Hitachi Metals Group

CSR Detailed Activity Report 2022

Published: November 2022

日立金属株式会社

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About This Report

Purpose

This report is published for the purpose of comprehensive disclosure of the Hitachi Metals Group's basic approach to corporate social responsibility (CSR), and the content of its related activities. The main activities for fiscal 2021 are detailed in The Hitachi Metals Group Report 2022 (Integrated Report). The Hitachi Metals Group Report 2022 (Integrated Report) is available from the Company's website (https://www.proterial.com/e/ir/ir-f-anu.html).

Publication Date

November 2022

The Scope of This Report

Period covered: The report focuses on fiscal 2021 (April 1, 2021 to March 31, 2022).

Organizations covered: Hitachi Metals, Ltd. and consolidated subsidiaries

Scope of recorded data:

Finance Hitachi Metals, Ltd., consolidated subsidiaries, and equity method companies

Social Unless stated otherwise, Hitachi Metals, Ltd.

Environment The extent of the data on the environmental burden created by the Hitachi Metals Group is described later.

Major changes occurring within the reporting period: None applicable

Underlying Guidelines

GRI Standards (Global Reporting Initiative)

ISO 26000: 2010 (International Organization for Standardization)

Disclaimer

This report contains forward-looking statements and descriptions of plans, estimates, and projections, as well as facts about the Hitachi Metals Group in the past and at present. Such statements and descriptions reflect our current assumptions and expectations of future events based on information available at present. Accordingly, they are inherently susceptible to uncertainties and changes in circumstances, and future performance and events may differ.

I. Hitachi Metals Group Codes of Conduct

Introduction

Our corporate creed is to “contribute to society by being the best enterprise.” In striving to accomplish this mission, we embrace the values of our corporate philosophy, “*Wa sureba tsuyoshi*,” the founding spirit of Hitachi Metals. We have also stipulated the Hitachi Metals WAY, a systematic philosophy that shapes our corporate culture and action principles, in order to provide society with value that is unique to the Hitachi Metals Group.

The Hitachi Metals Group Codes of Conduct consist of rules and principles intended to assist officers and employees in making decisions and taking actions based on “obey the law and walk the path of virtue,” with our corporate creed and corporate philosophy as a foundation, in order to realize this Hitachi Metals WAY. All officers and employees of the Hitachi Metals Group companies shall understand and follow the Codes of Conduct, and act with sincerity and fairness in a highly ethical manner.

1. Toward a Sustainable Society

(1) We will contribute to resolving social issues by promoting innovative solutions, accelerating collaborative creation with partners and stakeholders, and further integrating social and environmental responsibility into our business activities.

(2) We will strive to develop technologies that contribute to social development and use them with due consideration of their impact on society.

(3) We envision a low-carbon society, a resource efficient society, and a harmonized society with nature. To this end, we will endeavor to reduce CO_2 emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout our value chain.

(4) As a corporate citizen, we will make efforts to build a rapport with communities and contribute to their development by working together to resolve social issues.

2. Sincere and Fair Business Activities

2.1 Fair Trading

(1) To ensure fair and open competition, we will observe the fundamental rules of trade, including domestic and overseas competition laws and regulations, and act in compliance with legislation and sound corporate ethics.

(2) We will have no relationship whatsoever with antisocial forces anywhere in the

world, and resolutely reject involvement in improper or antisocial transactions.

(3) We will not trade shares using undisclosed information regarding the Group, affiliated companies, business partners, or customers that could affect the judgment of investors (insider information).

(4) We strictly prohibit and will have no involvement in bribery and other corrupt business practices. We will neither give or receive gifts nor extend or accept invitations to business entertainment beyond socially accepted limits, as we recognize that such practices can foster corruption. When working with political entities, we will build and maintain sound and transparent relationships.

(5) We will help maintain international peace and security through compliance with all applicable laws and regulations concerning import and export, and will operate appropriately according to our internal rules and policies.

(6) We will comply with applicable laws, respect social cultures and practices, and act sincerely and fairly in countries and regions where we have operations. Furthermore, we will do so guided by international norms and standards even in areas where legislation is not adequately enforced.

2.2 Relationships with Suppliers

(1) With a global vision, and mindful of the long-term perspective, we will find qualified suppliers and build fair and equal partnerships with them, working together to build mutual understanding and trust.

(2) In selecting suppliers, we will thoroughly review the quality, reliability, delivery time, and price of the materials they provide as well as their business stability and technological capability. We will give due consideration to their adoption of social responsibility practices, including areas such as the abolition of unfair discrimination, the elimination of child labor and forced labor, and environmental conservation.

(3) We will not accept any personal benefits from suppliers in procurement transactions.

2.3 Relationships with Customers

(1) We will provide products and services that meet the needs and requirements of our customers, complying with relevant laws and standards and ensuring quality and safety by setting additional standards of our own where necessary.

(2) We will communicate with customers sincerely, address defects and customer complaints quickly and in good faith, and strive to determine causes in order to eliminate them and prevent recurrence.

3. Respect for Human Rights

(1) We will promote our understanding of internationally recognized human rights, and

will respect and not infringe on the human rights of all those involved in our business activities.

(2) We will implement human rights due diligence appropriate to the social circumstances of the countries and regions where we have operations and the nature of our businesses, products, and services there.

(3) We will assess and prevent potential violations of human rights. In the event of such a violation, we will promptly take internal and external actions to correct and remedy the situation.

(4) We will respect individual human rights in the recruitment and treatment of employees and during all other company activities. We will not engage in any acts that may impair individual dignity or discriminate on bases such as sex, sexual orientation, age, nationality, race, ethnicity, ideology, belief, religion, social status, family origin, disease, or disability.

(5) We will hire employees in compliance with the relevant laws and regulations in each country and region, and in accordance with international norms and standards. We will not use child labor that employs children below the minimum working age or forced labor that is against the will of employees.

(6) We will strive to resolve issues through sincere and constructive discussion between management and employees, in compliance with the laws, regulations, and labor practices of each country and region, and in accordance with international norms and standards.

4. Building a Work Environment That Brings Out Employee Strengths

(1) Prioritizing health and safety above all else, we will strive to ensure the safety of employees and the workplace. In addition, we will promote the physical and mental health of employees and their families.

(2) We will support flexible work styles and respect diverse values, creating workplaces that provide employees with a sense of accomplishment and personal growth, and we will promote the sustainable growth of the organization and individuals.

(3) We will invest in educational programs to help employees expand their capabilities and exercise their strengths. Supervisors will fairly and appropriately support, guide, and educate their employees to develop their abilities.

5. Information Management and Communication

(1) We will promote the ethical handling of information, so as to ensure respect for human rights and security, through the proper management of personal information based on our Personal Information Protection Policy.

(2) We will properly manage and protect confidential information related to our business

activities in compliance with domestic and international laws and regulations as well as our internal rules and policies.

(3) In order to maintain and expand our trusting relationship with the Hitachi Metals Group's diverse stakeholders, we will disclose information openly and transparently, and respond to stakeholders responsibly through dialogue and other means of communication.

6. Protection of Intellectual Property and Brand

(1) We will protect our own intellectual property, respect third-party intellectual property, and use both effectively for smooth business operations.

(2) We will manage our own and third-party confidential information by importance and manage and handle it appropriately based on this ranking.

(3) We will protect and enhance the value of the Hitachi Metals Brand, recognizing it as an important management asset.

