply chains due to political and geopolitical threats • The increasing performance of overseas manufacturers • Decline in demand for refillable bottles due to the shift toward pouches (blow molding machines)

Analysis of Current State: Sources of Strengths and Challenges

Leveraging our extensive product lineup, we offer a wide range of models at our technical centers in Japan and overseas, equipped to address our customers' needs effectively. Our core competencies are fully integrated into our injection molding machines. Additionally, our strength in material design technology allows us to develop wear- and corrosion-resistant metallic materials. We also manufacture key components in-house, such as controllers, servo amplifiers, and special servo motors, and handle part processing and assembly at our own facilities. Our advanced manufacturing technology, unique to our non-fabless production, ensures we provide safe and reliable machinery and services. Notably, we are proud to be the world's leading manufacturer in terms of large all-electric injection molding machine shipments. In the automotive sector, the trend toward integrated molding and larger components for improved productivity presents a significant opportunity for us, as we specialize in providing large-scale injection molding machines.

Plastic and magnesium injection molding machines are distributed through a well-developed, directly controlled sales network and through sales companies at 22 locations (10 in Japan, 12 overseas). After-sales service is provided through a global service network, ensuring responsiveness to customer needs. However, we see potential for growth in Europe, India, and other regions. To enhance our corporate value in these areas, we plan to expand the capabilities of our bases.

TOP Message



Shoji Nunoshita
Managing Executive Officer
In charge of Meiki Plant, Director of Injection Molding Machinery Business Division

Message from the Head of the Division

Market conditions remained challenging in fiscal 2023, but signs of recovery appeared in the second half of the year, particularly with increased inquiries for large-scale equipment. Additionally, we have initiated production in Europe aiming for growth, and the demand for our commitment to "contributing to a low-carbon society" is on the rise.

The products of our division significantly contribute toward a low-carbon society by enhancing equipment energy efficiency and manufacturing lighter components. There is a growing demand for larger components, leading us to expand our range of products to include larger options alongside our existing small to large products. Additionally, the demand for IoT-enabled equipment is increasing, and we are pursuing global expansion by developing products that offer remote maintenance and user-friendly features.

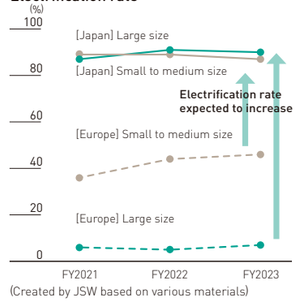
The Molding Machinery Business serves as a cornerstone for our manufacturing operations, featuring a high inventory turnover rate within our industrial machinery product segment. We aim to enhance productivity and expand our business through collaborative efforts between our domestic and three international bases.

Operating Environment

Percentage of injection molding machine electrification

In Europe, hydraulic machines remain prevalent, with the electrification rate for large machines being only a few percent. However, the recent increase in electricity prices and the growing imperative to reduce CO_2 emissions are expected to drive demand for replacing hydraulic machines with more energy-efficient electric injection molding machines.

Electrification rate

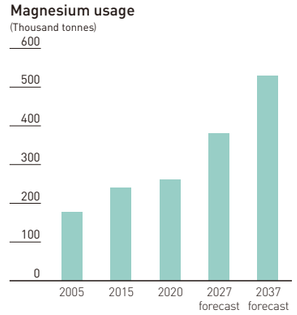


(Created by JSW based on various materials)

Magnesium usage for automobiles

The use of magnesium in automobiles is projected to rise, driven by the increasing need to reduce vehicle weight as electric vehicles become more prevalent. Additionally, there is a growing demand for larger components, such as in-vehicle displays to display more information.

Magnesium usage



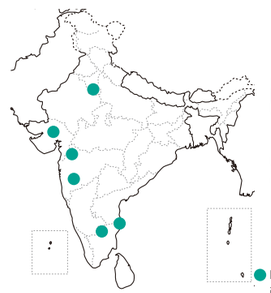
From the website of the Japan Magnesium Association
(Source: Excerpts from CM Group presentation materials)

Strategy, Measures, and Prospects for Growth

1. Plastic injection molding machines
Position Europe and India as key regions for future sales expansion.
- Europe: Accelerate the adoption of electric machines to meet rising energy costs and the need to reduce CO_2 emissions.
- India: Establish a technical center to increase our presence and strengthen sales and service networks.

2. Magnesium injection molding machines
- Expand large-scale machine series to meet the growing demand for automotive applications

3. Improve product competitiveness by incorporating AI/IoT functionality
- Remote maintenance (North America and Asia) and productivity improvement with smart molding machines (J-WiSe equipped machines) (Japan)





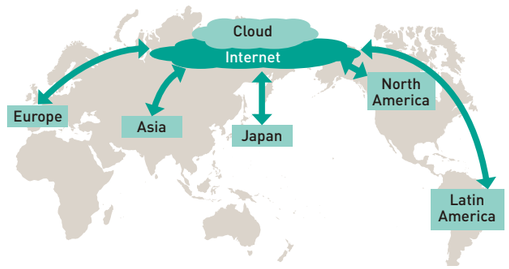
Ultra-large magnesium injection molding machine: JLM3000-MG II eL

Injection molding machine service agents in India

Expanding sales of electric plastic injection molding machines and capturing the emerging markets

As the world's leading manufacturer in terms of shipments of all-electric large-scale machines, we are poised to meet Europe's electrification needs by leveraging the large-scale assembly and service capabilities of our Poland base. To expand our global sales, including in Europe, we are committed to enhancing customer satisfaction by establishing a global unified service system that integrates remote service from Japan with local service staff.

Establish a global unified service system worldwide and improve customer satisfaction



Expanding magnesium injection molding machine lineup catering to the needs

We will develop and launch new models aimed at large-scale automotive components. Additionally, we will introduce region-specific models in major markets such as Europe, the United States, Southeast Asia, and India, leveraging our mass customization production capabilities.

Industrial Machinery Business

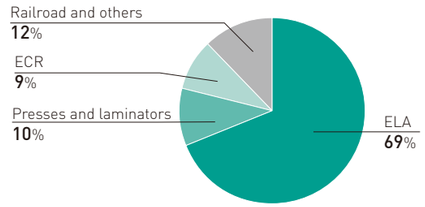
Business Overview

The Industrial Machinery Business Division manufactures, sells, and provides maintenance services for industrial machines that solving social issues in the fields of electronic devices and infrastructure.

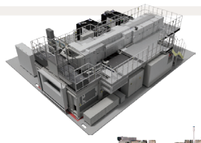
In April 2024, we strategically relocated our affiliate, JSW AFTY, to the Yokohama Plant, where JSW Aktina System and Nikko Kouki are also based. This move enables us to leverage our Group's resources more efficiently, enhance operational productivity, and optimize results. Our key products—excimer laser annealing (ELA) systems, ECR deposition systems, vacuum laminators, and vacuum presses—are generating a wide range of social value, including the creation of digital social infrastructure in a super-smart society and improvement of energy-saving performance through advancements made in the device products.

Our infrastructure product line offers highly specialized and essential products designed to meet customer requirements, including couplers and draft gears for railroad cars and starting gates for horse racing tracks. These products are highly regarded by customers for their reliability and durability.

Sales ratio for FY2023



ELA systems for display
Global market share: approx. 80%
(2022–2024)



ECR deposition systems for semiconductor lasers
Global market share: 100%
(High-end applications)



Railroad couplers and draft gears
Domestic market share: approx. 60%



Analysis of Current State: SWOT Table for FY2024

S Strengths • Product lineup leveraging proprietary technology (e.g., F-ELA systems) • Advanced technical capabilities in laser heat treatment • Ability to develop and design products that meet customer needs • Well-equipped testing facilities and process engineers • Exceptional reliability grounded in extensive experience of delivering equipment	**W Weaknesses** • Extensive range of products in specialized fields, leading to low individual sales volume • Limited production capacity resulting from a rapid increase in orders • Late entrant in the semiconductor manufacturing equipment market
O Opportunities • Demand for electronic devices driven by the expansion of DX, AI, and EV • Demand for new equipment driven by technological and product innovation (high-speed, high-capacity communications, next-generation power semiconductors) • Increasing demand for high-efficiency equipment aimed at reducing production costs • Relocating production to emerging countries to mitigate geopolitical risks	**T Threats** • Geopolitical risks such as raw material supply issues due to trade tensions between the US and China • Risk of a decrease in market value due to price competition with rival companies • Risk of declining demand due to the shift toward existing alternative technologies

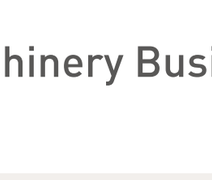
Analysis of Current State: Sources of Strengths and Challenges

Since its introduction in 1995, we have successfully delivered over 200 units of the ELA systems. Building on this extensive experience, we have developed innovative technologies like the F-ELA, which employs a unique float mechanism to transport workpieces. The F-ELA system that meets customers' needs is highly regarded and has been adopted for mass production. Currently, we are expanding our business beyond the display field and actively pursuing opportunities in the power semiconductor market by leveraging our laser heat treatment technology.

In addition, since its introduction in 1989, the ECR deposition system, essential for manufacturing semiconductor lasers for optical communications, has been successfully delivered and implemented at leading device manufacturing companies in Japan. Looking ahead, we aim to expand our sales to China, Europe, and the United States.

On the other hand, laminators and presses play a crucial role in manufacturing high-density circuit boards and package substrates for various semiconductor types. Our extensive delivery record has earned us the trust and confidence of our customers in this field. In 2023, we introduced a cutting-edge 3-stage vacuum laminator designed for manufacturing package substrates for servers used in high-speed, high-capacity data centers. We are currently demonstrating its performance on our customers' production lines. To further expand our business, we are targeting new markets in East Asia including China, as well as Southeast Asia and India.

TOP Message



Miki Sawai
Executive Officer
In charge of Yokohama Plant, Director of Industrial Machinery Business Division

Message from the Head of the Division

Electronic device products are used to produce key components for infrastructure devices that contribute to realization of the super-smart society, and business is projected to expand.

Notably, in our primary area of laser application products, we introduced the F-ELA system at the end of fiscal 2023. This groundbreaking system is the world's first to be compatible with large-size G8 glass substrates. The large-size substrate support enables production of multiple high-precision small and medium-sized panels. This advancement simultaneously boosts production efficiency and significantly reduces waste. We anticipate that our proprietary F-ELA technology will secure its place as a critical manufacturing device for panels, playing an essential role in the infrastructure of a super-smart society.

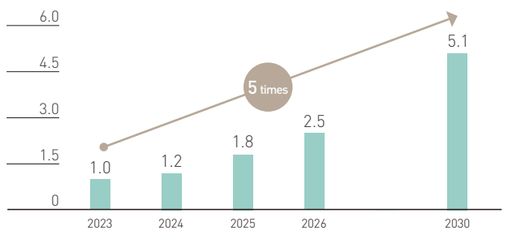
Additionally, we will leverage our core competence in laser heat treatment technology (melting and solidification) and precision control technology for power-semiconductor-related materials to enter new markets and further expand our business.

Operating Environment

The expansion of DX, AI and EV is fueling the demand for electronic devices, leading to increased investment in equipment aimed at enhancing quality and productivity. Notably, the electrification and automation of automobiles are driving the need for high-speed, high-capacity communication, power semiconductors, and various sensors. Additionally, the electronic circuit board industry is witnessing a shift in production to emerging countries, with significant investment progressing in Southeast Asia.

On the other hand, there are concerns that geopolitical risks, such as US-China trade friction, along with potential market value declines due to price competition with competitors, may adversely impact the business.

Market scale forecast for next-generation power semiconductors (SiC)
(Index: 2023 = 1.0)



(Created by JSW based on various materials)

Strategy, Measures, and Prospects for Growth

1. ELA systems for displays
- We will increase the production volume of F-ELA systems to solidify their position as an industry standard for high productivity and large-size panel manufacturing.

2. Laminator and press machines for electronic circuit boards
- We aim to strengthen our presence in emerging markets and expand our global footprint by leveraging our features, including energy efficiency and clean compatibility.

3. Three-stage vacuum laminator for manufacturing package substrates
- We will establish a technical center within the Meiki Plant, which is our development base for laminators, with the goal of addressing issues for our customers and making a full-scale market entry.



New vacuum laminator



Laser annealing system for semiconductors

Entering the semiconductor market through development of laser application technology

At the end of fiscal 2023, we secured an order for the world's first large-scale 8th generation substrate laser annealing system (F-ELA system), which utilizes a unique float transfer mechanism. To further expand sales of laser application equipment, we will leverage our core competence in laser application technology to develop and market a laser annealing system for the thermal processing of SiC substrates, which are next-generation power semiconductors. This will enable us to achieve productivity more than double that of conventional equipment and meet the growing market demand. Additionally, we will ensure customer satisfaction by enhancing sales of parts and maintenance services for mass-production equipment, alongside the introduction of new products for displays and semiconductors.

Sales trends and forecast for laser application equipment
(Index: FY23 = 1.0)



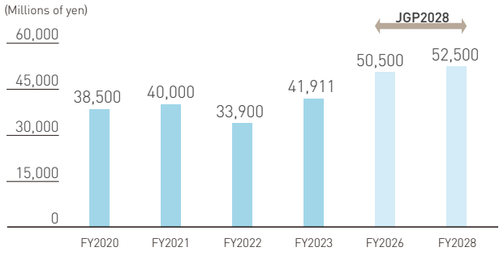
Material and Engineering Business

Business Overview

In the Material and Engineering Business, Japan Steel Works M&E (hereinafter referred to as M&E) has developed large products for power plants, which we pioneered and have the top market share (primary and secondary nuclear system components (nuclear reactor components, steam generator components, rotor shafts, generator shafts, etc.), high-efficiency gas turbine power generation (GTCC) rotor shafts), components for offshore wind power construction (anvils, ram weights, etc.), and industrial components (back up roll for plate mill, etc.). Additionally, we have been involved in the development and manufacture of pressure vessels, thick plates, and clad steel plates for social infrastructure and a wide range of facilities.

In response to major shifts in our operating environment toward a low-carbon society, we are further expanding our products related to nuclear and offshore wind power generation, and are exploring clad product applications. Additionally, we are transforming our product portfolio to continue offering a wide range of materials (M: Materials): not only steel, but also non-ferrous metals and carbon fiber composite materials. In engineering services (E: Engineering), we are broadening our scope to include hydrogen tanks for large buildings and other facilities, leveraging our expertise in welding, non-destructive testing, hydrogen, and high-temperature/high-pressure technologies.

Trends in net sales of Material and Engineering Business



Rotor shafts for nuclear power generation, generator shafts, nuclear reactor vessel components, steam generator components
Deliver ultra-large components manufactured from the world's largest 670-tonne steel ingot



Anvils for offshore wind turbines
Hold a 100% global market share for large models with an outer diameter of 6.5 meters or more



Analysis of Current State: SWOT Table for FY2024

S Strengths • Large-scale mono-block forging manufacturing equipment and manufacturing technology • Capacity to develop materials and manufacturing technologies for special steels such as high-strength alloy steel • High quality and safety honed in electric power and nuclear power products • Development technology for high-temperature-, high-pressure-, and hydrogen-embrittlement-resistant materials • Capacity to respond to global market demand	**W Weaknesses** • Limits to in-house machining capabilities due to constraints on large-scale machining facilities • Difficult to standardize due to our build-to-order production system • Not enough automation of tasks • Capacity to accommodate new demand for small and medium-sized products and small lot production (compared to the large-sized products handled by M&E)
O Opportunities • Expansion of the hydrogen economy as well as the renewable energy power generation market toward carbon neutrality • Changes in the external environment relating to nuclear power generation • Withdrawal/downsizing of competitors, industry reorganization trend	**T Threats** • Difficulty in securing personnel due to decrease in the local population and falling birthrate • A sudden slowdown in demand due to tighter regulations related to the environment and such • Shrinking market for oil- and gas-related products (rapid shift to renewable energy generation)

Analysis of Current State: Sources of Strengths and Challenges

Our greatest strength lies in the knowledge, experience, and track record we've built over more than 100 years in the fields of melting, mixing, and solidifying steel. We are proud to possess world-class manufacturing technology, including facilities at Muroran Plant capable of producing the world's largest 670-tonne steel ingots. These steel ingots are forged and heat-treated using a 14,000-tonne press machine and then shaped to their final form with super-large machining facilities, accommodating a maximum processing weight of 400 tonnes.

We leverage the strengths mentioned above to address the current base load requirements for primary and secondary components in nuclear power generation and high-efficiency gas power generation.

In renewable energy power generation, we also supply ram weights (used in pile drivers) and anvils (covers for monopiles) essential for securing offshore wind turbines to the seabed. These products benefit from our expertise, being large components with diameters of several meters, and they exhibit a high balance of strength and toughness.

By continuing these initiatives, we aim to create social value while sustainably enhancing our corporate value. We are confident that this approach will also attract talented individuals who take pride in contributing to these values.

TOP Message



Kengo Takeya
Executive Officer
In charge of Material and Engineering Business
Representative Director of Japan Steel Works M&E, Inc.

Message from the Head of the Division

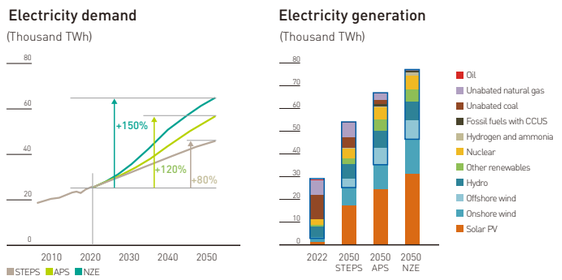
For over 110 years, our company has delivered high-quality, reliable products worldwide, drawing on our vast manufacturing expertise, especially in steel. In response to the growing global initiatives to secure stable energy and achieve carbon neutrality, there is a huge demand for us to play a significant role in supporting the world's energy supply and advancing a decarbonized society.

Under the medium-term management plan JGP2028 that commenced in fiscal 2024, we are focusing on stabilizing quality and improving the productivity of our core large-scale forged steel products. Additionally, we are investing in upgrading our facilities to better meet our customers' diverse needs. We will systematically implement measures to achieve our financial targets within five years, with the ultimate goal of realizing our vision for fiscal 2033.