7. Securing Corporate Assets

We will use all our corporate assets only for business activities and other appropriate purposes, and manage them properly to protect their value.

8. Crisis Management

We will make concerted efforts throughout the Hitachi Metals Group to secure employee safety and business continuity in case of disasters and threats such as earthquakes, tsunamis and floods, cyberattacks, and terrorism.

9. Responsibilities of Employees

Employees shall pledge to comply with the Codes of Conduct. If they become aware of any non-compliant activity, they shall immediately report to their manager or via the internal reporting system.

10. Responsibilities of Top Management

The top management shall take the initiative in complying with the Codes of Conduct and make their best efforts to conduct business based on corporate ethics and the law. In the event of a violation of the Codes of Conduct, the top management shall swiftly take corrective measures and actions to prevent the recurrence of similar incidents, while at the same time strictly disciplining themselves as well as those involved in the violation.

Formulated: September 17, 2010
Revised: October 1, 2018

II. About the Hitachi Metals Group

1. Corporate Profile

Corporate Name Hitachi Metals, Ltd.
Established April 10, 1956
Head office 5-6-36 Toyosu, Koto-ku, Tokyo, Japan
Representative Chairperson, President and CEO: Mitsuaki Nishiyama
Share capital ¥26,284 million (As of March 31, 2022)
Number of Employees Hitachi Metals, Ltd., Non-consolidated: 5,889
Hitachi Metals Group, Consolidated: 27,771 (As of March 31, 2022)
Products and businesses Manufacture and marketing of metallic materials and advanced components and materials
Group companies 61 consolidated subsidiaries (23 in Japan, 38 outside Japan)
Nine equity method companies (five in Japan, four outside Japan)
(As of March 31, 2022)

2. Consolidated Operating Performance

	FY2020	FY2021
Revenues	¥761,615million	¥942,701 million
Adjusted operating income*	(¥4,977million)	¥26,809 million
IFRS operating income	(¥49,213million)	¥26,695 million
Total assets	¥972,249 million	¥1,069,695 million
Interest-bearing debt	¥195,318 million	¥196,909 million
Total equity	492,118□million	¥531,118 million
Capital expenditure	¥28,806 million	¥34,349 million
R&D expenses	¥14,475million	¥12,404 million

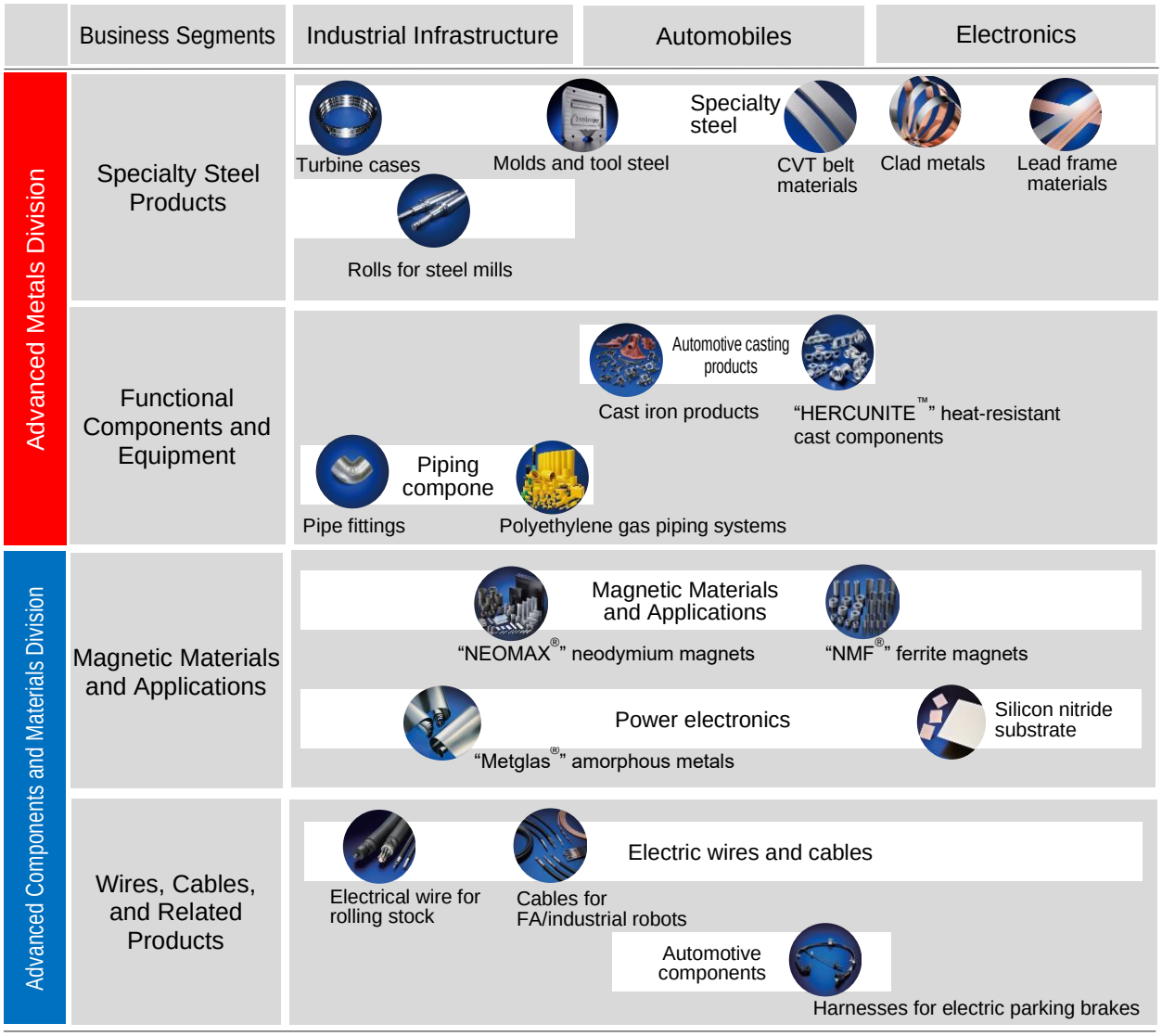
Note: Adjusted operating income: Revenues – Cost of sales – Selling, general and administrative expenses

3. Business Bases

Please see the following links on the Hitachi Metals website.
WEB Main Sales Bases
https://www.hitachi-metals.co.jp/corp/bases01.html
WEB Major Operation Bases / R&D Bases
https://www.hitachi-metals.co.jp/corp/bases02.html
WEB The Hitachi Metals Group
http://www.hitachi-metals.co.jp/corp/corp08.html

4. Business Domains and Major Product Applications

The Hitachi Metals Group specializes in the development of high-performance materials. Leveraging this expertise, we supply materials and products mainly to customers in the industrial infrastructure, automotive, and electronics-related segments.



III. Corporate Governance

1. Basic Views and Other Information on Corporate Governance

Our basic views on corporate governance and the governance structure and system are described in The Hitachi Metals Group Report 2022 (Integrated Report).
The Hitachi Metals Group Report 2022 (Integrated Report) is available from the Company's website (https://www.hitachi-metals.co.jp/e/ir/annual/anu_2022.html).

2. Basic Approach and Development Status Regarding Elimination of Antisocial Forces

Our policy is to take a resolute stance against antisocial forces that pose a threat to the order and safety of civil society, and cut off all ties with them. The following systems have been put in place to ensure the efficacy of this policy.