Operating Environment

Global energy demand is projected to increase under all climate change scenarios anticipated by the International Energy Agency (IEA). The NZE scenario is expected to see the highest increase. With the current situation considered to be at 100%, the NZE scenario is projected to reach 250% (+150%), the APS scenario at +120%, and the STEPS scenario at +80%. Our Company supplies components for various types of power generation, including nuclear and wind power (blue box in the figure below), presenting opportunities across all scenarios. Additionally, there is a growing trend toward nuclear power generation, particularly in Europe, driven by the need to balance decarbonization and energy security, as well as its superior cost performance and stable power supply capabilities.

Figure 3.13 ▶ Global electricity demand, 2010-2050, and generation mix by scenario, 2022 and 2050



* Source: Created by JSW based on IEA "World Energy Outlook 2023"

Strategy, Measures, and Prospects for Growth

1. Capture demand for forged steel products related to power generation equipment
- Securely capture demand for ultra-large forged steel products for nuclear power generation, offshore wind power generation, and other applications that help reduce CO_2 emissions.
- Respond to robust demand for forged steel products for high-efficiency thermal power generation.

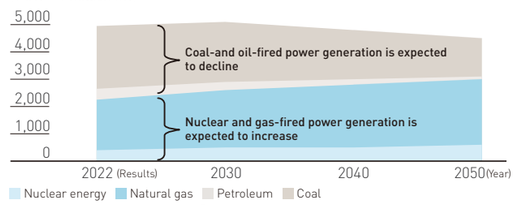
2. Investment in the renewal of aging core production facilities
- Aim to maintain manufacturing capabilities, improve efficiency, and increase profitability by investing in the aging production facilities.

We anticipate that the demand for nuclear power generation will continue to increase due to the need for decarbonization and energy security. Additionally, we expect the demand for high-efficiency thermal power generation, which operates under high-temperature and high-pressure conditions, to persist in the long term.

We will meet the growing demand by leveraging our extensive manufacturing experience and expertise in various reactor types across different countries and regions. Furthermore, we will address the demand for high-efficiency power generation using natural gas by utilizing our manufacturing capabilities for large-scale heat-resistant materials, and meet the demand for high-efficiency thermal power generation, such as the GTCC power generation system.

We recognize that a stable power supply is essential for "making the world sustainable and prosperous," and our Company plays a vital role in global energy supply and policies. We will continue to make every effort to ensure that we have the best production system in place at all times, so that we can provide products that meet our customers' requirements without delay.

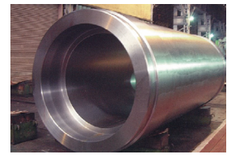
Outlook for installed power generation capacity by energy
STEPS (Stated Policies Scenario)



* Source: Created by JSW from IEA "World Energy Outlook 2023"



Reactor pressure vessel components



Component for casks (for spent fuel transportation/storage)



High-heat-resistant steel rotor shaft for high-efficiency power generation

Photonics Business

Business Overview

The Photonics Business, managed by our New Business Promotion Headquarters, and its core technology focuses on crystal growth and processing of synthetic quartz, lithium niobate (LN), and gallium nitride (GaN). Our roots trace back to synthetic quartz crystal, with nearly 40 years of experience in growing and selling crystals. Over the years, we have developed our crystal growing and processing technologies, offering products such as optical low-pass filters, quartz wafers, and wave plates, in addition to contract processing services. We are also expanding into new materials like LN and GaN, leveraging our technological expertise and experience. Notably, we have jointly developed the ammonothermal method with Tohoku University and Mitsubishi Chemical Corporation, a mass production technology for large and low-defect GaN crystals.

The cultivation and processing of synthetic quartz crystals are primarily managed by Fine Crystal, while Fine Crystal Iwaki oversees the cultivation and processing of LN crystals. In addition to being able to produce their own high-quality crystals, in recent years, they have advanced their technology for joining different materials and are intensifying their efforts in developing various bonded substrates required for optical communication applications.

Analysis of Current State: Strengths and Challenges

For crystal growth process, we leverage our core competencies in the technologies of "melting" and "solidifying." In addition to our established strengths in crystal growing and processing technologies, we have expertise in developing, designing, and manufacturing in-house pressure vessels (autoclaves) essential for growing crystals at high temperatures and pressures, using our proprietary high-heat-resistant, high-corrosion-resistant alloys. Additionally, we manufacture unique crystal materials such as synthetic quartz and LN crystal and possess fundamental processing technologies like cutting and polishing, as well as technologies for bonding different materials.

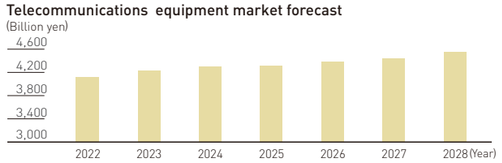
Our greatest strength lies in our ability to offer a comprehensive service. This includes ensuring the quality of the crystals themselves, managing the manufacturing equipment and conditions that enable that quality, and performing substrate processing with focus on the performance of the final product.

Analysis of Current State: Operating Environment

There is an increasing demand for next-generation high-speed, high-capacity communications, characterized by "high speed and large capacity," "low latency," and "massive simultaneous connections." The infrastructure supporting these communication networks requires substantial quantities of substrates for optical communications and optical modulators, as well as high-radio-frequency (RF) devices that ensure both high-speed operation and energy efficiency. High-quality crystals and substrates are essential to achieve these capabilities.

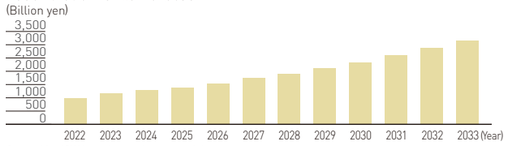
On the other hand, GaN is recognized for its unparalleled potential with no competing material in applications such as laser diodes (LDs: for special high-brightness lighting such as high-brightness projectors). Compared to the traditional hydride vapor phase epitaxy (HVPE) method, our Company's ammonothermal method offers superior quality and productivity.

Telecommunications equipment market forecast



Created by JSW based on various materials

Laser diode market forecast



Created by JSW based on various materials

TOP Message

Message from the Head of the Division

Our Photonics Business originated with the manufacturing and processing of synthetic quartz crystals by Fine Crystal, established in 1988. Until the 2010s, we focused on products that made use of the "birefringence" of quartz and LN. Today, we are dedicated to developing new high-quality, high-precision crystal substrates that leverage the various electrical and optical properties of quartz and LN to meet our customers' needs. With our lineup of three crystal materials, including the newly added GaN, we aim to provide optimal solutions to emerging social challenges such as higher brightness, greater capacity, lower latency, and power saving in key areas like optical devices, optical communication devices, and power electronics. We will achieve this by utilizing our long-established technological expertise alongside new knowledge.



Takumi Hanamura
Specialist Managing Senior Councilor
Director of New Business Promotion Headquarters
General Manager, Photonics Office, New Business Promotion Headquarters (concurrently)



Message from the Director in Charge of Promoting ESG

We are promoting sustainability initiatives in line with our new corporate Group philosophy and material issues that we established and identified in November 2022 as well as the Basic Sustainability Policy that we formulated in July 2023. In June of 2024, JSW Group formulated a new medium-term management plan, JGP2028. Our aims for the fiscal 2033, ten years from now, include not only reaching our financial target of 500 billion yen in net sales, but also achieving our sustainability targets of contributing to the realization of a sustainable and prosperous world through the development and implementation of industrial machinery and new materials that solve social issues.

In JGP2028, which is backcasted from there and has the approach of "reforms and challenges for new growth," we aim to grow into a corporate group with sales of at least 380 billion yen by fiscal 2028 via improving corporate value while resolving materiality and improving our financial foundation.

To achieve this goal, it is essential that we further strengthen our sustainability management. As such, we plan to enhance various initiatives related to the environment, society, and governance.

Visit our website to view the Japan Steel Works Group Basic Sustainability Policy.

Sustainability Management: https://www.jsw.co.jp/en/sustainability/sustainability_management.html

Hideo Nakanishi
Director & Executive Officer
In charge of Promoting ESG,
In charge of Environmental Management, General Manager of General Affairs Department

Governance and Promotion System for Sustainability

Sustainability promotion activities are carried out by the ESG Promotion Committee, which was established in April 2021 and chaired by the director in charge of promoting ESG.

In addition to considering strategies related to climate change, the committee also discusses all manner of ESG-related issues. The Board of Directors exercises appropriate oversight on the basis of input such as reports on the ESG Promotion Committee's activities.

In April 2022, we established our ESG Promotion Office as an organization dedicated to promoting ESG activities throughout the entire Group. The ESG Promotion Committee plays a central role in the Group's climate change response and ESG-related activities, which are promoted through the ESG Promotion Office in cooperation with head office divisions, business divisions, plants and Group companies.

Visit our website to view the ESG Activities Promotion Organization Chart.

Sustainability Management: https://www.jsw.co.jp/en/sustainability/sustainability_management.html

Environmental Management

Basic Approach

Our Group has established The Japan Steel Works Group Standards of Business Conduct, which states that we recognize that addressing environmental issues is an important corporate responsibility that the Group will pursue proactively. In October 2024, the Group's Environmental Policy was revised and approved by the Executive Board[1] after deliberations at the Executive Board and the Liaison Council of Outside Officers.[2]

1. Chaired by the representative director & president. Consists of all inside directors and executive officers appointed by the president.
2. Chaired by the representative director & president. Consists of the president, the executive vice president, all outside officers, all inside Audit & Supervisory Board members, and executive officers appointed by the president.

Environmental Policy

JSW Group recognizes the importance of being an environmentally responsible corporate body. We aim to prioritize environmentally responsible production and technologies to foster a sustainable and prosperous society in harmony with the ecosystems in which we live.

Action Plan

1. Systematically implement environmental initiatives and consistently implement and improve our environmental management system.
2. Establish suitable objectives and targets by monitoring environmental performance and strive to develop a recycle-oriented society, address climate change, give due regard to biodiversity, conserve water resources, and thereby reduce environmental impact.
3. Provide society with products and services that contribute to environmental conservation.
   - (1) Improve the social value of our existing and developed products and services by prioritizing environmental, health, and safety aspects by focusing not only on their functional value but also on their energy- and resource-saving capabilities, recyclability, and harmlessness through life cycle assessment design and other methods.
   - (2) Provide products and services that reduce environmental impact via an understanding of environmental needs and the development of technologies.
4. Strive for greater harmony with society.
   - (1) Regularly report and disclose environmental information and engage in dialogue with stakeholders.
   - (2) Seek the understanding and cooperation of business partners with regard to environmental considerations while working to reduce the environmental impact of the entire supply chain.
   - (3) Raise the environmental awareness of employees through measures such as the dissemination of this policy, ongoing training in environmental issues, and participation in local clean-up activities.

Shared Business Site Policies

Business sites set environmental policies, objectives and goals in accordance with international standards with due consideration of their operations and nearby communities.

- (1) Comply with laws, regulations and JSW Group agreements with external entities.
- (2) Manage chemical substances, work to prevent environmental pollution (including air, water, and soil contamination), and reduce and properly treat waste, exhaust gases, and discharge water with consideration to these activities' impact on biodiversity.
- (3) Use energy and resources more efficiently by conserving energy and saving and recycling resources.
- (4) Reduce CO_2 emissions to mitigate climate change and carefully monitor disaster risks to adapt to climate change.
- (5) Improve the efficiency of water resource utilization in accordance with regional water stress levels around manufacturing sites.
- (6) Require employees and on-site companies to understand and abide by business site policies.

Targets and Progress of the Medium-Term Environmental Plan

Achievement Level: ◎ Fully achieved ○ 80% or more achieved △ Less than 80% achieved

Priority Issues	FY2023 Targets	FY2023 Actual Results	Achievement Level	Medium-Term Environmental Plan (JGP2025) FY2025 Targets
Environmental Management	Maintain existing ISO 14001 certifications	Maintain existing ISO 14001 certifications	◎	Maintain existing ISO 14001 certifications Obtain new ISO 14001 certification of domestic manufacturing Group companies
Climate Change Measures	37.5% reduction in CO_2 emissions (compared with FY2013)	43.4% reduction in CO_2 emissions (compared with FY2013)	◎	CO_2 emission reduction targets relative to FY2013 levels 45% reduction by FY2025, 60% reduction by FY2030
	Improvement of 1% or more in energy usage intensity (year-on-year and average change in intensity over 5 fiscal years)	5.2% improvement over the previous year 6.6% improvement over average change in intensity over 5 fiscal years	◎	Improvement of 1% or more in energy usage intensity (year-on-year and average change in intensity over 5 fiscal years)
Promotion of Resource Conservation and Recycling	Recycling rate of 95% or higher (excluding slag and refractories)	Recycling rate of 95.3% (excluding slag and refractories)	◎	Recycling rate of 95% or higher (excluding slag and refractories)
Management of Chemical Substances	Improvement of 1% or more emissions and transfers intensity of chemical substances subject to the PRTR* law (year-on-year and average change in intensity over 5 fiscal years)	8.1% improvement over the previous year Improvement of 4.3% in the average change in intensity over 5 fiscal years	◎	Improvement of 1% or more emissions and transfers intensity of chemical substances subject to the PRTR law (year-on-year and average change in intensity over 5 fiscal years)
Compliance	Legal or regulatory violations: 0	Legal or regulatory violations: 0	◎	Legal or regulatory violations: 0
	Treat low-concentration PCB waste by March 2027	Progressing appropriately	◎	Treat low-concentration PCB waste by March 2027
Raising Environmental Awareness	Issuance of integrated report Conduct training for employees	Issuance of integrated report Conduct training for employees	◎	Disclose environmental management activities in an integrated report Conduct training for employees

* PRTR: Pollutant Release and Transfer Register

Environmental Management Structure

JSW Group recognizes the importance of conducting business activities in harmony with regional and international communities, and has been promoting environmental management activities as a groupwide initiative since 1997. The Environmental Management Committee, headed by the director in charge of environmental management who is appointed by the Board of Directors, formulates groupwide annual environmental management policies and action plans, and oversees and evaluates the progress of environmental management activities. Each plant has its own environmental supervisory committee and works to promote environmental management activities as part of JSW Group's unified approach to reducing its environmental impact. In addition, all of the Company's plants and several of its Group companies have obtained ISO 14001 certification, an international standard for environmental management systems. Please refer to our website for more details.

Environmental Management: https://www.jsw.co.jp/en/sustainability/environment/ems.html

Reduction of Environmental Impact

Policy and Initiatives for Water Resources

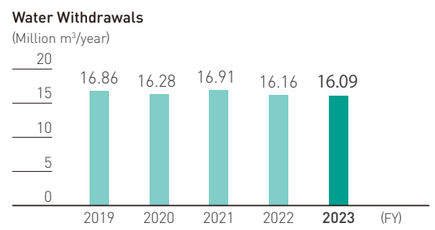
The Group utilizes the World Resources Institute's (WRI) Aqueduct assessment tool and other tools to check water stress at its manufacturing sites annually. As of May 2024, our assessments indicate that the Group has no manufacturing sites in water-stressed areas.* Japan Steel Works M&E, which accounts for more than 99% of the Group's water withdrawals, is located in Japan's Hokkaido Prefecture, where water stress is rated as Low in both its current Aqueduct assessment and in future projections.

At Japan Steel Works M&E, we are working to reduce freshwater intake by recycling cooling water and utilizing sea water, as well as practicing water source management for some industrial water utilization. We will continue to regularly check water stress levels at manufacturing sites and strive to use water resources appropriately as we take those stress levels into account.

In terms of discharge water quality, we will continue to conduct strict water quality management based on government ordinances.

* Areas rated with High or Extremely High water stress by Aqueduct

Water Withdrawals



Proper Management of Chemical Substances

At JSW Group, we manage chemical substances and other substances with environmental impact and are working to reduce emissions of hazardous substances. Based on the PRTR Law, we report to local governments annually about our release and transfer of the substances that are subject to that law. Substances that are subject to the PRTR law are used primarily in manufacturing processes, such as steel manufacturing, welding, galvanization, cleaning and coating.

Release and Transfer of PRTR Substances

	FY2022	FY2023
Amount released (t)	59.2	44.0
Amount transferred (t)	154.3	163.6
Total (t)	213.5	207.6

Initiatives to Reduce Waste

JSW Group is working to reduce waste volumes founded in 3Rs of waste: Reduce, Reuse, and Recycle. Our Industrial Machinery Products Business is maintaining a high recycling rate through thorough implementation of the 3Rs. Our Material and Engineering Business is contributing to the realization of a recycling-oriented society by utilizing internal and external steel scrap as raw materials.

Final Waste Disposal Volume and Recycling Rate

		FY2022	FY2023
Industrial Machinery Products Business	Final disposal volume (t)	101	105
	Recycling rate (%)	99.2	98.9
Material and Engineering Business	Final disposal volume (t)	25,270	21,392
	Recycling rate (%)	64.7	65.9

Response to Climate Change

Support for the TCFD recommendations

Please refer to our website for details.

Climate change response: https://www.jsw.co.jp/en/sustainability/environment/climatechange.html

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Governance

JSW Group considers climate change as an important management issue, and in June 2022, we expressed our endorsement for the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures). In the same year, we completed a scenario analysis and impact assessment. In accordance with the TCFD's disclosure framework, we analyze and consider the impact of climate-related risks and opportunities on the Group's business activities and earnings, and disclose the resulting information.

Strategy

Financial "Risk" Impact Assumed for FY2030 (Extracted)

Impact on annual operating income: Minor (less than ¥100 million); Moderate (¥100–1,000 million); Major (¥1,000 million or more)

Category	Type	Details	Degree of Impact	
			2°C	4°C
Transition risks	Policies and regulations	Imposition of a carbon tax	Moderate	—
		Introduction of border adjustment tax	Minor	Minor
	Technology	Cost of switching fuels at production facilities and R&D	Moderate	Moderate
	Markets	Decrease in demand for the products due to the reduction in the construction of conventional thermal power plants	Minor	—
		Decrease in demand for the products due to the reduction in the construction of conventional thermal power plants	Moderate	Moderate
	Reputation	Damage to our ESG evaluation and reputation due to delays in CO_2 emission reduction measures at the product manufacturing stage	Moderate	Moderate

Financial "Opportunity" Impact Assumed for FY2030 (Extracted)

Category	Type	Details	Degree of Impact	
			2°C	4°C
Opportunities	Markets	Expansion of the EV market	Major	Major
		Expansion of power electronics market and 5G infrastructure market	Moderate	Moderate
	Energy sources	Increased demand for renewable energy power generation	Moderate	Moderate
	Resource efficiency	Tax relief after the introduction of carbon pricing on CO_2 emissions from production facilities	Major	—
	Products and services	Expansion of products and services that contribute to the demand for the reduction of CO_2 emissions	Major	Major
		Response to the demand for plastic recycling, contribution to social implementation of non-fossil-fuel-derived plastics	Minor	Minor
		Increased demand for nuclear power plants and high-efficiency GTCC (Gas Turbine Combined Cycle) power plants	Moderate	Moderate

Specific Initiatives to Address Risks

Response to carbon taxes

The Basic Policy for the Realization of GX, approved by the Cabinet in February 2023, states the following regarding the introduction of a fossil fuel levy: "If this scheme were introduced without considering availability of alternative technologies or impact on international competition, Japan risks hurting its economy and triggering an exodus of production facilities (carbon leakage). Therefore, this approach will not be introduced immediately and deferred until fiscal 2028 after a period of five years for focusing on GX … by setting a policy for fossil fuel importers and other businesses that sets low initial prices and gradually raise them…" As such, the possibility of a carbon tax equivalent to the levels seen in Europe being imposed on CO_2 emissions from the Group's main production bases (four locations in Japan) by 2030 is expected to be extremely low.

The Group will continue to monitor domestic tax trends and, in order to mitigate the financial impact of taxation and achieve its CO_2 emission reduction targets, promote the introduction of renewable energy power generation, solar power generation facilities, and non-carbon-emitting facilities that utilize hydrogen and ammonia as fuel, in addition to various other energy-saving measures.

In fiscal 2023, the Group increased the percentage of electricity generated from renewable energy sources to 30% of Scope 2 at the Hiroshima Plant, 23% at the Yokohama Plant, and 20% at the Meiki Plant. Furthermore, the Hiroshima Plant once again expanded its solar power generation facilities in fiscal 2023, as it had in fiscal 2022. The Meiki Plant has also begun solar power generation.

Specific Initiatives to Address Opportunities

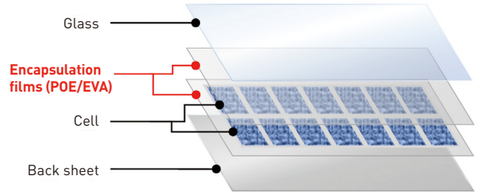
Initiatives for increased demand for renewable energy

As renewable energy power generation advances globally, over half of it now comes from solar power. The Group's pelletizers and twin-screw extruders are used in the production of the raw materials (pellets) of polyolefin elastomer (POE) and ethylene vinyl acetate (EVA) resins, which serve as encapsulation materials for photovoltaic panels. With the demand for solar power expected to continue growing steadily, we see this as an opportunity for the Group.

Furthermore, in addition to contributing to the reduction of CO_2 emissions through the generation of renewable energy, plastics also contribute to the reduction of CO_2 emissions and the mitigation of climate change in various ways, such as by improving automobile fuel efficiency with lightweight plastic parts.

Given this backdrop, we expect demand for pelletizers and twin-screw extruders, which are used to mass-produce resin materials, to remain high. To meet this demand, we advance our investment plan for the Hiroshima Plant to increase the production capacity of these machines and further improve manufacturing efficiency and assembly capabilities.

Solar Panel Structure and Encapsulation Films

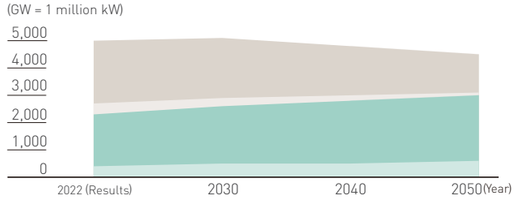


Response to increased demand for nuclear power plants and high-efficiency GTCC power plants

Demand for nuclear power is set to increase in the medium to long term as nations adopt new policies geared toward energy security and decarbonization. We are committed to providing products that meet the needs of the market, drawing on our extensive track record in developing and manufacturing technologies in large casting and forged steel components for nuclear power plants (reactor pressure vessel components, turbine rotor shafts, and generator shafts) as well as our knowledge of the nuclear power standards of countries around the world. We will also fulfill our responsibility to supply the market by investing in the renovation of core facilities to maintain production capacity and improve efficiency.

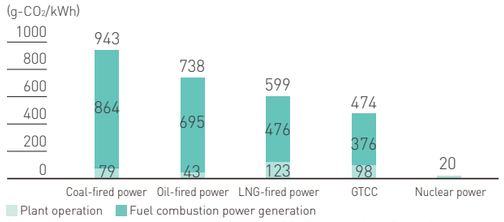
In the medium to long term, the market is expected to continue shifting to high-efficiency power generation facilities that curb CO_2 emissions, including gas turbine combined cycle (GTCC) power generation that has higher efficiency than conventional coal-fired power generation. We will leverage our large-scale heat-resistant materials manufacturing capabilities to address demand for the forged steel components (turbine rotor shafts, generator shafts) used in this type of power generation.

Power Generation Capacity Outlook Breakdown by Energy Source (Based on Stated Policies)



Source: IEA "World Energy Outlook 2023" (graphed by JSW)

Life Cycle CO_2 Emissions by Power Source



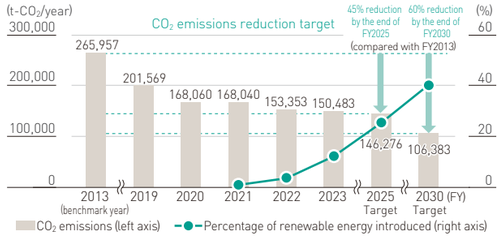
Source: "Comprehensive Assessment of Life Cycle CO_2 Emissions from Power Generation Technologies in Japan (2016)" by the Central Research Institute of Electric Power Industry (graphed by JSW)

Indicators and Targets

Classification	Management Indicator	Target (by end of year)	
		2025	2030
Reduction of CO_2 emissions in production activities (Scope 1, 2)	CO_2 emissions reduction rate (compared with FY2013)	45% reduction	60% reduction
Promotion of the introduction of renewable energy	Percentage of renewable energy among all energy used (Scope 1, 2)	25% or more	40% or more

The above "Indicators and Targets" for measuring and managing risks and opportunities related to climate change have been set forth with the aim of achieving a carbon-neutral decarbonized society. We continue to engage in environmentally friendly business activities and are working toward improvements in both "decarbonization through products" and "decarbonization of production processes." Regarding the CO_2 emission reduction targets, we have initiatives underway from Scope 1 and Scope 2 and have also completed the calculations of our most recent results for Scope 3.

CO_2 Emission (Scope 1, 2) Reduction Plan and Renewable Energy Introduction Plan



* In terms of the scope covered, the CO_2 emissions calculation includes the total of the head office and the Group's main manufacturing sites (Hiroshima Plant, Yokohama Plant, Meiki Plant, Japan Steel Works M&E, JSW Aktina System).

Quality Management

Summary of Circumstances Surrounding Inappropriate Conduct in Product Quality Inspections

In May 2022, the Company announced that a subsidiary, Japan Steel Works M&E (hereinafter, M&E) had engaged in inappropriate conduct, including falsifications, fabrications, and misstatements of product inspection results. Subsequently, we have taken with the utmost seriousness the findings and recommendations of a special investigation committee, consisting of outside attorneys, and are continuing efforts to prevent recurrence. Please refer to the URL below for details of the inappropriate conduct and the findings and recommendations of the Special Investigation Committee.

Regarding progress on measures to prevent recurrence of inappropriate conduct in quality inspections:
https://www.jsw.co.jp/ja/news/details/20220624112349.html

Roadmap to Prevent Recurrence, and Progress Status

Based on analysis of the causes of the inappropriate conduct, and after considering the recommendations of the Special Investigation Committee, JSW Group formulated measures to prevent recurrence, and has been implementing them to date following overall approval by the Board of Directors. From the four standpoints of Quality Assurance System Reform, Organizational Culture Reform, Process Reform, and Governance Reform, we have developed drastic measures to prevent recurrence and are working together with the Group as a whole. Regarding implementation, the Quality Management Office as the second line leading, directing, and supervising, and the Internal Auditors Office as the third line is auditing progress periodically and reporting results to the Board of Directors.

Category	Measures to Prevent Recurrence	Specific Measures and Progress in FY2023	Implementing Company
Quality assurance system reform	Establish companywide quality assurance system	Periodic quality audits by the Quality Management Office (biannually at the 5 plants, and once annually at the 14 affiliated companies)	JSW
	Strengthen the independence of the quality assurance function	Quality audits by the Quality Management Office (as a rule, biannually; in April and November in FY2023)	M&E
Organizational culture reform	Strengthen and raise awareness of the need for quality compliance	Quality Compliance Month (May in FY2023)	JSW
		Town meetings at M&E by our president (11 times in FY2023)	JSW
		M&E management get-togethers with frontline employees and young managers (monthly)	M&E
		Self-assessment to foster a culture of product safety (in February in FY2023)	M&E
	Organizational culture reform	Purpose penetration project - President town meeting (head office, 4 plants: all managers) - Purpose penetration workplace small meeting (the Company, affiliates: 4,500 employees) - Purpose training for organizational managers recommended by departments (29 managers (for initial training))	JSW
		Promote Organizational Culture Reform Project (start in August 2023)	JSW
Process reform	Digitize inspection work	Establish an inspection operation system to digitize inspection and test record preparation (start full-scale operation in September 2024)	JSW M&E
	Appropriate investment of management resources in quality control	Increase quality control personnel, promote personnel mobility	M&E
		Capital investment to enhance inspection operations efficiency (Capital investment completed. Start operation from August 2024)	M&E
	Strengthen quality assurance process	Permanent posting of Quality Management Office member to M&E (from April 2023)	JSW
	Upgrade communication with customers	Clarify characteristics of customer requirements (handling all inquiries)	M&E

* The above table does not include items that were "Complete" or "Complete (in operation)" in the roadmap under "Quality Management" on p. 40 of the Integrated Report 2023.

Opening of Quality Exhibition Room "VOICE509"

The quality exhibition room "VOICE509" was opened at M&E. This is a place where we disclose information such as an outline of inappropriate conduct regarding product inspections, their impact on business, and the results of cause analysis, and where each and every member of our Group can move toward a future of achieving reliable quality.

"VOICE509" was named as a place to experience and share the various voices associated with the "509" of May 9, 2022, the day on which inappropriate conduct was made public, as a lesson that is always etched in one's mind to not repeat the same mistakes.

Pending Issues and Future Response

Culture reform initiatives: Organizational Culture Reform Project

We divided into three areas based on our Group sites, internally recruited young employees who are passionate about wanting to change the organizational culture, launched Organizational Culture Reform Project Teams, and started activities from August 2023. Although the names and methods of activities vary depending on the area, we are continuing with activities aimed at (1) identifying issues that cannot be resolved by the department alone, and finding solutions involving top management, (2) stimulating communication across departments, and (3) fostering an organizational culture that is open to failure and encourages taking on challenges.

Area	Slogan	Main activities
Head Office / Yokohama	SCRUM Culture	• Committee for streamlining operations • Expressing gratitude • JSW borderless meetings
Hiroshima / Meiki	CHARM	• "Let's stop that" committee • Streamlining of meetings • CHARM morning assembly
Muroran	Open DOOR Project	• Holding a place for resolving issues • Employee plant tours • Utilization of Teams/work type channels

Quality Management Approach and System

Approach

At JSW Group, we conduct quality management activities at the division or plant level with the aim of providing meticulous support for each product.

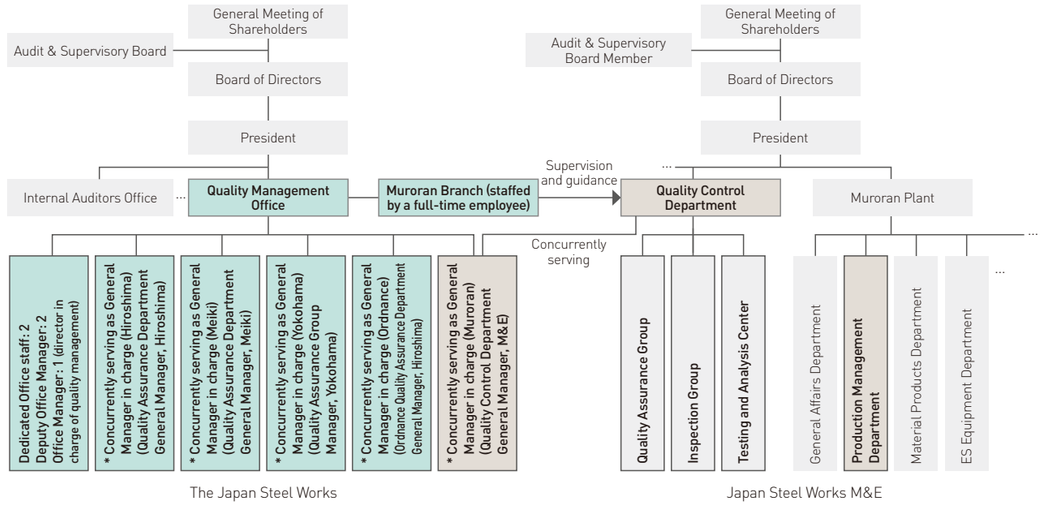
In order to strengthen the corporate monitoring and supervision functions for these activities, we established the Quality Management Office, headed by a director in charge of quality management, in September 2022, which is working on initiatives such as formulating the JSW Group Quality Policy and Quality Code of Conduct. In May 2024, which is Quality Compliance Month, we added and clarified in Item 1 of the Quality Code of Conduct that we will comply not only with the laws, regulations, and customer requirements, but also with the internal rules we have decided on ourselves.

System

Our quality assurance system ensures neutrality within the Company and the effectiveness of the check function related to quality assurance activities by having Quality Management Office members serve concurrently at each plant, including M&E. Furthermore, we established the Muroran Branch of the Quality Management Office in April 2023, and continue to strengthen supervision and guidance of quality assurance activities at M&E.

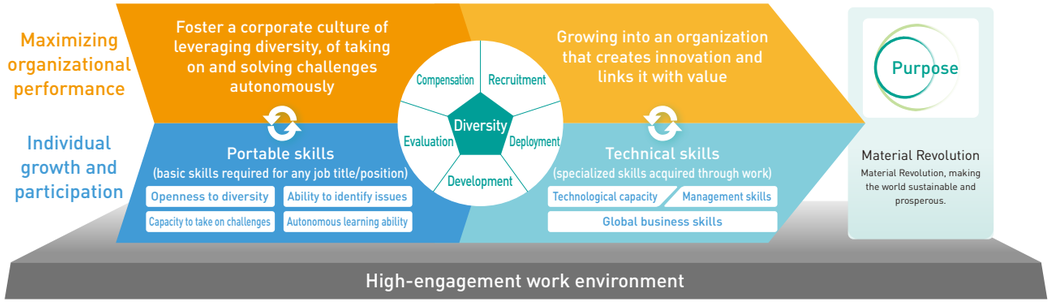
Quality Policy and Quality Code of Conduct: https://www.jsw.co.jp/news/news_file/file/20240527_news.pdf#page=7

Quality Management System Diagram



Human Capital Management

The corporate image that JSW Group is aiming for is one where "individual self-realization" and "sustainable growth of the organization" mutually circulate, and the individual and organization continue to thrive together. To this end, we are developing a human capital strategy that aims to achieve autonomous growth and active participation of diverse individuals and maximizing of organizational performance by linking human resource events of recruitment, deployment, development, evaluation, and compensation to realize sustainable growth and improved corporate value. In addition, since a good work environment is essential as a basis for developing strategies, we are promoting measures to increase engagement.



Human Capital Strategy

Recruitment

Acquisition of human resources that match our business strategy

JSW Group's workforce includes many highly skilled mid-tier personnel in their 30s to 40s who have plenty of experience. In order to execute our business strategy and achieve sustainable growth, we need to maintain and increase the number of business leaders in this age group.

In addition, while focusing on hiring new graduates as young employees who will grow into the middle tier of the future, we actively recruit experienced employees throughout the year.

Acquisition of diverse human resources

In order to promote DEI&B, which is a materiality, we will recruit human resources with various attributes and qualities to improve diversity.

To ensure diversity in attributes, our highest priority is to increase the ratio of female employees, which currently remains low. In particular, we are working to increase the ratio of female employees to recruit more female candidates by actively following up with female employees in the process of selecting female candidates. We also utilize various channels for people with disabilities and foreign nationals, and promote recruitment activities that emphasize matching with their career aspirations.

Meanwhile, as an initiative to recruit diverse human resources in terms of qualifications, in order to recruit unique human resources who excel in one skill, we established a new recruitment path for new graduates in fiscal 2024 called the "passionate recruitment course" that is different from the conventional selection flow. In addition, as a result of our focus on hiring experienced employees, nearly 40% of the total number of employees hired in fiscal 2023 were experienced employees, and many people with various experiences, backgrounds, and skills joined the Company, leading to an improvement in the diversity of human resources.

Development

Level-specific training and self-development support

We provide level-specific training for all employees, from new hires to managers. Furthermore, to support self-development, we make online learning platforms available, and strive to create an environment where people can acquire the skills they are seeking.

Growth support for organizational managers

Based on the results of the engagement survey, we believe that to raise the level of performance for the organization as a whole, it is important to enhance the skills of organizational managers who drive the workplace to achieve strategic goals.