(1) The Compliance Department will address risks involving antisocial forces, and an officer and a person in charge will be appointed for each business site. These people will collect and provide risk-related information, and explain response procedures for risk scenarios.

(2) To ensure close liaison with the Tokyo Metropolitan Police Department and other police departments with jurisdiction, as well as with external agencies like Tokubouren, we will keep up visits and other links to build up information on antisocial forces. If there is the possibility of harm from such forces, we will promptly notify these agencies, consult with them, and act in partnership with them.

(3) To eliminate antisocial transactions, we will work to strengthen rules on the prevention of such transactions, establish a system for the Compliance Department to scrutinize new trading partners in each division, and introduce clauses for the elimination of gang activity into contracts and transaction terms. The Compliance Department will conduct internal audits to confirm the state of compliance.

(4) To raise awareness among employees on how to handle antisocial forces, the Company distributes the Hitachi Metals Group CSR Guidebook which declares, "We absolutely refuse all contacts and demands from antisocial forces and groups," and strives to familiarize all employees with the declaration.

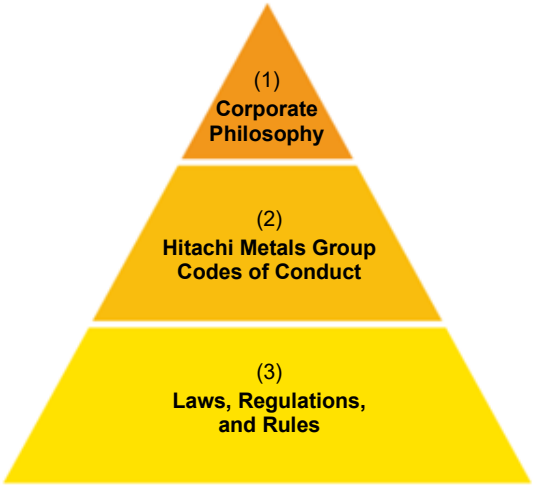
IV. CSR Management

1. CSR Activities at the Hitachi Metals Group

Hitachi Metals will aim to grow as a high-performance materials company that supports a sustainable society, in accordance with the corporate philosophy. CSR management, which calls on corporations not only to pursue profitability but also to meet stakeholders' expectations and contribute to the development of society, is literally consistent with our aspiration declared in our corporate philosophy.
We at the Hitachi Metals Group promote CSR activities, aiming to contribute to society through our business operations.

(1) Guidelines for CSR Activities

The Hitachi Metals Group has systematically established guidelines for CSR activities as follows:



(1) The corporate philosophy governs all corporate activities of the Hitachi Metals Group. It also functions as the guiding principles of our CSR activities.

(2) The Hitachi Metals Group Codes of Conduct consist of rules and principles intended to assist the Group's officers and employees in making decisions and taking actions based on the corporate philosophy. It is a declaration to society concerning in which direction our Group should move forward and it also serves as the standard of our corporate ethics.

(3) Laws and regulations are basic and minimum requirements to be complied with to engage in corporate activities.

The Hitachi Metals Group aims to carry out its social responsibility and realize its Corporate Creed through the observance and implementation of laws and regulations, as well as the Hitachi Metals Group Codes of Conduct, by all officers and employees in their daily duties.

(2) Hitachi Metals Group Stakeholders

The business of the Hitachi Metals Group is materialized through engagement with stakeholders. The Hitachi Metals Group considers stakeholders strongly associated with its business activities as “customers,” “shareholders and investors,” “suppliers,” “employees,” and “society and local communities,” and develops its CSR activities by responding to the requests and expectations of those stakeholders and contributing to society’s connectivity.

(3) System for Promoting CSR

As the business domains of the Hitachi Metals Group have expanded rapidly on a global scale due to M&A and other activities, thorough compliance has assumed increasing importance as the management foundation that enables the Group to fulfill its social responsibility. The CSR Management Office, an organization that is independent from other corporate and business divisions, plays a central role in working with divisions involved in business activities and Group companies, in order to address compliance issues in response to the demands and expectations of stakeholders.
To achieve these goals as an organization, we have appointed a Hitachi Metals Group Risk Management Officer to supervise the compliance activities of the entire Group, and have also established compliance promotion departments at each of our business divisions and appointed risk management officers at all Group companies, thereby creating a structure that encourages business divisions and Group companies to carry out compliance activities autonomously. These departments cooperate with other corporate divisions to resolve socially important challenges such as human rights issues and environmental problems.

(4) CSR Activity Results and Plans

(a) Framework for CSR Activities

Every year since fiscal 2015, the Hitachi Metals Group has self-assessed its activity results for initiatives implemented against targets set by each division in the previous year. By repeating this cycle of setting and implementing road maps based on self-assessment results, the Group is continually enhancing the quality of management.

(b) Fiscal 2021 Initiative Results and Fiscal 2022 Plans

★★★ Achieved ★★ 90% achieved ★ Not achieved

Some of the FY2021 measures (planned) have been reviewed.

FY2021 Measures (Planned)	FY2021 Measures (Results)	Self-assessment	Measures Planned for FY2022
1. Organizational Governance			
・Hold regular meetings regarding compliance, formulate preventative measures, and share information (ongoing)	・Held compliance management meetings semiannually to analyze matters related to compliance and risks involving our businesses, formulate preventative measures, and share information	★★★	・Hold regular meetings regarding compliance, formulate preventative measures, and share information (ongoing)
・Conduct compliance training at the Hitachi Metals Group (ongoing) ・Conduct environmental education at the Head Office and each business site (ongoing) ・Conduct Hitachi Insights, the Hitachi Group employee satisfaction survey targeting all back-office workers (ongoing)	・Conducted online compliance training for all back-office workers in group companies in Japan, and provided e-learning programs regarding compliance codes for all back-office workers in group companies in Japan and overseas (participation rate: 100%) ・Implemented environmental auditor development training (once) ・Provided environmental e-learning programs (participation rate: 97%) ・Conducted Hitachi Insights, the Hitachi Group employee satisfaction survey targeting all back-office workers in October and November (6,987 employees responded on a consolidated basis)	★★★ ★★★	・Conduct compliance training at the Hitachi Metals Group (ongoing) ・Implement environmental auditor development training (once or more) ・Provide environmental e-learning programs (ongoing) ・Introduce new engagement survey frameworks to be applied across the Hitachi Metals Group in response to the ownership transition
2. Human Rights			
・All employees receive human rights training every three years, based on the Hitachi Metals Group Human Rights Policy, according to the Hitachi Group's policies	・Conducted human rights training in a planned manner throughout the entire Hitachi Metals Group (14,150 employees participated on a consolidated basis)	★★★	・Conduct human rights training in a planned manner throughout the entire Hitachi Metals Group (ongoing)
3. Labor Practices			
・Set a target number of paid days-off used per person of 14 or more ・Set a target rate of 50% or more for employment diversity (ongoing) ・Set a target ratio of 5% for women in career-track positions (ongoing)	・At 15.2, achieved the target number of paid days-off used per person (significant variance by job level and category identified as an issue) ・At 39%, failed to achieve the diversity employment target rate ・At 6.3%, achieved the target ratio of women in career-track positions	★★	・Set a target number of paid days-off used per person of 14 or more (ongoing) ・Set a target rate of 50% or more for employment diversity (ongoing)