Firstly, we consider it important for the organizational managers to develop the skills to enhance the psychological safety and job satisfaction of workplace members, and therefore have strengthened the training to acquire management skills with a view to contributing not only to improved engagement but also to organizational change and innovation.

In addition, because the personnel composition and issues vary from workplace to workplace, by designing a variety of educational content for organizational managers that takes into consideration the various learning needs of each workplace, we will support these managers in enhancing their skills appropriate to the actual situation of each workplace.

We also actively fast-track young high performers into management in anticipation of future advancement to senior management. We task these individuals with critical missions involving significant responsibility, and actively conduct development measures through internal recruitment and rotation.

IT skills education

All employees have been categorized into levels according to responsibilities and IT skills, and the target percentage of employees at each level has been set. As we work to achieve these percentages, we are developing an environment to provide appropriate educational content to employees with various skill levels, thereby working to improve IT literacy throughout JSW Group. In addition to the foregoing, we will also work to develop department leaders, familiar with business as well as IT, who will promote digitization of business operations to derive concrete results from DX activities.

Support and monetary incentive programs for technology and skills transfer, and acquisition of official certifications

We have established in-house training environments such as Ginou-Dojo (Technical Skills Dojo) (Hiroshima Plant) and Hagane-Juku (Steel Academy) (Japan Steel Works M&E Muroran Plant). We are transmitting skills that have been passed down by generations of skilled technicians to younger employees, and broadening the base of employees with deep technical backgrounds. We also encourage employees to obtain official certifications and reward them when they do, and have introduced a skills certification system to promote autonomous learning and growth.


Ginou-Dojo (Technical Skills Dojo)


Hagane-Juku (Steel Academy)

Global business skills

We offer employees educational opportunities to acquire global business skills. In addition to improving skills such as negotiating and giving presentations in English, this training also gives participants the opportunity to learn styles of thinking that have global resonance.

Moreover, we provide the basic and specialized education required for global business, such as language training including study abroad, and workplace rotation for personnel development, including to the Company's international locations. Through the synergistic effects of these efforts, we are fostering the human resources who will lead the development of our business on a global scale.

Going forward, we will begin to structure an educational system to effect management skills acquisition, including the expertise to formulate and execute growth strategies and establish corresponding management structures, and knowledge of M&A.

Indicators	FY2021	FY2022	FY2023
Training cost per employee (thousands of yen)	28.5	53.3	58.8
Number of participants in job level-specific training	277	266	317
Completion rate of job level-specific training (%)	98.9	98.1	98.1
Number of employees newly certified under The National Trade Skill Test & Certification (NTSTC)	111	100	98

Deployment

Based on the approach of deploying the right person into the right job, we are working to systematize personnel rotation based on our medium-term development vision by assigning employees to the most suitable positions for business execution, after consideration of their individual aptitudes and personalities. This will ensure that all employees can exercise their abilities and acquire technical skills (specialized abilities) through their work.

In addition, we are embarking on initiatives that will promote autonomous career development, including implementing planned internal open recruitment in certain divisions, with the aim of developing personnel by encouraging them to take on the challenge of developing new businesses.

Evaluation and Compensation

Separate systems have been established for general employees (non-managers) and managers. Evaluation of general employees focuses on job performance. At the assistant manager level, the highest general employee level, the Company sets goals based on the individual's scope of responsibility, and evaluates based on achievement of those goals. For management-level employees, an MBO system has been put in place, where they set goals autonomously with respect to problem-solving and organizational development linked to business objectives, and work autonomously to achieve them.

Communication with supervisors is mandatory in setting goals for managers and assistant managers. Such communication reinforces the link between management and individual goals, and ensures that all employees can exercise their individual abilities and play an active role in furthering the organization's pursuit of management strategy.

In the past, the MBO system for managers had set targets for a single fiscal year, which was inconsistent with the medium-term targets. Starting in fiscal 2024, we have clarified the setting of targets over a multi-year span for the execution of the medium-term management plan, and set new challenge targets so as not to operate the system in a conservative manner.

Creating a Work Environment That Enhances Engagement

Activity of diverse human resources: From D&I to DEI&B

The Group recognizes that the execution of its business strategy hinges on the active participation of diverse human resources that can bring about new added value through a variety of thinking styles and ideas. In order to maximize the potential of each and every employee, we believe that in addition to "D (diversity) and I (inclusion)," which had previously been stated in our materiality, "E (equity)" and "B (belonging: creation of an environment where employees can be themselves)," are indispensable. Therefore, we changed "D&I" to "DEI&B" in fiscal 2024.

Activities to promote DEI&B

We provide onboarding training for experienced hires, to ensure smooth integration and participation.

We provide advance training to departments hiring persons with disabilities, to ensure smooth personnel integration and departmental understanding of the nature of the disability.

We are also developing educational content addressing female health issues, and working to obtain support and understanding at each workplace. JSW Group's relatively low percentage of female employees and managers presents a challenge. We have women in management positions—at the general or section manager levels in sales, technical, and corporate departments. However, to place women in leadership positions, we will hire more new female graduates for career track positions and, through retention measures, steadily expand the number of women who aspire to become managers. In parallel, we will actively promote recruitment of experienced female hires to increase the number of female managers.



Indicators	FY2021	FY2022	FY2023
Percentage of female new graduate hires for career-track positions (%)[1]	15.0	15.6	25.0
Percentage of women among assistant managers (%)	8.7	10.1	9.9
Number of employees who took childcare leave	14	38	60
Percentage of employees with disabilities (%)[2]	2.21	2.46	2.42

1. The percentage of female new graduate hires for career-track positions is based on the number of women who were offered employment during the fiscal year in question and who joined the Company on April 1 of the next fiscal year.
2. As of June 1 of each fiscal year

Initiatives based on the results of the engagement survey

We have been conducting an engagement survey annually since fiscal 2022. Based on the results of these efforts, we are enhancing education for organizational managers so that all employees can play an active role, eliminating disparities in management among workplaces and raising the level of management.

In addition, since scores tended to gradually decrease as employees continued to work after joining the Company, we are strengthening the environment in which young employees can fully demonstrate their abilities by enhancing follow-up after joining the Company.

Female employees have higher scores than male employees, but the results of the analysis show that they need support in terms of career awareness, and in order to stay close to their respective career visions, we will consider support measures including support for female employees, including their superiors.

Support for work-life balance

In addition to establishing a childcare and family care leave system and ensuring that it conforms with current law, we are working to create an environment that facilitates a balance of work with childcare and family care, with telecommuting, staggered work hours, and an hourly paid leave system.

In terms of education, we are promoting measures to support self-development, so that employees can upgrade their skills in line with their motivation.

Employee benefits

To accommodate the diverse values and needs of our employees, we are undertaking to enhance our system by offering them a cafeteria (benefit) plan from which they can select the benefits that fit their needs.

Occupational Health and Safety

Policy for Health and Safety Activities

In JSW Group, which operates primarily in manufacturing, ensuring the health and safety of employees has always been a top priority. We consider our health and safety initiatives to be part of a corporate foundation and corporate culture rooted in an emphasis on human capital and respect for human rights.

We are carrying out these activities in accordance with the policy below, with the aim of maintaining and improving the health of employees and preventing occupational accidents.

1 Basic Philosophy

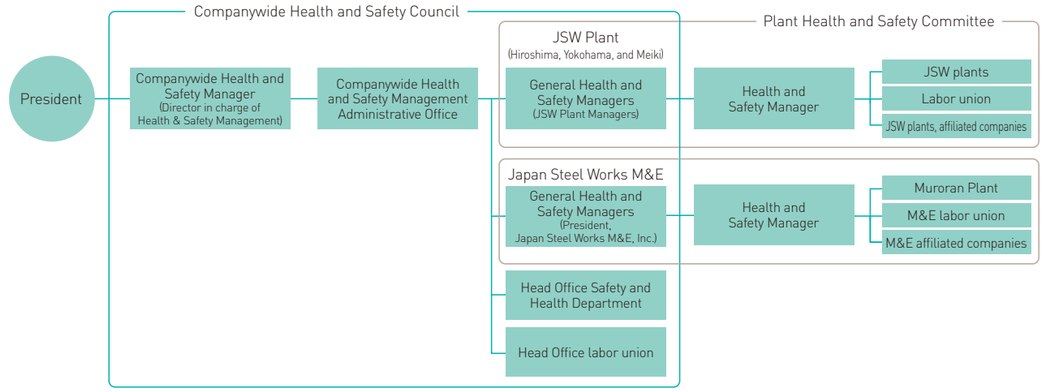
- To fulfill our social responsibility, we have positioned health and safety as a vital part of our management policy, and work to ensure the health and safety of everyone involved in our business.
- We have established and operate an occupational health and safety management system, and prioritize health and safety in all of our business activities to foster workplaces where employees can work safely and with peace of mind.

2 Basic Policy

(1) We will comply with health- and safety-related laws and regulations, as well as internal standards, and steadily promote their establishment as rules, customs, and culture.
(2) Based on strong leadership from top management, employees, the labor union, and JSW Group will work in unison to establish a safety management system to prevent occupational accidents and health hazards.
(3) We will invest the resources necessary for effective workplace improvements.

Health and Safety Promotion Structure

The promotion structure for health and safety activities in JSW Group is as follows.



Health and Safety Initiatives and Results

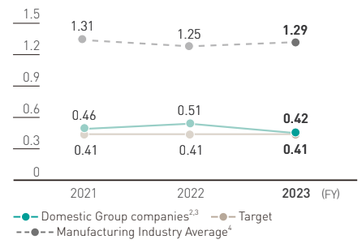
In JSW Group, we specify priority items for health and safety activities each fiscal year, and the Group (as well as the labor union) and suppliers of each plant work together on activities aimed at achieving zero occupational accidents.

Our major sites have acquired certification for their occupational health and safety management systems, and are enhancing the effectiveness of their activities.

To promote employee health, including mental health care, the Group conducts periodic stress checks and strives to properly manage working hours, among other activities.

Site	Certification	Date Acquired/Renewed
Hiroshima Plant	ISO 45001	August 12, 2022
Japan Steel Works M&E	ISO 45001	July 10, 2024

Frequency Rate of Accidents per Million Workhours[1]



1. Frequency rate of accidents calculated from lost-worktime, serious and fatal accidents during the fiscal year
2. Including partner companies on Company premises
3. Excluding certain Group companies
4. Manufacturing industry averages are from the survey of occupational accident trends (Ministry of Health, Labour and Welfare).

Supply Chain Management

Our Perspective and Basic Procurement Policy

JSW Group has established The Japan Steel Works Group Standards of Business Conduct, which states, among other things, that the Group will respect the human rights of all people, conduct business transactions properly as based on fair and free competition, and engage in responsible procurement. In September 2022, The Japan Steel Works Group Human Rights Policy was established to promote respect for human rights in accordance with international norms. Furthermore, in September 2022, we revised the existing The Japan Steel Works Group Basic Procurement Policy to have our suppliers achieve an understanding of and cooperate with the above standards and policies, and to facilitate product procurement that takes into consideration matters such as human rights, labor, health and safety, the environment, and information management in a manner consistent with the move toward a sustainable society. We also formulated our Request to Business Partners, a document that outlines the specifics regarding our vision of how we hope suppliers conduct business. The Japan Steel Works Group Policies and Request to Business Partners are published on our website, and are available to all stakeholders. We also distribute printed copies to our business partners. Furthermore, we are currently requesting confirmation of agreement from our suppliers in the supplier survey described below.

Going forward, we will work to comprehensively disseminate these Policies and Request, strive to monitor the sustainability initiatives of our major suppliers, conduct dialogue and other interactions with suppliers as needed, and continue to strengthen our supply chain risk management and its sustainability. To ensure that all suppliers in our supply chain can continue to play indispensable roles within society, we will share with them the Group's policies and work together to promote sustainable procurement practices that sustain sound growth together through our business dealings.

For details concerning The Japan Steel Works Group Basic Procurement Policy and Request to Business Partners, please refer to our website.

Supply Chain: https://www.jsw.co.jp/en/sustainability/social/supplychain.html

Supplier Survey

Since fiscal 2023, we have been soliciting participation in a CSR Procurement Survey of our major suppliers, to monitor the status of their sustainability initiatives. The survey is divided into nine major sections, based on such themes as our Request to Business Partners and The Ten Principles of the UN Global Compact. Representative survey topics include child labor and forced labor prevention (Labor), respect for human rights and discrimination prevention (Human Rights), and initiatives to prohibit conflict minerals (Supply Chain). In addition, in conjunction with soliciting response to the CSR Procurement Survey, we also confirm that suppliers agree to The Japan Steel Works Group Human Rights Policy, The Japan Steel Works Group Basic Procurement Policy, and Request to Business Partners.

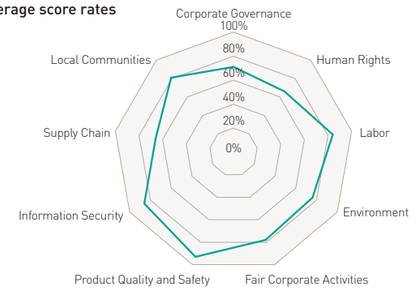
In fiscal 2023, we solicited 40 suppliers in Japan and overseas (covering over 34% of the order amount*) to respond to a survey based on actual procurement amounts at each of the Group's major manufacturing sites. A total of 31 suppliers responded (covering over 28% of the order amount*) by the end of fiscal 2023. Additionally, we confirmed that all 31 suppliers agreed with The Japan Steel Works Group Human Rights Policy, The Japan Steel Works Group Basic Procurement Policy, and Request to Business Partners. We will continue to solicit responses from suppliers who have not yet responded.

The results of the survey for each major item are shown in the figure on the right. The average score rates were high for Product Quality and Safety and Information Security, while the average score rates were relatively low for Human Rights and Supply Chain. Based on the aggregated results, we analyzed individual questions and provided feedback to suppliers who responded. In addition, for suppliers who scored low on questions that could lead to a particularly serious risk, we make individual inquiries to ascertain detailed conditions that cannot be ascertained through closed-ended questionnaires ((1) actual problems, (2) incorrect interpretation of questions, (3) underestimation of the company, etc.). If we determine through individual inquiries that efforts are still insufficient, we will engage in dialogues for improvement.

* Percentage of the total amount of orders placed from the Group's main manufacturing sites to our primary suppliers for materials and subcontracting

CSR Procurement Survey Results

Average score rates



Survey System

1. Initiative request
2. Monitoring status of initiatives
3. Analysis of initiatives
4. Feedback to and dialogue with suppliers

Respect for Human Rights

JSW Group respects internationally recognized codes such as the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. We also promote efforts to respect human rights based on international guidelines such as the United Nations' Guiding Principles on Business and Human Rights.

In accordance with these, we have established The Japan Steel Works Group Human Rights Policy, which clearly prohibits discrimination, harassment, child labor, and forced labor; indicates our respect for basic labor rights; and expresses our commitment to respecting all human rights in all aspects of our business activities. To ensure that this policy is propagated throughout the Group's business activities, we use in-house newsletters, bulletin boards, portal sites, e-learning programs and other means to disseminate the policy and educate employees.

In order to maximize the potential of each and every employee, we believe that in addition to the existing "D (diversity) and I (inclusion)," "E (equity)" and "B (belonging: creation of an environment where employees can be themselves)," are indispensable. Therefore, we changed "D&I" to "DEI&B" for materiality in June 2024.

In this context, JSW Group has focused on health and safety activities and harassment prevention, with the primary aim of ensuring that each and every employee can perform their work in a healthy and pleasant environment where they are respected as individuals and their human rights are not violated. We have established internal and external consultation hotlines and a resolution process through the Harassment Countermeasures Committee (chaired by the director in charge of Personnel Department). For the protection of the employee consulting with us, they shall not be treated disadvantageously in any way, and to ensure this, persons who engage in unfavorable treatment shall be subject to appropriate disciplinary measures. The number of consultations was 33 in fiscal 2022 and 42 in fiscal 2023, and we recognize that the process is functioning properly. Many of the consultations concern suspected interpersonal relationships and harassment in the workplace, and the committee investigates and responds appropriately.

We conduct fair hiring practices that respect the human rights of all individuals, not only employees. We have also established systems that support a favorable work-life balance, foster a workplace environment that is inclusive of diverse personnel, and strive to provide equal opportunities so that individuals can excel. In April 2024, among the Group's various employee benefits systems, those that previously required the filing of marriage registration were made available based on the partnership declaration system by local governments.

Furthermore, in the wider supply chain, we request, as appropriate, that suppliers understand and respect human rights and comply with relevant laws and regulations. In an effort to build human rights due diligence, we began conducting the CSR Procurement Survey in fiscal 2023.

Recognizing that its business activities are extremely vast in terms of the fields covered, involving a wide variety of individuals, JSW Group will engage in dialogue with labor unions and all other stakeholders, set priorities and address them appropriately, and step up the monitoring of human-rights-related risks to prevent any direct or indirect negative impacts on human rights. For details concerning The Japan Steel Works Group Human Rights Policy, please refer to our website.

Respect for human rights: https://www.jsw.co.jp/en/sustainability/social/diversity.html

Local Communities

The Group believes that companies are members of society, and that they progress in collaboration with various communities, including local communities. JSW Group also engages in socially responsible activities with the aim of realizing a better society and becoming a company that is rooted in the local community. Please refer to our website for details regarding the activities we engage in, such as cleanups, education, and community exchange.

Social Contribution Activities: https://www.jsw.co.jp/en/sustainability/social/socialcontribution.html



Work experience activities



Sponsor and exhibitor at Hiroshima Skill Fair

Roundtable Discussion with Outside Directors



The Evolution of Management & Governance and Promoting JGP2028

We hosted a roundtable discussion on what course the evolution of JSW Group's management and governance should take with four outside directors, who provided candid feedback on the progress of initiatives, challenges, key points in JGP2028, and future expectations for the Group.

Evolution of JSW's Management and the Role of Outside Directors

Nakanishi This marks my fifth year as an outside director of JSW since joining in 2020. JSW is a serious, proud company that prizes technical capability, and while there was a strong awareness of creating good products when I joined management, awareness of governance and other aspects of management and organizational operations was lacking; however, these areas have improved in recent years. I would like to keep making recommendations for further improvement to meet the requirements demanded by society and stakeholders.