FY2021 Measures (Planned)	FY2021 Measures (Results)	Self-assessment	Measures Planned for FY2022
・Formulate an action plan integrating the Act for Measures to Support the Development of the Next Generation and the Act on the Promotion of Female Participation and Career Advancement in the Workplace, and proactively disclose related figures to the public (ongoing) ・Increase the ratio of women in management positions (ongoing) ・Hold Hitachi Metals Women's Forums for information exchange between women in career-track positions and strengthen coordination among them (ongoing)	・Formulated an integrated action plan for the three years from FY2022 and announced it to the public. Related figures were also disclosed as widely as possible. ・Increased the ratio of women in management positions to 1.8% (annual target achieved) ・Sent participants to cross-industry exchange programs and external seminars for women in management positions ・Refrained from holding Hitachi Metals Women's Forums for the purpose of reviewing the program's objective of reporting.	★★	・Proactively disclose related figures to the public (ongoing) ・Increase the ratio of women in management positions (ongoing) ・Hold forums for young women to support their career development ・Encourage male employees to take child care leave ・Hold seminars for those in management-level positions to learn about unconscious bias
・Exceed the legal employment rate of employees with disabilities (2.3%)	・The actual figure for FY2021 was 2.36%, achieving the target	★★★	・Exceed the legal employment rate of 2.3%

3. Labor Practices			
・Confirm activities regarding the Hitachi Metals Group's key health and safety measures, as well as the state of legal compliance through health and safety audits of business sites, and implement health and safety training for supervisors (ongoing) ・Conduct stress checks throughout the Hitachi Metals Group and enhance feedback (ongoing) ・Enhance measures for health management (ongoing) ・Full-scale operation of the Hitachi Group accident investigation system (strengthening disaster analysis and countermeasures)	・Cancelled on-site health and safety audits due to the COVID-19 situation, and conducted communication online with some offices, instead. Also, started online health and safety training. ・Continued to conduct stress checks and result feedback throughout the Hitachi Metals Group ・Major measures implemented for health management: steps taken against secondhand smoking; smoking-cessation programs; established smoking areas; and designated smoking times ・Started using the Hitachi Group accident investigation system across the Company, for the purpose of analyzing causes to prevent recurrence and improving the process to address root issues, thus enhancing the operation of the system	★★★	・Confirmed activities regarding Hitachi Metals Group's key health and safety measures, as well as the state of legal compliance through health and safety audits of business sites ・Major health and safety training implemented: specialized training programs targeting line managers and safety managers; and online video programs for employees in general ・Full-scale operation of the Hitachi Group accident investigation system (strengthening disaster analysis and countermeasures) ・Conduct stress checks throughout the Hitachi Metals Group and enhance feedback (ongoing) ・Enhance measures for health management (ongoing)
・Resume the program to send individuals selected from among those at the general manager level to external training for executives ・Conduct training of individuals selected from among those at the manager level to develop global leaders (ongoing) ・Secure a determined number of human resources by hiring new graduates. Reduce midcareer hiring to the minimum levels required.	・Sent eight persons selected from among those at the general manager level to external training for executives (including four to Hitachi training for executives) ・Conducted training of individuals selected from among those at the manager level to develop global leaders ・Secure a determined number of human resources by hiring new graduates. ・Resumed midcareer hiring from the second quarter of FY2021	★	・Continue to send individuals selected from among those at the general manager level to external training for executives. Select new hosts of executive training programs outside Hitachi in response to the ownership transition. ・Conduct training of individuals selected from among those at the manager level to develop global leaders (ongoing) ・Secure a determined number of human resources by hiring new graduates. Secure the required number of midcareer hires.
4. The Environment			
・Increase the sales ratio of key environmentally conscious products*1 (24%)	・Increased the sales ratio of key environmentally conscious products (21.2%)	★	・Increase the sales ratio of key environmentally conscious products (23%)
・Reduce CO_2 emissions per production unit (6% compared to base year FY2010)	・Reduced CO_2 emissions per production unit (2.2% compared to base year FY2010)	★	・Reduce CO_2 emissions per production unit (20% compared to base year FY2015)
・Reduce the ratio of waste and valuables generation per production unit (14% compared to base year FY2010) ・Waste landfill rate (12%)	・Reduced the ratio of waste and valuables generation per production unit (18.9% compared to base year FY2010) ・Waste landfill rate (11.7%)	★★★	・Reduce the ratio of waste and valuables generation per production unit (33% compared to base year FY2010) ・Waste landfill rate (11.5%)

・Reduce the ratio of chemical substance emissions per production unit (25% compared to base year FY2010)	・Reduced the ratio of chemical substance emissions per production unit (33.72% compared to base year FY2010)	★★★	・Reduce the ratio of chemical substance emissions per production unit (26% compared to base year FY2010)
5. Fair Operating Practices			
・Plan to revise the CSR Procurement Guidelines in response to progress in the implementation of human rights and environmental initiatives, and disseminate the revised Guidelines	・Published the Hitachi Metals Group Sustainable Procurement Guideline in October 2021 on corporate website	★★★	・Promote the Hitachi Metals Group Sustainable Procurement Guideline internally, and plan to confirm with each supplier that they will comply with the Guidelines after the transition to the new company
・Conduct information security education (ongoing) ・Conduct information security self-audits (ongoing) ・Make an online pledge not to retain business information on privately-owned computers (ongoing) ・Conduct targeted e-mail attack simulations (ongoing) ・Implement measures against the sending of e-mails to unintended recipients (ongoing) ・Take necessary steps to comply with personal information protection laws in relevant countries, including the EU General Data Protection Regulation (GDPR) (ongoing) ・Revise rules related to information security ・Enhance countermeasures against unauthorized access	・Conducted information security education ・Conducted information security self-audits ・Made an online pledge not to retain business information on privately-owned computers ・Conducted targeted e-mail attack simulations ・Implement measures against the sending of e-mails to unintended recipients (ongoing) ・Took necessary steps to comply with personal information protection laws in relevant countries, including the EU General Data Protection Regulation (GDPR) ・Prepared to revise rules related to information security ・Enhanced countermeasures against unauthorized access ・Implemented measures against PPAP	★★★	・Enhance information security management and operation systems in response to the departure from the Hitachi Group ・Conduct information security education (ongoing) ・Conduct information security self-audits (ongoing) ・Make an online pledge not to retain business information on privately-owned computers (ongoing) ・Conduct targeted e-mail attack simulations (ongoing) ・Implement measures against the sending of e-mails to unintended recipients (ongoing) ・Take necessary steps to comply with personal information protection laws in relevant countries, including the EU General Data Protection Regulation (GDPR) (ongoing) ・Revise rules related to information security ・Enhance countermeasures against unauthorized access

6. Customers (Consumer Issues)			
・Create new products/businesses that can contribute to a sustainable society (implement tasks in companywide research themes and select themes) (ongoing) ・Process research (development of industrial technologies using AI and robotics) (ongoing) ・Promote cooperation and collaboration with customers and research institutions in Japan and overseas (expand open innovation) (ongoing)	・Promoted SBC*2 themes (ongoing: 4; new: 2; complete: 2) ・Process research (promoted development of advanced inspection equipment, etc., using AI and robotics) ・Promoted cooperation and collaboration with customers and research institutions in Japan and overseas (conducted joint research with institutions in Japan and overseas and developed energy-saving products and technologies)***	★★★	・Expand and enhance materials and technology development efforts aimed at carbon neutrality and a resource-efficient society ・Create new products/businesses that can contribute to a sustainable society (implement tasks in SBC themes and select themes) (ongoing) ・Process research (promote development of industrial technologies using AI and robotics) (ongoing) ・Promote cooperation and collaboration with customers and research institutions in Japan and overseas (expand open innovation) (ongoing)
7. Community Involvement and Development			
・Consider social contribution activities enabling a closer relationship with local citizens and culture (ongoing)	・Conducted local contribution activities mainly in regions where offices and factories are located (social contributions amounted to 79 million yen)	★★★	・Consider social contribution activities enabling a closer relationship with local citizens and culture (ongoing)
・Contribute to material science technical research through the support of Hitachi Metals' Materials Science Foundation (ongoing) ・Support *tatara* method of iron manufacture (ongoing)	・Contributed to material science technical research through support of Hitachi Metals' Materials Science Foundation ・Supported tatara method of iron manufacture (operations and personnel) conducted by the Society for Preservation of Japanese Art Swords at Nittoho Tatara in Okuizumo, Shimane Prefecture	★★★	・Contribute to material science technical research through the support of Hitachi Metals' Materials Science Foundation (ongoing) ・Support *tatara* method of iron manufacture (ongoing)
8. Review and Improvement of CSR Activities			
・Improve responses to the Carbon Disclosure Project (CDP)*3 (ongoing)	・Responded to the Carbon Disclosure Project (CDP)	★★★	・Improve responses to the Carbon Disclosure Project (CDP) (ongoing)

*1. Products that are targeted for growth based on management strategy and that make a significant contribution to resolving environmental issues such as climate change and resource recycling

*2. Strategic Business Creation (SBC) Project refers to a company-wide business development project organized for two purposes: 1) to create new businesses in areas that are not covered by any existing business categories or covered by more than one category; and 2) to develop strategic businesses targeting new strategically important products from a company-wide point of view

*3. This project is promoted through collaboration among institutional investors and calls for information about climate change from major corporations

(5) Economic Performance

(a) Direct Economic Value Generated and Distributed

Please refer to the following pages.

WEB Financial closing information

http://www.hitachi-metals.co.jp/ir/library/ifrs.html

Social Contribution Activities	V. Report on Social Aspects 2. In cooperation with Society and the Local Community (2) Social Contribution Activities carried out in fiscal 2020
Environmental Accounting	VI. Report on Environmental Aspects 1. Environmental Management (5) Environmental Accounting

2. Compliance

(1) Basic Approach

To foster a deeper understanding of compliance, the Company has prepared and distributed the CSR Guidebook to all officers and employees of the Hitachi Metals Group, and provides compliance education in online and e-learning formats on a regular basis. In addition, the Company has set October of each year as Hitachi Metals Group Corporate Ethics Month, and holds compliance lectures delivered by outside instructors, primarily for employees in management-level positions, as well as providing various other programs to cultivate an awareness of compliance.

(2) Compliance Education Activities

(a) Hitachi Metals Group Corporate Ethics Month

To thoroughly instill compliance, we designated October as Hitachi Metals Group Corporate Ethics Month, as in past years, and carried out the following measures, in addition to conducting compliance training.

i) The “President’s Message for Hitachi Metals Group Corporate Ethics Month,” prepared in his own words to call for adherence to compliance, was distributed online and by other methods to officers and employees in the Group.

ii) We held compliance lectures (led by outside instructors) for those in management-level positions. (Targets were executive officers and other management executives, and general managers at the head office or regional offices.)

iii) We distributed workplace compliance education materials for use in the workplace during morning assemblies and departmental meetings.

iv) We conducted compliance awareness surveys to understand employees’ compliance awareness and familiarity with the whistleblowing system, and culture of openness at work.

(b) Compliance Training

Each year, the Compliance Department conducts compliance training for officers and employees of the Hitachi Metals Group. This training covers compliance with the Codes of Conduct and competition laws and regulations, prevention of acts of bribery, prevention of transactions with antisocial forces, and the whistleblowing system.

Training related to compliance was included in the curriculum for new employees and in education for specific levels and positions, etc.

No.	Type	Substance	Target employees
1	Education for all members	Compliance training	Hitachi Metals Group employees

2		Compliance lectures for employees in management-level positions (led by outside instructors)	Executive officers and general managers at the head office or regional offices
3		Hitachi Group Compliance e-learning	Back-office workers
4	Education for new hires	Training for new hires	New hires
5	Education for midcareer hires	Training for midcareer hires	Midcareer hires
6	Education for specific levels and positions	Training for newly promoted managers	Newly promoted line managers
7		Training for employees on overseas assignment	Employees on overseas assignment

(3) Compliance Audits

The Internal Auditing Office conducted internal audits of all offices. The Compliance Department joins this audit activity in order to conduct compliance audits to check whether there is any suspicion of practices that violate either laws or company rules.
Also, the Group companies conducted self-audits of their compliance.

(4) Export Controls

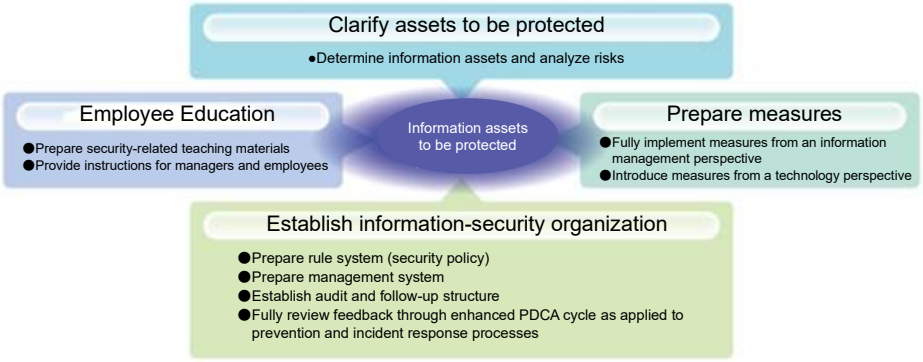
In its Codes of Conduct, Hitachi Metals sets “Obey the law and walk the path of virtue” as the basis of its actions. Accordingly, our basic policy on export controls is to “Strictly observe export-related laws and contribute to the maintenance of international peace and security,” and under this policy, we formulated and resolutely apply a compliance program that includes Rules on Security Export Controls. Specifically, we scrutinize the destination countries and regions, applications, and customers of all exported goods and technologies as we perform procedures on the basis of relevant laws. We guide global Group companies in enacting export control rules and establishing systems to ensure that they control exports appropriately, in line with the policy. We also provide educational assistance and perform internal audits. Hitachi Metals will make exhaustive efforts to carry out our social responsibility for the maintenance of international peace and security in the future.
In fiscal 2021, the Hitachi Metals Group committed no major violations of export controls.

3. Information Protection and Management

(1) Basic Approach

As utilization of IT has become essential to increasing the profitability of many business corporations, such corporations are facing a growing exposure to increasing and ever more sophisticated cyberattacks aiming to access personal information of customers and important technology information held by the corporations. It is becoming ever more important for corporations to appropriately manage and protect corporate information, including personal information, as part of their social responsibility. The Hitachi Metals Group established the “Basic Policy of Information Security” in April 2004, followed by the “Personal Information Protection Policy” in January 2005, establishing an organization of personal information protection/information security based on these policies. The Company has continued to update information security measures in line with these policies.