Mitsui I also became an outside director of JSW in 2020, the same year as Mr. Nakanishi. I observe management based on my background and experience in technology and production. While I sense the seriousness of JSW and its commitment to technology, I also had the impression that, as a company with more than a century of history, the organization was rigid and lacked flexibility; however, I too have noticed positive changes in recent years.

Starting around 2022, JSW has been developing a philosophy system, including its purpose, vision, value creation process, and material issues, and has identified key management issues. The discussions to formulate and identify these issues gave me the impression that the awareness among management and employees has changed. Identifying material issues in particular has made it possible to organize different scenarios based on which material issue it is related to and consider concrete measures to address challenges.

Kawamura I have been involved in public policy for education, culture, and research promotion and became an outside director at JSW in 2023 after running an independent administrative agency in the entertainment industry. At board meetings, I try to speak from a different perspective to help facilitate multifaceted discussions.

Management here has good teamwork, which I believe is the driving force behind increasing organizational performance. However, as we enter a phase of business expansion, I believe incorporating diversity will help build an even more resilient organization. It is vital to ensure that people with different backgrounds and attributes, including those who have newly joined JSW Group, do not feel alienated and to avoid the groupthink that highly homogeneous organizations are prone to.

In June 2024, Ms. Mizumoto, the first female director at IHI Corporation, joined as an outside director of JSW, further increasing the diversity of the board. I believe having diverse role models also serves as a boon for employees when envisioning their career paths.

Kuriki I have been involved in management in the semiconductor industry both in Japan and abroad for many years and became an outside director at JSW in 2023, and since I was coming from a completely different industry, I at first spoke cautiously all while trying to gain a deeper understanding of the Company. Now that a year has passed and my understanding of the Company has improved, I want to be more proactive in sharing my thoughts on things I felt were different or new based on my experience and knowledge to contribute to the development of the Company.

Board Discussions to Formulate the JGP2028 Medium-Term Management Plan

Nakanishi In formulating JGP2028, we started with such themes as, "What kind of company do we want to be in the first place?" (reassessing corporate philosophy) and "What kind of company do we want to be 10 years from now?" then backcast from there to discuss repeatedly what we should do now. This process was different from previous medium-term management plans, and I think we found a formulation process that works well.

Mitsui Previous plans showed sales and profit targets but did not write down any common understanding of the underlying business plan or what kind of company it was trying to be. Through repeated discussions about purpose, vision, and material issues, we were able to formulate JGP2028 based on the philosophy system.

Kuriki For JGP2028, I have said that how to express the reality of achieving goals and explain business growth and growth factors is an issue, and I feel a fuller explanation on what will bring about growth to achieve the FY2028 financial targets is required.

To execute JGP2028, a mechanism has been established for the board to constantly monitor action plans presented by each business division, so going forward, I'd like to supervise management by not only tracing figures but also by monitoring changes in the business environment to encourage the Company to constantly update what it should do.



Nakanishi Regarding targets, there are cases where figures take on a life of their own, but enhancing content such as improving in profitability, increasing capital efficiency, and strengthening competitiveness is vital, and I believe we need to explain this more carefully to investors and employees.

The business portfolio has been discussed at board meetings for several years, and while the vision for fiscal 2028 was shown in JGP2028, discussions on how to transform the portfolio beyond that are ongoing.

Mitsui The business portfolio in JGP2028 envisions how to grow each business from its current state, but we must discuss what will be phased out by 2030 at board meetings as well.

Kawamura At board meetings, I've heard explanations of different measure to maximize revenue from each business division, and I hope we will work to improve profitability for products with high market value and high technical capability cultivated by the Company over many years by fully leveraging JSW's negotiating power. Going forward, I believe we must have deeper discussions on each area of business with follow-ups at board meetings.

Kuriki JSW's current profitability includes a competitive edge created by factories that are fully amortized. Future investments in equipment upgrades will boost competitiveness through such measures as reduced manufacturing times, but maintaining the same business structure will increase amortization costs. That is why the Company must boost competitiveness through business transformation, which I recognize as a major challenge.

Mitsui Creating new businesses is also key. Since I joined, the Company has put forth all kinds of initiatives for new businesses, but I get the sense that these have yet to blossom. While I understand it takes time, I feel we've reached a point where we should focus our resources through "selection and concentration." To tie the Company's technical foundation to social issues and creating new businesses, extracting something beyond what we currently have is vital. JSW appears to have a strong desire to be self-sufficient with its own technology, but I believe it is crucial to consider M&A and alliances for the future as well.

Nakanishi Based on its origins, JSW's strengths lie in mechanical and electrical technologies; however, if the Company were to focus on developing technology for chemical recycling in the field of plastics, for example, it might be able to pioneer a unique domain.



Kawamura To create new businesses, it is vital to go beyond existing businesses and view things from a medium-to-long-term perspective when conducting research and development, so I have high hopes for the new research institute currently under consideration. JSW has real experience in producing results for research and technological development over long spans of time, so they should be able to relay this successfully. I hope the institute will serve as a model for the next generation of the Company and as a pilot model for organizational culture reform by comprising diverse engineers and employing entirely new organizational structures and operations aimed at forward-looking, free-thinking R&D. If the creation of such a research and development center is widely communicated outside the Company, I believe it will serve as a foundation for attracting outstanding researchers and engineers and become a new strength for the Company.

Nakanishi I agree with Ms. Kawamura about the new research institute. JSW once had functioning technology asset sharing, but ultimately each business division began doing R&D independently. The president recognizes this as a challenge for achieving further growth and since 2023 has begun changing the organizational structure to share technology assets across business divisions, so I feel the groundwork for creating new technologies is being laid. If we are to establish new research functions, I think we need to broaden recruitment of engineers to include chemical engineers in addition to mechanical and electrical engineers.

Challenges in Strengthening Management Foundation and Keys for Transformation

Kawamura As business expands, securing and developing human resources has become a major management issue. To be a company chosen by workers, it is vital to create an environment where diversity is secured and respected in all its forms, where each employee experiences psychological safety and job satisfaction so that they feel glad to work for JSW and want to stay. For that reason, I have on different occasions suggested that we should strive for DEI&B by adding Equity and Belonging to the Diversity & Inclusion (D&I), and other directors also provided advice on this as well, so it was incorporated into JGP2028. I would like to continuously support and supervise at board meetings to ensure this is reflected in a variety of measures going forward.

Kuriki JSW has many Group companies in Japan and abroad, meaning there is significant room for streamlining Group governance mechanisms for management, and currently, management costs are higher than necessary. Considering future international expansion, the Group governance mechanism must be simplified to reduce risks.

Nakanishi In terms of DX, the unification of the core system across the Group will lead to streamlined operations, standardization, and stronger Group governance, but this is currently being applied to Japanese bases rather than from a global perspective. Going forward, it will be crucial to create unified judgment criteria for the core system to reduce governance risks associated with global expansion.



Mitsui In terms of horizontal partnership within the Group, I think previously, plants and business divisions operated independently, with weak cross-organizational functioning. However, the occurrence of misconduct in product inspections at our subsidiary Japan Steel Works M&E in 2022 led to reform in cross-organizational quality management and corporate culture. Cross-organizational discussions in R&D have been revitalized as well.

JSW is a big organization with business sites in many different locations, so it is vital for middle management to play their role if the message from management is to reach all employees.

Kawamura In organizational culture reform, I feel that bottom-up efforts have advanced, with project teams working actively and presenting the results and status of these at board meetings. Furthermore, when formulating future plans and measures such as non-financial targets and the direction of ESG, it would be a good idea to have a mechanism for companywide discussions, such as gathering opinions from all departments, consolidating them, or flexibly launching project teams based on different themes. I believe that when employees feel involved in steering the Company, bottom-up proposals are easier to make and engagement increases. When top-down direction aligns with bottom-up desires to create change in the Company, a truly powerful company can be created.

Nakanishi Based on my own management experience, I have told the president that changing corporate culture ultimately comes down to the top communicating with employees over and over. The president continues to hold town hall meetings with employees at each plant, and I believe that taking initiative and repeatedly communicating the ideas of top management will foster a new culture.

Kawamura I agree. It's crucial for the top to consistently communicate beliefs in official, consensus-based policies without wavering.

Kuriki Based on employee feedback in working groups, I think middle management needs strengthening. For example, introducing different HR systems in one part of the Company, creating tangible results of "change," then expanding horizontally all while monitoring the situation may be a good approach.

Kawamura Proactively communicating JSW's changes to a wide range of stakeholders including shareholders, investors, local communities, and students who may work here in the future might help unleash the Company's potential. I feel JSW has been modest in its external communications so far. I hope the Company will more clearly convey the social value of its businesses and effectively communicate its new businesses, products, and facilities.



Kuriki The IR manager spoke of wanting to strengthen communications with individual investors. For example, we hope to expand the shareholder base by reaching out to retail-focused securities client channels, making JSW more familiar to individuals.

Nakanishi I think it would be effective to hold factory tours for shareholders and local residents as well as briefings on growth areas and other themes to promote JSW's initiatives. At board meetings, we are also discussing how to promote JSW Group outside the Company to increase corporate value.

Corporate Governance

Basic Approach

Based on our Philosophy and the Standards of Business Conduct, the Group recognizes that it is essential to earn the trust of all stakeholders, including shareholders, customers, business partners and employees, in order to simultaneously create social value and enhance sustainable corporate value. We therefore continue to strengthen corporate governance to ensure the transparency, soundness and effectiveness of management.

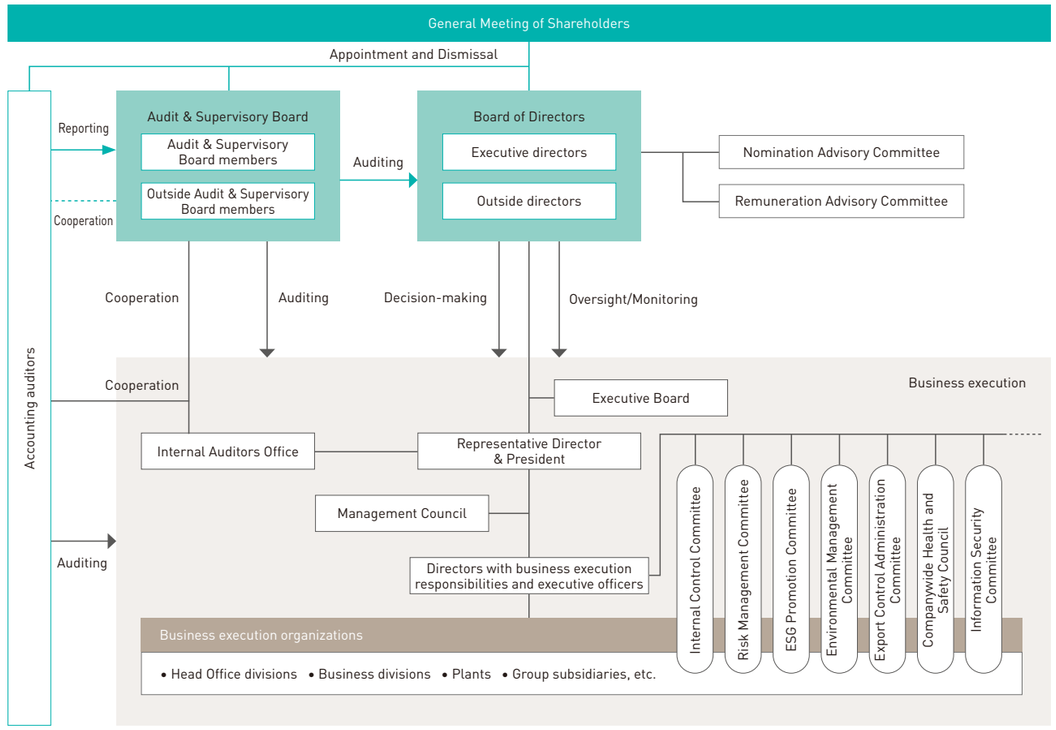
Overview of Corporate Governance Structure

The Japan Steel Works, Ltd. ("the Company") has adopted the structure of a company with an audit and supervisory board. The Board of Directors consists of ten directors (five of whom are outside directors) and the Audit & Supervisory Board consists of four Audit & Supervisory Board members (two of whom are outside Audit & Supervisory Board members).

The term of office for directors is set at one year. The Company has also introduced an executive officer system that separates management decision-making and supervisory functions from business execution functions conducted by executive officers, thereby speeding up decision-making, strengthening supervision and improving business execution. Since April 1, 2023, the Company has implemented a system that, in principle, ensures that in the case of head office divisions directors and executive officers, and for business divisions executive officers and other employees, are each responsible for oversight and business execution for the tasks they are delegated or assigned by the Board of Directors. This clearly delineates business execution of the business divisions from supervision by the Board of Directors.

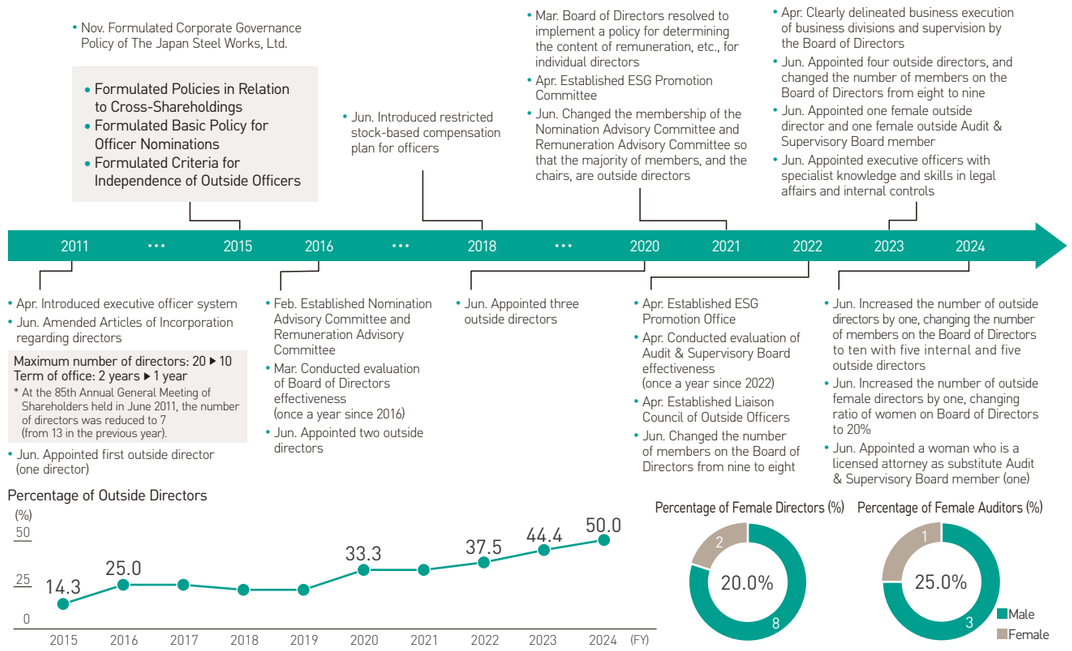
Audit & Supervisory Board members attend important meetings including those of the Board of Directors, the Executive Board and the Management Council. Once every fiscal half in principle they visit plants, sales locations and Group companies, and receive reports on necessary information from each division. They also exchange opinions with directors, executive officers and other keypersons, and based on these exchanges, advise management from an objective and impartial standpoint, while strictly monitoring the execution of duties by directors.

Corporate Governance Structure



* The Liaison Council of Outside Officers was established as a venue to provide outside officers with advance explanations about the agenda for Board of Directors meetings, and as a forum for outside directors and executive officers to verify, report on, and exchange opinions about business execution.

Building a Stronger Governance System



Role and Composition of Governance Bodies

		Board of Directors	Audit & Supervisory Board	Nomination Advisory Committee	Remuneration Advisory Committee
Composition	Attendees (with voting right)	Directors (5 inside, 5 outside)	Audit & Supervisory Board members (2 inside, 2 outside)	President (1) Director in charge of Personnel Department (1) Outside directors (5)	
	Observers/Advisors (no voting rights)	Audit & Supervisory Board members (2 inside, 2 outside)	–	–	
	Chairperson/Committee Chair	President	Internal auditor	Outside director	
Objectives and Areas of Authority		Decides and reports on basic management policies, matters stipulated by laws and regulations, and other important management matters, and monitors the execution of duties by directors and executive officers	Reports, discusses and makes resolutions on important matters relating to auditing; this does not preclude the exercise of individual Audit & Supervisory Board members' authority	• As an advisory body to the Board of Directors, deliberates on matters relating to the nomination and dismissal of directors, Audit & Supervisory Board members and executive officers, and reports the results to the Board of Directors • Consults on the succession planning for the president, and reports the results to the Board of Directors	As an advisory body to the Board of Directors, deliberates on matters relating to the remuneration of directors and executive officers, and reports the results to the Board of Directors
Meetings in FY2023		15	13	2	5

		Executive Board	Management Council	Liaison Council of Outside Officers
Composition	Attendees	Inside directors (5) Non-director executive officers (6)	Inside directors (5) Inside Audit & Supervisory Board members (2) Non-director executive officers (6) Business division directors and business division deputy directors, general plant managers, Head Office division managers	Directors (3 inside, 5 outside) Audit & Supervisory Board members (2 inside, 2 outside)
	Observers/Advisors (no voting rights)	Inside Audit & Supervisory Board member (1)	–	–
	Chairperson	President	President	President
Objectives and Areas of Authority		• Deliberates and decides on important management matters and matters that have a significant impact on the Company's profit and loss • Discusses and reports on basic management policies and matters relating to overall management	Coordinates and reports on the following important management matters and shares management information 1. Analysis of business environment, progress of business plans 2. Important matters relating to research and development 3. Matters relating to Group companies 4. Matters that have a significant impact on management including those relating to sales, production, funding, profit and loss 5. Other important management matters	Gives advance explanation of the resolution matters and deliberation matters of the Board of Directors, and reports on the status of operations and important management matters of the Company and the Group
Meetings in FY2023		41	11	12

Major Matters Discussed at the Board of Directors Meetings in FY2023

- New medium-term management plan JGP2028
- Measures to prevent recurrence of inappropriate conduct
- Evaluation of the effectiveness of the Board of Directors
- Feedback on IR/SR activities
- Human capital/talent development strategy
- Business portfolio with an awareness of capital costs
- Report on the status of compliance line operations
- Status of operations of internal control systems
- Review of cross-shareholdings
- Executive appointments and governance structure
- Risk management
- Progress report on digital transformation promotion
- R&D framework
- Skill matrix
- Revision of Nomination and Remuneration Advisory Committee regulations
- Basic Sustainability Policy
- Organizational culture reform
- Analysis on the exercise of voting rights
- Integrated report
- Corporate governance report

Skill Matrix

We identified six material issues (i.e., Materiality) as themes that should be prioritized in order to embody our Purpose and, after verifying the importance of the Materiality identified, we selected the skills needed to implement management initiatives aimed at resolving these issues. During the selection of candidates for directors at the Annual General Meeting of Shareholders in June 2024, we increased and strengthened human resources with skills and knowledge in R&D and innovation as well as human capital that includes women's careers, considering both gender and skill diversity.