Basic concept of information asset protection >>

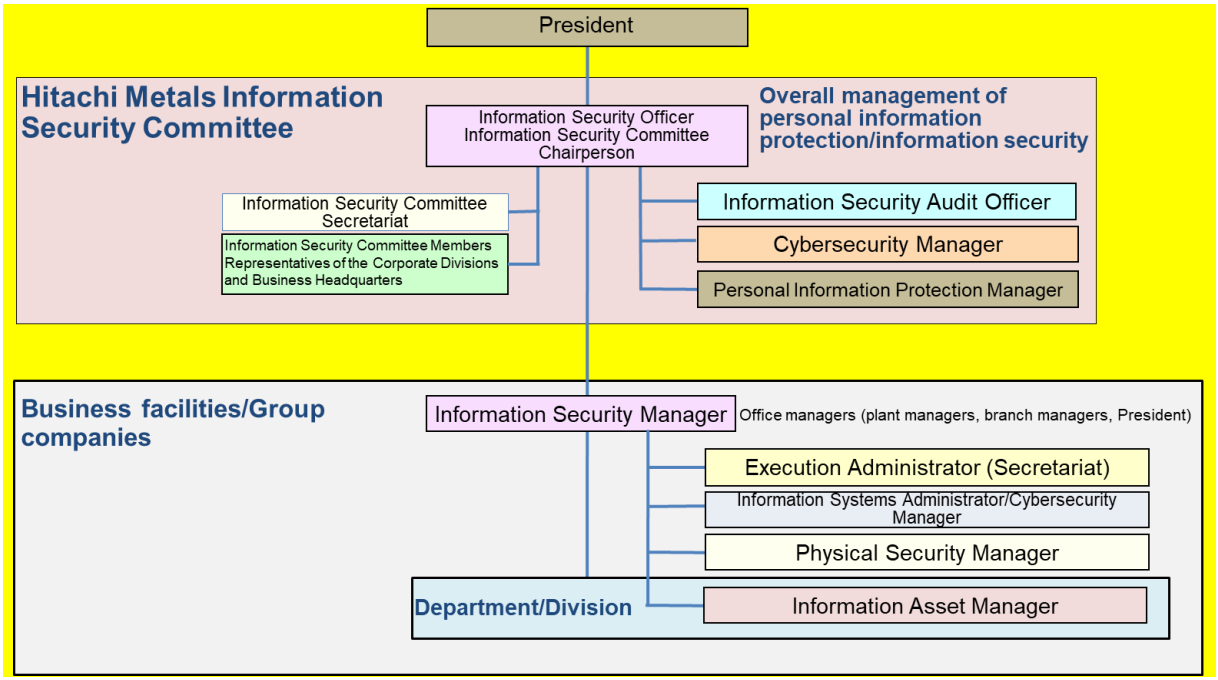


In January 2016, private companies along with local governments and other organizations across Japan began using the My Number system, a social security and tax information system for individuals. At corporations, human resources and general administration departments deal with employees’ My Number information, legal departments handle investors’ My Number information, and procurement departments collect My Number data on sole proprietors. Consequently, the My Number launch precipitated the need to amend personal information protection policy along with regulations on the management of personal information as well as peripheral rules, detailed regulations, guidelines, and other administrative formalities. However, personal information, including that of the My Number system, is a valuable asset that companies must manage and safeguard. To date, Hitachi Metals has applied a two-pillared approach—rules pertaining to information security that hinged on the Basic Policy for Information Security and rules pertaining to the management of personal information that hinged on the Personal Information Protection Policy. Two corporate structures—the Personal Information Protection Committee and the Information Security Committee—worked as one to expediently promote measures. Consequently, the introduction of My Number provided an opportunity to implement a system with a

single set of rules and to integrate the corporate structures as well.
In December 2015, Hitachi Metals unified existing rules related to information security and rules related to the management of personal information along with rules related to the handling of confidential documents, and then merged them into rules related to information security, which are the mainstay of information security management rules.
Hitachi Metals' efforts to enhance information security are driven by four considerations: 1) establish an information security organization, 2) clarify assets to be protected, 3) educate employees, and 4) maintain various security measures. The Company works steadily to implement steps to achieve each one. Particular emphasis, however, is placed on prevention, responding quickly if a situation arises, heightening employees' sense of ethics, and making them more security conscious. In addition, Hitachi, Ltd. leads the Hitachi Group, of which Hitachi Metals is a part, in promoting information security management and working toward a higher level of security throughout the wider group organization.

(2) Promotion Organization

Following the integration of related rules in December 2015, the Personal Information Protection Committee and the Information Security Committee were reorganized into a new Information Security Committee. To reinforce the Information Security Committee, a Cybersecurity Manager was appointed in 2017 to address the growing threats of cyberattacks, and a Privacy Protection Manager appointed in 2020 to cope with privacy-related risk and compliance issues.



(3) Information System Security Measures

Hitachi Metals has systematically implemented measures against external risks such as targeted attacks and other unauthorized access and computer viruses, internal risks such as the unauthorized removal, loss, or theft of company information or the sending of e-mails to unintended recipients, and other risks including natural disasters, etc.

Since fiscal 2006, the Company has been continuously inspecting the personal computers of employees who have a Group e-mail address to find and delete business information, and this was done again in fiscal 2020. At the same time, the Company instructed its employees to submit, through the website, a written pledge not to retain business information in personal computers and other devices which they own. Since fiscal 2007, the Company has also requested that its business partners deploy equivalent measures to prevent leaks of business information from personal computers owned by their employees. Since fiscal 2009, we have introduced a filtering system to monitor all e-mails sent externally to prevent external leaks of business information. Further efforts have also been made to enhance measures preventing information leaks, such as reviewing and improving our management system for portable information terminals to prevent losses of increasingly capable mobile phones, smartphones, and other devices. In addition, as a countermeasure against the sending of e-mails to unintended recipients, erroneous transmission prevention software has been installed on all business PCs of the Hitachi Metals Group.

As countermeasures against cyberattacks, quarantine programs were introduced in 2018 to increase capabilities to address the vulnerability of company computers, and Endpoint Detection and Response (EDR) software was introduced in 2020 to improve endpoint security.

Despite these measures, in the Hitachi Metals Group in fiscal 2020, some e-mails were sent to unintended recipients. Nevertheless, there were no incidents involving breach of customer privacy or leakage of customer information.

(4) Employee Education

Each year, the Company provides information security education for all employees (including temporary staff, etc.) who use IT equipment. This education is designed to instill an understanding of rules related to the use of IT equipment, including the handling of information (including personal information) and the prohibition against using personal computers for work. The education has been provided in the e-learning format since fiscal 2020 to replace the previous on-site visits, as a measure to control COVID-19 infection. In order to improve capabilities to protect from targeted e-mail attacks, which have been becoming ever more sophisticated and posing a growing threat of malware infection, relevant training is run on an ongoing basis to raise the security awareness of individual employees.

	e-learning training in Japan and overseas *Conducted using materials in PDF format at business sites where e-learning training was not available.	Training using simulated e-mails about targeted attacks
Implementation timing	August 2021–March 2022	January–February 2022
Target	Hitachi Metals Group employees	Employees at business sites connected to the Hitachi Metals Group network

(5) Self-audit

Each year, the Company conducts a self-audit of personal information protection/information security, confirming the status of compliance with the rules, and improving any areas that need to be addressed. Our fiscal 2021 audit was performed between December 2021 and January 2022.