For information on the skill matrix, please refer to p. 60-61.

Reasons for Appointment of Outside Directors

JSW believes that the function and role of outside directors in corporate governance is to strictly supervise the execution of duties by directors and to make management judgments and decision-making from a neutral and objective standpoint with no risk of conflict of interest with the Company, and from an independent standpoint with no risk of conflict of interest with general shareholders. To that end, the Company has appointed five outside directors.

The roles expected of outside directors are stipulated in the Corporate Governance Policy.

For information on the Corporate Governance Policy of The Japan Steel Works, Ltd., please refer to our website.
https://www.jsw.co.jp/pdf/sustainability/governance/governance/GovernancePolicy_en.pdf

Evaluation of Board of Directors' Effectiveness

The Board of Directors continues to enhance its functions by conducting an annual questionnaire-based analysis and evaluation. The following is a summary of the analysis and evaluation for fiscal 2023.

Analysis and evaluation methodology

(1) During February 2024, an anonymous questionnaire was administered to all directors and Audit & Supervisory Board members. The planning of the subjects covered and the collection and tabulation of the survey results were outsourced to a third-party organization.
(2) The Board of Directors Secretariat compared the results of the questionnaire with previous evaluations, and recompiled and analyzed the results, including identifying subjects given low evaluations and extracting important comments from the open-ended responses. In addition, the secretariat compiled and analyzed data on discussion times in fiscal 2023 and verified differences between annual activity plans and actual results.
(3) At the March and April 2024 Board of Directors meetings, the board discussed its effectiveness from the perspective of improving the medium-to-long-term corporate value of the entire Group, based on the compiled results of the questionnaire, the re-tabulation and analysis of those results by the Board of Directors Secretariat, and advice from a third-party organization.

Questionnaire content

I. Appropriateness of purpose, structure, and management of the Board of Directors
II. Adequacy of monitoring and deliberation by the Board of Directors
III. Director performance
IV. State of information sharing and disclosure, including shareholder response

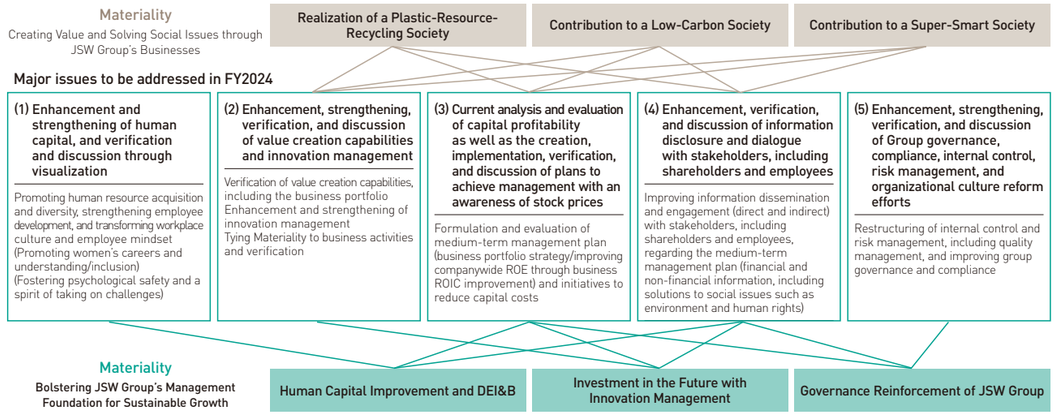
Results of the FY2022 Analysis and Evaluation and an Overview of FY2023 Initiatives

In response to the four issues identified in the fiscal 2022 effectiveness evaluation, the Board of Directors proceeded forward with the following actions in fiscal 2023. As a result, the effectiveness evaluation for fiscal 2023 confirmed that improvements have been steadily made for each of the issues and that effectiveness has been generally ensured.

Issues identified in FY2022	FY2023 initiatives
(1) Acquiring and training of human resources, investigating measures to improve human capital	(1) Verification of employee engagement survey results and formulation of human resources strategy (2) Increasing the ratio of women in new graduate and mid-career hires (3) Creating dialogue opportunities between management and female employees
(2) Investigating and strengthening value creation capabilities and innovation management systems	(1) Verification of business portfolio using ROIC spread (2) Progress of DX promotion activities and verification of investment risks (3) Review of research and development policies and revision of related regulations
(3) Investigating and improving engagement with different stakeholder groups	(1) Formulation of JGP2028, the new medium-term management plan (2) Setting KPIs for Materiality during the medium-term management plan period (3) Continued implementation of SR/IR meetings and feedback to management
(4) Investigating and strengthening corporate governance, internal controls, and risk management	(1) Promotion of Organizational Culture Reform Project to restore trust and create further development (2) Establishment of a dedicated enterprise risk management (ERM) department (effective April 1, 2024) (3) Introduction of a leniency system within the whistleblowing system

FY2023 Analysis & Evaluation Results and Future Initiatives

Based on the fiscal 2023 effectiveness evaluation and the Group's Materiality, we identified the following as major issues to be addressed in fiscal 2024.



Evaluation of the Audit & Supervisory Board's Effectiveness

The Audit & Supervisory Board evaluates its own effectiveness so as to clarify areas of its activities that require consideration or improvement. These are then reflected in audit plans for the following fiscal year. By doing so, the board aims to improve the quality of its audits and its effectiveness overall.

As part of the evaluation, the four Audit & Supervisory Board members, the president, one outside director, and the general manager of the Internal Auditors Office, answer a questionnaire about the effectiveness of the board's responsibilities, composition, and operations; Group audits; interaction with the Board of Directors; its three-way audits; and internal controls.

Fiscal 2023 evaluation results verified that audit activities were generally implemented appropriately and effectively in response to the areas for improvement raised in the previous year's reflection, which were (1) ensuring diversity and expertise by appointing a female certified public accountant as an auditor, (2) exchanging opinions with auditors of major subsidiaries for Group governance, (3) conducting regular exchanges of opinion with outside directors (four times a year), and (4) providing recommendations for establishing an ERM system and reporting to the Board of Directors. Meanwhile, areas for improvement for the next fiscal year include (1) providing recommendations for further enhancement of internal control audits and reporting to the Board of Directors, (2) regular consultations with subsidiary auditors for Group governance, (3) exchanges of opinions with outside directors on important topics, (4) bolstering cooperation in the three-way audit, and (5) strengthening audits related to ERM efforts, information security, and compliance, all of which we will strive to improve.

As audit policies for fiscal 2024, we are actively (1) auditing internal controls of the corporate group from the perspective of group management and group governance, (2) verifying proper companywide risk control based on the three lines model, (3) focusing on the construction and operation status of internal controls and the state of efforts in each department during the term as well as following up on these and the execution status of the PDCA cycle in business execution at the end of the term, (4) developing a cooperative system with JSW Group auditors, and (5) bolstering cooperation with the Internal Auditors Office and accounting auditors.

Officers' Remuneration

The Company's policy for determining the directors' remuneration (the "policy for determining") was partially revised at the Board of Directors meeting held on April 5, 2024, with the aim of enhancing incentive effectiveness for achieving the medium-term management plan JGP2028 and further promoting shared interests with shareholders.

(Outline of the revision of the policy for determining and review of the officers' remuneration system)
The Company has eliminated bonuses across the board and increased the proportion of stock-based remuneration as a long-term incentive for representative directors. The Company has also changed evaluation indicators for performance- and results-linked remuneration (variable remuneration) to include consolidated operating income, consolidated ROE (return on equity), and results of medium-to-long-term initiatives. These changes are designed to fortify incentives (short and medium-to-long term) to achieve the JGP2028 medium-term management plan.

Analysis and Evaluation Method

1 Basic Policy for Directors' Remuneration

The maximum amount of directors' remuneration is decided by resolution of the General Meeting of Shareholders. The basic policy is to set remuneration that provides sound incentives for sustainably enhancing corporate value, at a level corresponding to respective roles and responsibilities, and that ensures fairness and transparency in remuneration-related decision processes.

The Company regularly verifies the appropriateness of the level and composition of directors' remuneration based on benchmarks from companies of similar size and relevant industry/type and salary levels of the Company's employees.

2 Procedures for Determining Directors' Remuneration

The directors' remuneration is determined by the Board of Directors after receiving a report from the Remuneration Advisory Committee. However, the allocation of annual remuneration by position and individual allocation may be delegated to the president by resolution of the Board of Directors. In this case, the president makes decisions in accordance with the content of the report.

3 Composition of Directors' Remuneration

The composition and percentage breakdown of directors' remuneration are as follows:

(1) Representative director & president and representative director & executive vice president

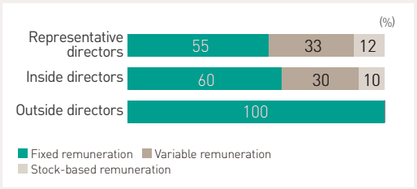
The composition shall be annual remuneration (1) base portion, (2) companywide performance-linked portion, and (3) efforts to improve medium-to-long-term corporate value and stock-based remuneration. The approximate ratio of fixed remuneration (1) base portion: variable remuneration (2) and (3): stock-based remuneration is 55:33:12.

(2) Inside directors

The composition shall be annual remuneration ((1) base portion, (2) companywide performance-linked portion, (3) results-linked portion, and (4) efforts toward medium-term action plan items and quality/safety/compliance initiatives as medium-to-long-term measures) and stock-based remuneration. The approximate ratio of fixed remuneration ((1) base portion): variable remuneration ((2), (3) and (4)): stock-based remuneration is 60:30:10.

(3) Outside directors

Outside directors, who are responsible for supervisory functions, shall be paid only fixed remuneration (base portion of annual remuneration) in consideration of their independence from management, objectivity, and in light of their supervisory duties, which include mutual checks on directors.



4 Matters Relating to the Method of Calculation of Directors' Remuneration, etc.

The summary of each type of remuneration is as follows. Variable remuneration is calculated by comparing actual performance against quantitative evaluations such as companywide performance and results-linked portions, as well as qualitative assessments of efforts contributing to medium-to-long-term growth and other indicators, and multiplying the percentage of achievement by the base amount of remuneration for each position.

(1) Base portion

The base portion is fixed remuneration determined on the basis of the particular position and the number of years the position has been held by the individual.

(2) Companywide performance-linked portion

The companywide performance-linked portion is variable remuneration that is determined on the basis of the consolidated performance of the previous fiscal year and consists of a consolidated operating income portion and a consolidated ROE (return on equity) portion.

This indicator was selected because of its importance in terms of indicating how performance directly links to the companywide performance targets in the medium-term management plan.

(3) Results-linked portion

The portion linked to results is determined as variable remuneration based on the performance evaluation for the previous fiscal year of the division for which the director is in charge.

(4) Evaluation of representative directors' efforts to improve medium-to-long-term corporate value

The Company consults the Remuneration Advisory Committee on the results of efforts to achieve Materiality (Creating Value and Solving Social Issues through JSW Group's Businesses and Bolstering JSW Group's Management Foundation for Sustainable Growth), which it then reviews and incorporates into remuneration.

(5) Evaluation of inside directors' efforts toward medium-to-long-term measures

The Company consults the Remuneration Advisory Committee on the results of efforts toward medium-term action plan items and quality/safety/compliance initiatives, which it then reviews and incorporates into remuneration.

(6) Stock-based remuneration

Stock-based remuneration is granted in the form of restricted transferable shares as remuneration for the purpose of providing medium-to-long-term incentives to increase corporate value and to further the sharing of value with shareholders. The number of shares to be allocated shall be the number of shares obtained by dividing the standard amount by position according to the director's position by the closing price of the Company's shares on the Tokyo Stock Exchange on the day before the date of resolution by the Board of Directors regarding the execution of the restricted stock remuneration allocation agreement. Moreover, in consideration of the period of time it takes management measures to contribute to business performance, the restricted transfer period is set by the Board of Directors in advance for a period between three and five years (currently five years in accordance with the five-year medium-term management plan JGP2028).

5 Remuneration for Audit & Supervisory Board Members, etc.

The remuneration of each Audit & Supervisory Board member shall consist only of fixed remuneration (base portion of annual remuneration) from the viewpoint of emphasizing independence and objectivity with respect to management.

Group Governance

JSW Group consists of The Japan Steel Works, Ltd. and 44 subsidiaries (32 consolidated, 12 non-consolidated). The Group operates the Industrial Machinery Products Business, Material and Engineering Business, and other businesses in Japan and around the world.

For Group companies, the JSW business division with primary responsibility leads the formulation of management policies and short- and medium-term management plans and monitors their progress. In order to enhance the effectiveness of these efforts, we assign full-time or part-time directors or Audit & Supervisory Board members with the responsibility of supervising and auditing the execution of duties at Group companies, in principle, thereby ensuring that the execution of duties by directors, etc., and employees at Group companies complies with laws and regulations and the Articles of Incorporation. In addition, regarding risks relating to specific functions, such as quality control, health and safety, environmental management, and export control administration, each Group company participates in the various committees formed by the relevant divisions of the Company, or follows the regulations developed by the Company, and appropriately manages these risks.

Each company in the Group also appoints individuals to be in charge of general affairs, accounting, and IT matters related to internal control. The appointed individuals receive guidance and training from the Internal Control Committee Office and conduct self-assessment of implementation and operation of internal control in step with risk assessment. The status and results of the self-assessment of internal control operations are systematically reported to the office and each company. The Internal Audit Division also monitors the governance and risk management status of each company by directly or indirectly auditing the status of each company and the methods and results of self-assessments.

The whistleblowing system will operate not only for domestic Group companies but is being rolled out sequentially for other international Group companies as well, starting with China.

Cross-Shareholdings

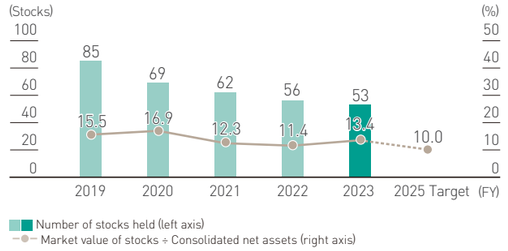
1 Policy on Cross-Shareholdings	The Company holds shares that it judges to be necessary for policy purposes through regular confirmation and review and that contribute to the Company's businesses over the medium to long term in ways such as maintaining and strengthening sound, ongoing relationships with business partners, forming business alliances, and supporting the sound development of investee companies.
2 Regular Confirmation and Review of Shareholdings	Each year, the Company confirms the purpose of individual cross-shareholdings and current transaction status, etc., and the Board of Directors verifies whether shareholdings are appropriate by comprehensively considering the significance and purpose of the Company's acquisition and holding of the shares, as well as the safety, profitability, economic viability, risks and other factors associated with the shareholdings.
3 Policy on Exercise of Voting Rights	The Company makes decisions on the exercise of voting rights by confirming the details of each proposal from the standpoint of the business conditions of the investee company, its business relationship with the Company, improvement in its medium-to-long-term corporate value, and its social responsibilities, while following predetermined voting rights exercise standards.

Based on the Corporate Governance Policy of The Japan Steel Works, Ltd., we regularly confirm and review the significance of our cross-shareholdings, and we are gradually selling shares whose significance has diminished.

In addition, the medium-term management plan JGP2028 sets forth a cash allocation plan to ensure an appropriate balance between investment in growth and shareholder returns in order to sustainably increase corporate value, and as part of this, the Company plans to reduce its cross-shareholdings to less than 10% of net assets by the end of fiscal 2025.