(6) Protection and Respect for Intellectual Property

Hitachi Metals practices the principle set forth in its Codes of Conduct that reads: “We will protect our own intellectual property, respect third-party intellectual property, and use both effectively for smooth business operations.”

Specifically, to appropriately protect and effectively apply intellectual property created in such processes as research, development, and manufacturing, Hitachi Metals acquires the rights to inventions, ideas and designs created by employees in the course of their work, in accordance with the Company’s rules, which have been established through legally stipulated procedures. With the global expansion of our business, we acquire and maintain the rights to these creations as intellectual property rights inside and outside Japan, forming assets that will support the sustainable growth of the Hitachi Metals Group. We take appropriate action against infringements of our intellectual property rights, including exercise of our rights through legal action.

At the same time, we strive to prevent infringements of the intellectual property rights of others and smoothly advance our business. To that end, we investigate the intellectual property rights of others globally, in advance of all stages of research, development, design, etc., for new products and technologies, in accordance with Hitachi Metals rules. If that investigation reveals a need to use the intellectual property rights of others, we acquire the necessary licenses.

We also provide our employees with ongoing education and training about intellectual property, to instill awareness of the protection and respect of our intellectual property rights and those of others.

4. Respect for Human Rights and Compliance with International Norms

The Hitachi Metals Group stipulates respect for human rights in both the Hitachi Metals Group Codes of Conduct and the supplementary Hitachi Metals Group Human Rights Policy. Our basic stance is to respect and work to refrain from infringing on the rights of all persons involved in our business operations. In December 2013, the Hitachi Metals Group formulated the Hitachi Metals Group Human Rights Policy. This Policy recognizes the human rights stated in the International Bill of Human Rights and the ILO (International Labour Organization) Declaration on Fundamental Principles and Rights at Work as the minimum levels of these rights. Our policy clearly states that the Hitachi Metals Group pursues measures to observe the international principles of human rights. Specifically, we will implement human rights due diligence and appropriate education based on the UN Guiding Principles on Business and Human Rights, while strictly observing the laws of the regions and countries in which we do business. We put the Hitachi Metals Group Human Rights Policy into practice, and are continuously working on initiatives such as raising the awareness of our officers and employees, and establishing hotlines to promote the creation of a corporate culture in which human rights abuses do not occur.

We regularly utilize e-learning to conduct human rights education and training at each employee level, in order to systematically raise awareness of human rights (with a total of 14,150 employees, on a consolidated basis, receiving human rights-related training in fiscal 2021). In addition, we have established various harassment hotlines, in order to incorporate the Hitachi Metals Group Human Rights Policy into all of our activities.

As our business activities expand rapidly on a global basis, we will continue to enhance human rights awareness and support measures to prevent the occurrence of human rights abuses based on differences in religion or nationality, the presence or absence of disabilities, gender, or other factors. Also, we established the Human Rights Risk Management Committee in April 2021 as part of our efforts to strengthen global human rights risk management. The Committee is conducting activities with a focus on issues related to forced labor and immigrant labor.

V. Report on Social Aspects

1. Together with Our Suppliers

(1) Basic Policy of CSR Procurement

Based on the Corporate Creed of contributing to society by being “the best enterprise,” Hitachi Metals has formulated its procurement policy to outline its basic concepts regarding material procurement, and published this policy on its website. As our business progresses globally, we share this procurement policy among all of the companies in the Hitachi Metals Group, in order to encourage them to contribute to society through their own business activities. We will continue striving to comply with laws and regulations as well as social norms, and to fulfill our social responsibility with consideration for human rights and the environment, while building a fair and impartial business culture based on relationships of trust with our suppliers.

Procurement Policy

Basic Concept of Material Procurement

- **Open global procurement**

  We procure materials from suppliers regardless of their nationality, size, and performance based on the principle of free competition.

- **Fair and equitable transactions**

  We select suppliers on a fair and equitable basis according to their economic rationality such as quality, prices, delivery time, technologies, the credibility of management and services.

  We never accept any personal gifts or favors from them.

- **Maintain partnerships**

  We cultivate fair business relations with all of our suppliers on an equal footing.

  We constantly strive to deepen mutual understanding and trust, and aim to achieve growth, development, and a working partnership with them from a long-term perspective.

- **Compliance with laws**

  We conduct procurement activities in compliance with applicable laws and regulations as well as social norms.

  We are determined not to have any relations with antisocial forces that threaten the order and safety of civil society.

- **Take human rights, occupational safety, and health into consideration**

  We take special care to ensure human rights, occupational safety, and health in our procurement activities.

We also ask our suppliers to make the same efforts.

- **Maintain confidentiality**

  We treat all confidential information of our suppliers obtained through procurement activities as being strictly private and confidential, by using the same degree of care we use to safeguard our own proprietary information. We do not disclose their information to a third party nor use it for purposes other than the original intent without their prior consent.

- **Preserve the environment**

  We give priority to suppliers who are proactively working on environmental conservation as well as to environmentally friendly materials and components.

① Issuance of the Hitachi Metals Group Sustainable Procurement Guideline

Hitachi Metals published the Hitachi Metals Group Sustainable Procurement Guideline on its website in October 2021. This is the result of the previous post of the Hitachi Metals Group Supply Chain CSR Procurement Guideline being revised in order to update the contents based on the latest standards that have been acknowledged worldwide. The Guideline encompasses a wide range of sustainability concepts recognized as a company's social responsibility, including respect for human rights, consideration of the environment, fair trading and ethics, occupational health and safety, product quality and safety, information security, and social contributions. The Guideline also stipulates corrective measures to be taken in case of any clear violation discovered among suppliers. When starting a new business relationship, we request the relevant company to comply with our Sustainable Procurement Guideline, while at the same time conducting corporate surveys on bribery risks based on the Hitachi Metals Global Compliance Program (HMGCP) in an effort to strengthen our screening of suppliers.

WEB Hitachi Metals Group Sustainable Procurement Guideline
http://www.hitachi-metals.co.jp/corp/corp11_04.html

Periodic Audits of Operations

Acquiring applicable legal knowledge and accurate business information is imperative to proper conduct of procurement transactions. We thus regularly hold seminar sessions to provide persons in change of procurement at business sites with updates on laws and regulations. Additionally, all business sites and Group companies in Japan perform annual mutual audits of operations, where procurement managers from business sites and Group companies as well as executives from the Head Office serve as auditors. In fiscal 2021, as in fiscal 2020, despite restrictions on movement due to the COVID-19 pandemic, we performed mutual audits for all business sites and Group companies, chiefly online, to monitor whether operations were being conducted in accordance with laws and regulations as well as with Company regulations.

② Green Procurement

The Hitachi Metals Group procures products with a minimal environmental impact from suppliers who are proactively working on environmental conservation. In 1998, we issued the Green Procurement Guidelines to share with our suppliers our views on environmental considerations, specifically the prevention of global warming, recycling of resources, and conservation of biodiversity and ecosystems. The Guidelines have been revised many times in response to the latest laws and chemical substances regulations, and each revised version has been provided to suppliers. Additionally, in June 2021, we expressed our support for the TCFD recommendations. Going forward, we will take up initiatives for reducing our environmental impact (reduced consumption of resources and energy, recycling, and appropriate management of chemical substances contained in products), keeping in mind not only compliance with laws and regulations and responding to customer requirements but also the transition towards a decarbonized society.