Status of Holdings

Number of listed and unlisted stocks held; Market value of cross-shareholdings on balance sheet ÷ Consolidated net assets



Management Team (As of June 30, 2024)

Directors / Audit & Supervisory Board Members



Toshio Matsuo
Representative Director & President

Career
- Apr. 1984 Joined the Company
- Apr. 2013 Deputy General Plant Manager, Hiroshima Plant
- Apr. 2015 General Plant Manager, Hiroshima Plant
- Apr. 2016 Executive Officer
- Apr. 2017 Managing Executive Officer; Director of Injection Molding Machinery Business Division; In charge of Hiroshima Plant
- Jun. 2017 Director & Managing Executive Officer
- Apr. 2020 Representative Director & Executive Vice President; In charge of Export Control Administration; In charge of Plastics Machinery Business Division, Injection Molding Machinery Business Division, Industrial Machinery Business Division; In charge of Meiki Plant
- Apr. 2021 In charge of Ordnance Business Headquarters; In charge of Business Development Office; In charge of Hiroshima Plant and Yokohama Plant
- Apr. 2022 Representative Director & President (current position)

Number of shares of the Company held: 24,224 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance: ○
- Sales and Marketing: ○
- Quality: ○
- Manufacturing, Technology, and R&D: ○
- Environment: ○



Hiroki Kikuchi
Representative Director & Executive Vice President

Career
- Apr. 1985 Joined Mitsui Bank (currently Sumitomo Mitsui Banking Corporation)
- Apr. 2012 General Manager, Nihonbashi-higashi Corporate Business Office, Sumitomo Mitsui Banking Corporation
- Apr. 2015 Joined the Company
- Jul. 2015 General Manager, General Affairs Department
- Apr. 2016 General Manager, Secretary Office
- Apr. 2018 Executive Officer
- Jul. 2018 General Manager, Corporate Planning Office (current position)
- Apr. 2020 Chief Financial Officer (current position), In charge of Finance & Accounting Department (current position); General Manager, Business Development Office
- Jun. 2020 Director & Executive Officer
- Apr. 2021 Director & Managing Executive Officer
- Apr. 2022 In charge of Plastics Machinery Business Division, Injection Molding Machinery Business Division, Industrial Machinery Business Division and Ordnance Business Headquarters; In charge of Business Development Office
- Apr. 2023 General Manager, Business Development Office (current position)
- Apr. 2024 Representative Director & Executive Vice President (current position); In charge of Export Control Administration (current position)

Number of shares of the Company held: 12,792 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance: ○
- Finance and Accounting: ○
- Legal Affairs, Internal Controls, and Risk Management: ○
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:



Shigeki Inoue
Director & Senior Managing Executive Officer

Career
- Apr. 1986 Joined the Company
- Apr. 2015 Deputy General Plant Manager, Hiroshima Plant
- Apr. 2017 General Plant Manager, Hiroshima Plant
- Apr. 2018 Executive Officer
- Apr. 2021 Managing Executive Officer; Director of Industrial Machinery Business Division, General Manager, Business Development Office
- Apr. 2022 Chief Technology Officer (current position); In charge of Quality Management (current position); In charge of Intellectual Property Department (current position); In charge of Yokohama Plant
- Jun. 2022 Director & Managing Executive Officer
- Sep. 2022 General Manager, Quality Management Office (current position)
- Apr. 2023 In charge of New Business Promotion Headquarters (current position); General Manager, Innovation Management Headquarters (current position)
- Apr. 2024 Director & Senior Managing Executive Officer (current position)

Number of shares of the Company held: 12,432 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance:
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation:
- Sales and Marketing: ○
- Quality: ○
- Manufacturing, Technology, and R&D: ○
- Environment: ○



Motoyuki Shibata
Director & Managing Executive Officer

Career
- Apr. 1986 Joined the Company
- Jun. 2015 Deputy General Plant Manager, Hiroshima Plant
- Apr. 2018 General Manager, Finance & Accounting Department
- Apr. 2020 Director, Japan Steel Works M&E, Inc. General Manager, Business Promotion Office
- Apr. 2022 Executive Officer, the Company; In charge of Export Control Administration (current position); General Manager, Personnel Department (current position)
- Apr. 2023 In charge of Health & Safety Management (current position)
- Jun. 2023 Director & Executive Officer
- Apr. 2024 Director & Managing Executive Officer (current position); CISO (current position); In charge of CSR & Risk Management (current position)

Number of shares of the Company held: 5,255 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (12/12)

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance:
- Finance and Accounting: ○
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D:
- Environment: ○



Hideo Nakanishi
Director & Executive Officer

Career
- Apr. 1990 Joined the Company
- Jun. 2015 General Manager, General Affairs Department, Muroran Plant
- Apr. 2020 General Manager, Personnel Department
- Apr. 2022 General Manager, General Affairs Department (current position)
- Apr. 2024 Executive Officer; In charge of Promoting ESG (current position); In charge of Environmental Management (current position)
- Jun. 2024 Director & Executive Officer (current position)

Number of shares of the Company held: 2,506 shares

Record of attendance at Board of Directors meetings (FY2023): —

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance: ○
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management: ○
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D:
- Environment: ○



Yoshiyuki Nakanishi
Director
Independent Officer

Career
- Apr. 1978 Joined Dainippon Ink and Chemicals, Incorporated (currently DIC Corporation)
- Apr. 2010 Executive Officer, DIC Corporation
- Jun. 2011 Director and Executive Officer, DIC Corporation
- Apr. 2012 Representative Director, President and CEO, DIC Corporation (retired in December 2017)
- Jan. 2018 Chairman of the Board of Directors, DIC Corporation (retired in January 2021)
- Jun. 2020 Director, the Company (current position)
- Jun. 2020 Outside Director, IHI Corporation (current position)
- Jan. 2021 Director, DIC Corporation (retired in March 2021)
- Mar. 2021 Executive Advisor, DIC Corporation (retired in March 2023)
- Jun. 2021 Outside Director, Shimadzu Corporation (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee): ○ (Chair)
- Remuneration Advisory Committee (Committee): ○ (Chair)
- Corporate Management and Governance: ○
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing: ○
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:



Hisao Mitsui
Director
Independent Officer

Career
- Apr. 1978 Joined Kao Soap Co., Ltd. (currently Kao Corporation)
- Jun. 2006 Executive Officer, Kao Corporation
- Jun. 2010 Director and Executive Officer, Kao Corporation
- Jun. 2012 Director and Managing Executive Officer, Kao Corporation (retired in March 2014)
- Apr. 2015 Auditor, National Institute of Technology and Evaluation (retired in June 2019)
- Jun. 2020 Director, the Company (current position)
- Jun. 2020 Outside Auditor, LiveDo Corporation (current position)

Number of shares of the Company held: 462 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance: ○
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality: ○
- Manufacturing, Technology, and R&D: ○
- Environment: ○



Junko Kawamura
Director
Independent Officer

Career
- Apr. 1979 Joined the Ministry of Education (currently Ministry of Education, Culture, Sports, Science and Technology, Japan)
- Aug. 1988 Councilor, Legislative Bureau of the House of Representatives
- Apr. 2006 Board Member, National Institute of Technology
- Jul. 2008 Director of Private Education Institution Department, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology
- Sep. 2011 General Manager, Department of Facilities Planning, Minister's Secretariat, Ministry of Education, Culture, Sports, Science and Technology
- Jan. 2012 Deputy Commissioner, Agency for Cultural Affairs
- Jul. 2014 Director-General, Lifelong Learning Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology
- Jan. 2016 Director General, National Institute for Educational Policy Research
- Jun. 2016 Counsellor, Cabinet Secretariat (retired in September 2017)
- Apr. 2018 President, Japan Arts Council (retired in March 2023)
- Jun. 2023 Director, the Company (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (12/12)

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance:
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management: ○
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:



Yasuyuki Kuriki
Director
Independent Officer

Career
- Apr. 1979 Joined Tokyo Electron Ltd.
- Apr. 1999 Executive Officer, Tokyo Electron Ltd. (retired in March 2005)
- Apr. 2005 President & Representative Director, Tokyo Electron Korea Ltd. (retired in May 2010)
- Jun. 2010 President & Representative Director, TOKYO ELECTRON DEVICE LIMITED (retired in December 2014)
- Jan. 2015 Corporate Director, TOKYO ELECTRON DEVICE LIMITED (retired in June 2015)
- Jul. 2015 Representative Chairman, Tokyo Electron Korea Ltd. (retired in June 2018)
- Jul. 2018 Chairman, Tokyo Electron Korea Ltd. (retired in June 2019)
- Jul. 2019 Senior Advisor, Tokyo Electron Korea Ltd. (retired in March 2020)
- Jun. 2023 Director, the Company (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (12/12)

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance: ○
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation: ○
- Sales and Marketing: ○
- Quality:
- Manufacturing, Technology, and R&D: ○
- Environment:



Nobuko Mizumoto
Director
Independent Officer

Career
- Apr. 1982 Joined Ishikawajima-Harima Heavy Industries Co., Ltd. currently IHI Corporation
- Oct. 2008 General Manager, Recruiting Group, Personnel Division, IHI Corporation
- Apr. 2012 General Manager of Corporate Social Responsibility Division, IHI Corporation
- Apr. 2014 Executive Officer, General Manager of Group Business Process Platform Control Division, IHI Corporation
- Apr. 2016 Executive Officer, General Manager of Procurement Strategy Planning, IHI Corporation
- Apr. 2017 Managing Executive Officer, General Manager of Procurement Strategy Planning, IHI Corporation
- Apr. 2018 Managing Executive Officer, General Manager of Intelligent Information Management Headquarters, IHI Corporation
- Jun. 2018 Director, Managing Executive Officer, General Manager of Intelligent Information Management Headquarters, IHI Corporation
- Apr. 2020 Director, IHI Corporation (retired in June 2020)
- Jul. 2020 Advisor, Executive Fellow, IHI Corporation
- Apr. 2021 Advisor, IHI Corporation (retired in June 2023)
- Jun. 2021 External Director who is an Audit and Supervisory Committee Member, Tokuyama Corporation (current position); Outside Director, Taikisha Ltd. (retired in June 2023)
- Jun. 2023 Outside Director, Okamura Corporation (current position)
- Jun. 2024 Director, the Company (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): —

Skill Matrix
- Nomination Advisory Committee (Committee): ○
- Remuneration Advisory Committee (Committee): ○
- Corporate Management and Governance: ○
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation: ○
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D: ○
- Environment:



Shingo Mito
Audit & Supervisory Board Member (Full-Time)

Career
- Apr. 1984 Joined the Company
- Jul. 2006 General Manager, Personnel Department
- Jul. 2011 Deputy General Plant Manager, Hiroshima Plant
- Apr. 2014 Deputy Director of Machinery Business Division
- Apr. 2016 Deputy Director of Research and Development Headquarters
- Apr. 2017 Executive Officer
- Oct. 2017 Deputy Director of New Business Promotion Headquarters
- Apr. 2021 Director of New Business Promotion Headquarters
- Jun. 2021 Director & Executive Officer
- Apr. 2022 Director & Managing Executive Officer
- Apr. 2023 Director, the Company
- Jun. 2023 Audit & Supervisory Board Member (Full-Time) (current position)

Number of shares of the Company held: 15,237 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance:
- Finance and Accounting:
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing: ○
- Quality:
- Manufacturing, Technology, and R&D: ○
- Environment:



Hiroyuki Shimizu
Audit & Supervisory Board Member (Full-Time)

Career
- Apr. 1984 Joined the Company
- Oct. 1998 Houston Office Manager
- Jun. 2008 Nagoya Branch Manager
- Sep. 2015 Deputy General Manager, Corporate Planning Office
- Apr. 2017 Kansai Branch Manager
- Apr. 2019 Deputy Director of Machinery Business Division (Sales Management Supervisor)
- Apr. 2020 Representative Director, President and CEO of GM Engineering Co., Ltd.
- Jun. 2022 Audit & Supervisory Board Member (Full-Time) (current position)

Number of shares of the Company held: 2,966 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (15/15)

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance:
- Finance and Accounting: ○
- Legal Affairs, Internal Controls, and Risk Management:
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation:
- Sales and Marketing: ○
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:



Saori Yamaguchi
Audit & Supervisory Board Member
Independent Officer

Career
- Apr. 1982 Joined MITSUBISHI GAS CHEMICAL COMPANY, INC. (retired in July 1985)
- Oct. 1986 Joined Tohmatsu Awoki & Sanwa (currently Deloitte Touche Tohmatsu LLC)
- Aug. 1990 Registered as a Certified Public Accountant
- Jun. 2005 Appointed Partner at Deloitte Touche Tohmatsu LLC (retired in December 2019)
- Jan. 2009 Member of the Defense Equipment Procurement Council, Ministry of Defense (retired in December 2018)
- Dec. 2019 Established Yamaguchi Saori Certified Public Accountant Firm Representative (current position)
- Jun. 2023 Audit & Supervisory Board Member, the Company (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): 100% (12/12)

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance:
- Finance and Accounting: ○
- Legal Affairs, Internal Controls, and Risk Management: ○
- Personnel, Labor Administration, and Human Capital:
- Information Systems and Digital Transformation:
- Sales and Marketing:
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:



Shinya Unno
Audit & Supervisory Board Member
Independent Officer

Career
- Apr. 1980 Joined The Long-Term Credit Bank of Japan, Ltd.
- Oct. 1999 Joined Chugai Pharmaceutical Co., Ltd.
- Mar. 2005 General Manager of Corporate Planning Department, Chugai Pharmaceutical Co., Ltd.
- Mar. 2006 Executive Officer, Chugai Pharmaceutical Co., Ltd.
- Mar. 2010 Managing Executive Officer, Chugai Pharmaceutical Co., Ltd.
- Apr. 2016 Senior Executive Officer, Chugai Pharmaceutical Co., Ltd.
- Apr. 2020 Vice President & Executive Officer, Chugai Pharmaceutical Co., Ltd.
- Apr. 2022 Advisor, Chugai Pharmaceutical Co., Ltd. (retired in March 2023)
- Jun. 2023 Chairman and Park President, Sankeien Hoshokai Public Interest Incorporated Foundation (current position)
- Jun. 2024 Audit & Supervisory Board Member, the Company (current position)

Number of shares of the Company held: 0 shares

Record of attendance at Board of Directors meetings (FY2023): —

Skill Matrix
- Nomination Advisory Committee (Committee):
- Remuneration Advisory Committee (Committee):
- Corporate Management and Governance: ○
- Finance and Accounting: ○
- Legal Affairs, Internal Controls, and Risk Management: ○
- Personnel, Labor Administration, and Human Capital: ○
- Information Systems and Digital Transformation:
- Sales and Marketing: ○
- Quality:
- Manufacturing, Technology, and R&D:
- Environment:

Executive Officers

Seiji Umamoto
Senior Managing Executive Officer

Shoji Nunoshita
Managing Executive Officer

Takeshi Shinmoto
Managing Executive Officer

Masayuki Aoyama
Executive Officer

Miki Sawai
Executive Officer

Kengo Takeya
Executive Officer

Risk Management

Basic Approach

The Company and other companies in the Group work to avoid and mitigate different types of risk, and manages these to keep their impact to a permissible amount. In this way, the Group recognizes that working on continuous development and sufficiently fulfilling its social responsibilities are important management issues.

In selecting Materiality, the Group considers two perspectives: creating value and solving social issues through JSW Group's businesses, and bolstering JSW Group's management foundation for sustainable growth. Based on these, we will encourage awareness that there are both risks for the sake of sustainable growth that should be taken actively and risks that should never be taken, even if for the sake of making profits. We will also carry out appropriate and efficient risk management.

Framework

The Group has established JSW Group Risk Management Regulations, which clearly stipulate that the Company and Group companies manage risks in accordance with their respective management structures and division of duties, and that all employees, from officers to general employees, are responsible for implementing appropriate and effective risk management in accordance with their respective roles. In addition, the Company has appointed a director in charge of risk management (CRO), who oversees risk management of the Company and Group companies. The Operations Management Division acts as the risk management secretariat, and the Company has constructed a risk management framework based on the three lines model. The Company is pushing forward with risk management for the entire Company by strengthening the risk management divisions, which forms the second of those lines. As of April 2024, the Risk Management Group has also been established in the Corporate Planning Office as a special organization to promote and oversee companywide risk management efforts. Also, to deal with risks by divisional function such as quality management, health and safety, environmental management, export control, and information security, each division has formed committees or put in place regulations from a companywide, cross-sectional perspective to reduce risk through training, guidance, and supervision.

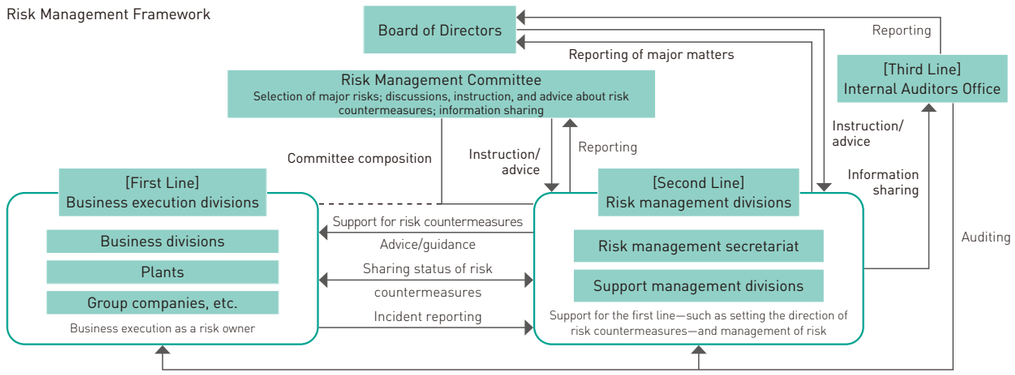
With regard to companywide risk management, the Risk Management Committee (chaired by the CRO) endeavors to share information on role-specific risks and on evaluations, for important issues, whether potential or apparent problems in different management organizations. Where necessary, the committee responds to these and discusses specific efforts and as needed utilizes the lines of reporting shown in the risk management framework diagram to guide or instruct relevant divisions. In addition, escalation regulations have been established along with a system for the immediate reporting of incidents and materialization of significant risks that includes Group subsidiaries.

In risk management, the Internal Audit Division monitors risk management as the third line, and reports to the Board of Directors and the Executive Board. Information on major risks and related efforts are suitably announced via the annual financial reports and the website.

In the event of a major accident, disaster or any other risk that could cause serious damage to JSW Group, the Crisis Management Headquarters, led by the director in charge of risk management, is promptly established to offer a response.

In fiscal 2021, it was revealed that inappropriate conduct in quality inspections by Japan Steel Works M&E, Inc. had taken place (see p. 42–43 of this report) and this was the case of an operational misconduct risk that manifested itself in the quality assurance process. After this discovery, in September 2022, the Group set up the Quality Management Office to control quality assurance functions and by clarifying the functions of the second line in risk management (under the three lines model), it has strengthened the work processes and the management framework to secure work suitability and efficiency. In these ways, the Group is striving to prevent recurrence.

Risk Management Framework



Compliance

Basic Approach

JSW Group has established its Standards of Business Conduct and engages in business activities in compliance with ethics, laws and regulations, and international rules in both letter and spirit. In particular, the Group will continue to conduct business activities based on the understanding that compliance is not only legal compliance, but also includes adherence to internal rules and contracts, and is an important element for building a relationship of trust with society as well as a fundamental driver for increasing employee engagement.

In addition, the Board of Directors has decided on the Basic Policy on Internal Control and is developing internal control systems, and with the recognition of the importance of the proper operation of these systems, we regularly report on matters relating to internal control and its operational status to the Board of Directors.

Regarding compliance with codes such as laws and regulations, and internal rules, on a regular or as-needed basis, the Internal Auditors Office audits the overall operations of JSW, and reports the results to the Board of Directors and Audit & Supervisory Board, as well as the representative director & president and, the Executive Board or the Management Council, or other relevant parties. In fiscal 2023, there were no violations of relevant laws and regulations* that resulted in fines or penalties.

* Relevant laws and regulations: Laws and regulations regarding the environment, Industrial Safety and Health Act, Financial Instruments and Exchange Act, laws and regulations regarding export control administration, laws and regulations regarding competition, laws and regulations regarding bribery, and Whistleblower Protection Act

Promotion of Compliance Training

The Company is implementing the following measures to further enhance compliance awareness.

- E-learning for JSW employees and Group company officers and employees is conducted annually to enhance compliance awareness and ensure thorough risk management. (In fiscal 2023, the participation rate was 94%)
- Regular harassment prevention training is conducted by our corporate divisions for subsidiaries (4 companies in fiscal 2023: Nikko Techno, JSW AFTY, Nikko YPK Shoji, and Fine Crystal).
- Information and articles are posted and continually updated on the in-house portal site, intranet noticeboard, posters, and newsletters to help raise awareness of compliance.
- E-learning for employees of the Company and Group companies is conducted annually to ensure compliance with laws, regulations and internal rules on export control administration. (In fiscal 2023, the participation rate was 99%)
- Internal mock examinations, preparatory courses for examinations and e-learning are conducted annually to increase the number of current employees who pass the export control administration practical skills certification examination.
- Information security training is conducted annually for all employees. (In fiscal 2023, the participation rate was 100%)
- As part of Quality Compliance Month each May, the Company streams a video message from the president and conducts e-learning and quality compliance training via educational videos. (In fiscal 2024, the participation rate was 100%)
- For National Product Quality Month each November, the Company streams a video message from the director in charge of quality management and conducts e-learning and quality compliance training via educational videos. (In fiscal 2023, the participation rate was 98%)
- E-learning is conducted on patents for employees involved in technology development at the Company and Group companies who have worked for a certain number of years.

Whistleblowing System

JSW Group has formulated and operates whistleblowing rules for the purpose of strengthening and promoting compliance management, and has established a system for the proper handling of reports and consultations from employees and others regarding potential organizational or individual violations of laws and regulations that may have been committed by employees or others associated with JSW or Group companies. This enables JSW Group to promptly detect potential violations of laws and regulations and take corrective action, thereby minimizing risk and damage to the Group that would otherwise arise from such a violation. This system brought about events such as the discovery of inappropriate conduct in quality inspections by Japan Steel Works M&E, Inc. (see p. 42–43 of this report) and the system is functioning effectively in line with these goals.

This system allows for anonymous reports and consultation and stipulates that those who use it will not receive disadvantageous treatment. As of February 2024, a system of reduction or exemption of internal disciplinary action for self-reporting of misconduct (known as a leniency system) was introduced to fortify the response to organizational misconduct and harmful practices.

The Whistleblowing Committee, chaired by the director in charge of risk management, investigates reported cases, and if a problem is identified, the committee will take appropriate action and implement corrective measures. During this process, the office of the Whistleblowing Committee and Audit & Supervisory Board members share information as appropriate, while the Audit & Supervisory Board members monitor the progress made in individual cases and the status of operation of this system. In principle, the Board of Directors confirms proper operations of the whistleblowing system twice a year, as based on reports from the committee.

The number of reports made was 42 in fiscal 2022 and 42 in fiscal 2023. Most reports were consultation cases on workplace environments, including harassment incidents, which were investigated by the committee and appropriately addressed.

Key Data

Main Financial Data

11-Year Summary

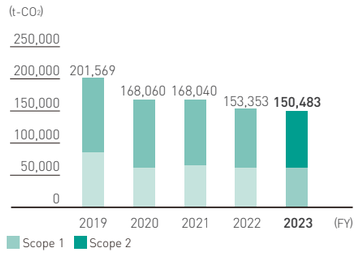
(Millions of yen)

(FY)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net sales (consolidated)	188,719	194,674	223,301	212,469	211,700	220,153	217,527	198,041	213,790	238,721	252,501
Operating income	8,864	7,517	14,423	12,340	20,578	24,290	18,709	10,226	15,460	13,846	18,014
Profit before income taxes	9,504	(5,523)	(22,049)	(5,841)	14,892	29,317	14,154	12,960	19,736	18,518	19,201
Profit attributable to owners of parent	5,527	(5,327)	(16,600)	(4,968)	10,712	19,966	9,310	6,893	13,948	11,974	14,278
Total assets	293,139	319,667	293,138	275,315	297,365	305,471	297,173	316,249	339,729	348,358	366,775
Net assets	139,268	138,234	111,340	107,587	118,600	129,827	132,492	141,985	151,083	160,636	178,613
Net D/E ratio	0.00	(0.06)	(0.10)	(0.07)	(0.23)	(0.17)	(0.18)	(0.22)	(0.32)	(0.28)	(0.30)
Operating cash flow	11,549	11,580	19,721	12,023	26,712	1,092	18,959	14,712	22,325	(986)	21,707
Investing cash flow	(5,719)	(2,675)	(12,135)	(13,580)	(5,077)	(1,334)	(13,172)	(3,243)	(2,976)	947	(6,841)
Financing cash flow	(15,007)	(2,964)	4,788	(1,203)	(2,457)	(3,758)	(6,164)	2,767	(2,860)	(20,112)	(4,899)
Cash and cash equivalents at end of the period	42,297	49,152	61,458	58,671	77,879	73,820	74,477	88,759	105,799	86,400	96,902
R&D expenses	3,836	4,104	4,292	4,237	4,369	4,506	4,708	4,586	4,909	5,020	5,661
Capital investment	5,242	7,992	14,010	9,502	6,436	9,945	10,585	12,592	4,903	7,346	12,183
Depreciation	12,950	11,008	10,669	7,858	4,097	4,424	5,733	6,040	6,183	6,572	7,743
Earnings per share (Yen)	14.92	(14.39)	(45.32)	(67.61)[1]	145.77	271.69	126.66	93.76	189.63	162.75	194.02
Dividend per share (Yen)	5.0	4.0	5.0	15.0[2]	37.5	55.0	45.0	35.0	57.0	58.0	59.0
Consolidated dividend payout ratio (%)	33.5	—	—	—	25.7	20.2	35.5	37.3	30.1	35.6	30.4
Operating income ratio (%)	4.7	3.9	6.5	5.8	9.7	11.0	8.6	5.2	7.2	5.8	7.1
ROE (%)	4.1	(3.9)	(13.5)	(4.6)	9.6	16.3	7.2	5.1	9.6	7.8	8.5
ROA (%)	1.9	(1.7)	(5.4)	(1.7)	3.7	6.6	3.1	2.2	4.3	3.5	4.0

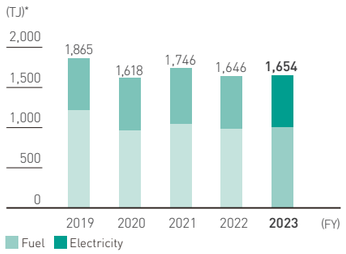
1. The Company conducted a 1-for-5 reverse common stock split effective October 1, 2016. Earnings per share for fiscal 2016 is calculated on the assumption that the reverse stock split occurred at start of the fiscal year.
2. The Company conducted a 1-for-5 reverse common stock split effective October 1, 2016. Dividend per share for fiscal 2016 in the table above is the total of the interim dividend of ¥2.5 and the year-end dividend of ¥12.5. Taking into consideration the effects of the reverse stock split, the interim dividend would have been ¥12.5, resulting in a total annual dividend per share of ¥25.

Key Non-Financial Data

CO_2 Emissions

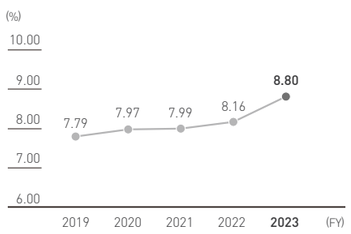


Energy Usage



* Terajoule

Female Employee Ratio (Non-Consolidated)



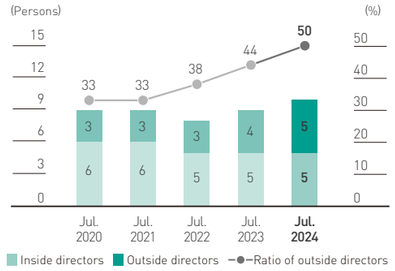
Note: Including employees seconded away from the Company; not including employees seconded to the Company.

Frequency Rate of Accidents per Million Workhours[1]



1. Frequency rate of accidents calculated from lost-worktime, serious and fatal accidents during the fiscal year.
2. Including partner companies on Company premises
3. Excluding certain Group companies
4. Manufacturing industry averages are from the survey of occupational accident trends (Ministry of Health, Labour and Welfare).

Composition of the Board of Directors



Corporate Data (As of March 31, 2024)

Company Information

Company Name	The Japan Steel Works, Ltd.
Founded	November 1, 1907
Incorporated	December 11, 1950
Head Office	Gate City Ohsaki-West Tower, 11-1, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan
Share Capital	¥19,818 million
Number of Employees	5,115 (consolidated) 1,901 (non-consolidated)

Main Group Companies (As of March 31, 2024)

Domestic

Consolidated subsidiaries

Nikko-YPK Shoji Co., Ltd.
10F, Gate City Ohsaki-West Tower, 11-1, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan
Phone: +81-3-5745-2131

Nikko Kosan Co., Ltd.
23F, Gate City Ohsaki-West Tower, 11-1, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan
Phone: +81-3-5745-2130

Nikko Tokki Co., Ltd.
1005 Gate City Ohsaki-West Tower, 11-1, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan
Phone: +81-3-5745-2093

Nikko Sekkei Co., Ltd.
6-1, Funakoshi-Minami 1-chome, Aki-ku, Hiroshima-shi, Hiroshima 736-0082, Japan
Phone: +81-82-822-7653

Nikko Techno Co., Ltd.
6-1, Funakoshi-Minami 1-chome, Aki-ku, Hiroshima-shi, Hiroshima 736-0082, Japan
Phone: +81-82-822-3232

Nippla Inc.
6-1, Funakoshi-Minami 1-chome, Aki-ku, Hiroshima-shi, Hiroshima 736-0082, Japan
Phone: +81-82-847-5510

MG Precision Co., Ltd.
6-1, Funakoshi-Minami 1-chome, Aki-ku, Hiroshima-shi, Hiroshima 736-0082, Japan
Phone: +81-82-822-1305

Sun-Tectro, Ltd.
6-1, Funakoshi-Minami 1-chome, Aki-ku, Hiroshima-shi, Hiroshima 736-0082, Japan
Phone: +81-82-824-3881

Just Co., Ltd.
2-1, Horikoshi 3-chome, Minami-ku, Hiroshima-shi, Hiroshima 734-0052, Japan
Phone: +81-82-820-0123

Nikko Kouki Co., Ltd.
2-1, Fukuura 2-chome, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0004, Japan
Phone: +81-45-701-7841

JSW Aktina System Co., Ltd.
2-1, Fukuura 2-chome, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0004, Japan
Phone: +81-45-787-8462

JSW AFTY Corporation
2-1, Fukuura 2-chome, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0004, Japan
Phone: +81-45-787-7203

Japan Steel Works M&E, Inc.
4, Chatsucho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-22-0143

Nikko Unyu Co., Ltd.
4-1, Chatsucho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-22-7923

Nikko Truck Co., Ltd.
4-1, Chatsucho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-22-7923

Nikkou Muroran Service Co., Ltd.
4, Chatsucho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-24-2553

MNED Co., Ltd.
4, Chatsu-cho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-22-0620

Muroran Environmental Plant Service, Ltd.
3F, JESCO, 14-7, Nakamachi, Muroran-shi, Hokkaido 050-0087, Japan
Phone: +81-143-22-0005

Fine Crystal Co., Ltd.
9-1, Chatsucho, Muroran-shi, Hokkaido 051-8505, Japan
Phone: +81-143-22-7401

Muroran Copper Alloy, Co., Ltd.
9-1, Chatsucho, Muroran-shi, Hokkaido 051-0006, Japan
Phone: +81-143-22-0690

Tahara Machinery Ltd.
2-1, Kagurominami, Inzai-shi, Chiba 270-1369, Japan
Phone: +81-476-21-1991

GM Engineering Co., Ltd.
Shin-Yokohama No.1 Building, 14-27, Shinyokohama 2-chome, Kohoku-ku, Yokohama-shi, Kanagawa 222-0033, Japan
Phone: +81-45-472-6819

Non-consolidated subsidiary

Fine Crystal Iwaki Co., Ltd.
2-6, Chubukogyodanchi, Iwaki-shi, Fukushima 972-8338, Japan
Phone: +81-246-68-6858

Yamato Rebuilt Co., Ltd.
4882-1, Kimagase, Noda-shi, Chiba 270-0222, Japan
Phone: +81-4-7198-4556

Overseas

Consolidated subsidiaries

SM Platek Co., Ltd.
687-2, Seonggok-dong, Ansan-si, Kyeonggi-do, Korea
Phone: +82-31-488-3401

Japan Steel Works America, Inc.
1251 Avenue of the Americas, Suite 2390, New York, NY 10020, U.S.A.
Phone: +1-212-490-2630

The Japan Steel Works (Singapore) Pte. Ltd.
17 Gul Lane, Singapore 629413
Phone: +65-6861-4511

JSW Electromechanical Trading (Shanghai) Co., Ltd.
304, Metro Plaza, 555 Loushanguan Road, Changning District, Shanghai, China
Phone: +86-021-5206-7031

Non-consolidated subsidiaries

Japan Steel Works Europe GmbH
Bonner Str. 243 40589 Düsseldorf, Germany
Phone: +49-0211-7886000

Japan Steel Works India Private Limited
611 Time Tower, MG Road, Sector 28, Gurgaon, Haryana 122002, India
Phone: +91-124-469-4444

Stock Information (As of March 31, 2024)

Stock Status

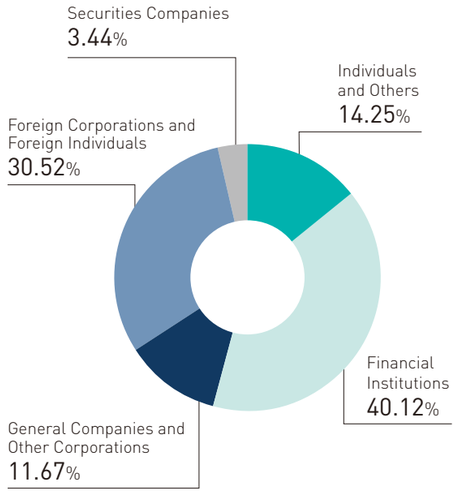
Authorized Shares	200,000,000 shares
Issued and Outstanding Shares	74,399,910 shares
Shareholders	22,734

Major Shareholders

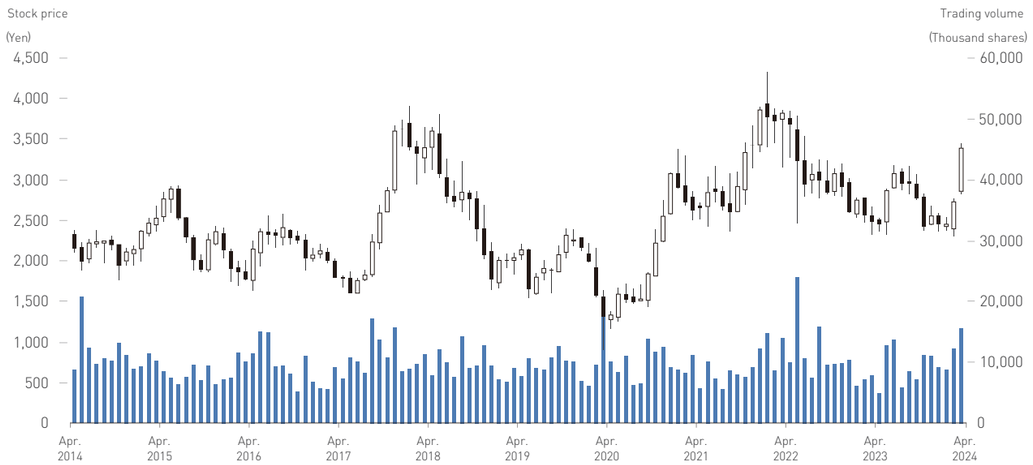
	Shares Held	Shareholding Ratio
The Master Trust Bank of Japan, Ltd. (Trust Account)	12,363,100	16.80
Custody Bank of Japan, Ltd. (Trust Account)	6,777,240	9.21
TAIJU LIFE INSURANCE COMPANY	2,827,600	3.84
Sumitomo Mitsui Banking Corp.	1,540,032	2.09
JUNIPER	1,304,700	1.77
HSBC–FUND SERVICES CLIENTS A/C 500 HKMPF 10PCT POOL	1,190,400	1.62
NORTHERN TRUST GLOBAL SERVICES SE, LUXEMBOURG RE LUDU RE:UCITS CLIENTS 15.315 PCT NON TREATY ACCOUNT	1,170,000	1.59
Goldman Sachs International	1,154,520	1.57
Sumitomo Mitsui Trust Bank, Ltd.	1,141,300	1.55
GOVERNMENT OF NORWAY	1,053,559	1.43

Note: Shareholding ratios are calculated after deducting 804,752 treasury shares from the total number of shares issued.

Classification of Shareholders by Percentage of Shares Held



Stock Price and Trading Volume



Note: The Company conducted a 1-for-5 reverse common stock split and changed the number of shares per stock unit from 1,000 shares to 100 shares, effective October 1, 2016. All stock prices and trading volumes in the graph above are shown taking into consideration the effects of the reverse stock split.