③ Procurement BCP Initiatives

We carry out procurement BCP strategies as part of preparation for risks that could halt our business operations, including earthquakes, wind and flood damage, and other natural disasters, as well as new infectious diseases, fires, and power outages. We are working to minimize procurement risk by diversifying and decentralizing our sources of procurement, while asking our key suppliers to have their own BCP measures in place.

(2) Response to Globalization

The Hitachi Metals Group strives to establish a global procurement network across Europe, North America, and Asia, while expanding its procurement base. We are working to support the optimization of procurement activities overall while enhancing CSR risk management and increasing concentration and consolidation of purchasing across the Group. We have also set up Global Procurement Offices (GPOs) in four locations—Europe, the United States, Asia, and China—where we are promoting transparent procurement activities by choosing optimal suppliers from around the world, while at the same time strengthening governance at our overseas Group companies. As part of this, we started in fiscal 2019 to standardize procurement operation criteria for overseas Group companies, and in fiscal 2021 we applied these standards to the audits performed by GPOs and appropriate guidance was given for familiarization.

Responsible Mineral Procurement

In July 2010, the United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), out of concern that minerals mined in the Democratic Republic of the Congo (DRC) and surrounding countries could become fund sources for armed groups, designating four minerals—tantalum, tin, tungsten, and gold (collectively “3TG”)—as conflict minerals. The region covered by the EU Conflict Minerals Regulation, passed in July 2017, was expanded to include Conflict-Affected and High Risk Areas (CAHRAs) when it came into force in January 2021. In recent years, there have been growing concerns about other aspects including serious human rights violations and environmental pollution, in addition to conflict. In the wake of such developments, the Hitachi Metals Group announced the Conflict Minerals Procurement Policy in September 2013 and the Hitachi Metals Group’s Policy for Responsible Supply Chain of Minerals in August 2021. The Hitachi Metals Group has clarified that it is working to ensure responsible procurement that does not contribute to conflict and human rights violations, and is accelerating efforts in coordination with industry groups to enhance the transparency of its supply chain.

To carry out responsible procurement, we conduct surveys using the Conflict Minerals Reporting Template (CMRT) and other tools published by the Responsible Minerals Initiative (RMI) to specify the countries of origin and smelters of the minerals used in the supply chain, and request suppliers to procure minerals from smelters that are compatible with the Responsible Minerals Assurance Process (RMAP). Up to now, no cases of armed groups being funded by or problematic uses of minerals have been found.

2. In Cooperation with Society and the Local Community

(1) Basic Approach

The Hitachi Metals Group pursues social contribution activities in fields such as sports promotion, environmental protection, social welfare, arts and culture, community activities, and support at time of disasters, to bring progress to communities around the world where the Group is active. We also work together with social welfare organizations and educational institutions to gain a sense of what communities want from the Hitachi Metals Group as we carry on with our activities.

Besides social contribution activities as a company, we support volunteer activities by employees through volunteer leave and a system of volunteer awards as part of our efforts to nurture a corporate culture that helps create a better society.

Hitachi Metals' characteristic social contribution activities include support for Japan's research into materials science and technology by supporting the Hitachi Metals' Materials Science Foundation, which was established largely with funds willed by Dr. Kakunosuke Miyashita (a former Hitachi Metals vice president). We also contribute to the preservation of Japan's traditional culture through our work with the operations of Nittoho Tatara, which was revived in 1977 by the Society for Preservation of Japanese Art Swords.

(2) Our Social Contribution Activities in Fiscal 2021

In fiscal 2021, the Hitachi Metals Group carried out social contribution activities worth a total of 79 million yen,* including donations, while reducing the number of programs and sessions organized for sporting and other events, environmental protection activities, factory tours, among others, as in fiscal 2020, principally due to the spread of COVID-19. The main content of our contribution activities was as follows:

*This figure includes the calculated equivalent values of employees and company facilities required for activities.

	Category and description of activity	Company name and business site name
Social welfare	Donation of wheelchairs, etc. to social welfare councils and social welfare facilities	Hitachi Metals head office
	Central Community Chest of Japan, Year-End Mutual Aid Fund	Hitachi Metals and domestic Group companies
	Ran blood drives, provided cooperation to activities to prevent the spread of COVID-19*1	Hitachi Metals, Ltd. and global Group companies
	Made donations, mainly of food, clothing, and blankets, to low-income families through charitable organizations. Made donations to welfare organizations.*1	Waupaca Foundry, Inc. Hitachi Cable America, Inc.
	Supported patients with amyotrophic lateral sclerosis (ALS) and acute myeloid leukemia (AML)	Waupaca Foundry, Inc.

	Made donations to local facilities (hospitals, fire stations, churches, recreation facilities)	Waupaca Foundry, Inc. Ward Manufacturing, LLC
	Supported cancer foundations and participated in associated events	Waupaca Foundry, Inc.
	Sponsored activities of the local food bank (for providing free meals to low-income people and others)	Hitachi Cable America, Inc PT. HITACHI METALS INDONESIA
	Christmas gifts for low-income children*2	Waupaca Foundry.Inc
	Gave food and gifts to children with disabilities	Hitachi Cable Vietnam Co., Ltd
	Supported low-income students	Namyang Metals Co., Ltd.
	Supported Boy Scout and Girl Scout activities	Waupaca Foundry.Inc
	Supported elderly people	Pacific Metals Co., Ltd.
Health, medicine, sports	Supported the Tokyo 2020 Olympic and Paralympic Games through the Sports Promotion Fund	Electric Wire & Cable Business Unit, Casting and Rolling Production Dept., Advanced Components & Materials Division,
	Sponsored the Mie Prefecture Rubber Baseball Association Kuwana Branch Junior High School Baseball Pennant Tournaments*2	Kuwana Works, Hitachi Metals, Ltd.
	Sponsored the Boys' Baseball Western Regional Tournament	Kuwana Works, Hitachi Metals, Ltd.
	Dispatched employees to local competitions	Various Hitachi Metals works
	Company sports teams hosted sports clinics for elementary, junior high and senior school students	Various Hitachi Metals works and global Group companies
	Supported local sporting events and sports teams	Various Hitachi Metals works and global Group companies
Academic and research education	Support through Hitachi Metals' Materials Science Foundation	Electric Wire & Cable Business Unit, Casting and Rolling Production Dept., Advanced Components & Materials Division,
	Donation of education and research funds to universities	Hitachi Metals, Ltd. and global Group companies
	Visiting lecture program and internships for local schools	Hitachi Metals, Ltd. and global Group companies
	Hosted factory tours by schools and other groups	Various Hitachi Metals works and global Group companies
	Scholarship support for students	Waupaca Foundry, Inc.
	Support for local school boards for education promotion*3	Yasugi Works, Hitachi Metals, Ltd.
	Supported Hitachi Future Innovator Program's activities (sent instructors to elementary school classes)	Electric Wire & Cable Business Unit, Casting and Rolling Production Dept., Advanced Components & Materials Division,
	Donated books to libraries, etc.	Waupaca Foundry, Inc. Hitachi Cable Vietnam Co., Ltd.

Environmental conservation	Made donations to forest conservation activities (Shimane CO_2 absorption certification system)	Yasugi Works, Hitachi Metals, Ltd.
	Tree planting activities	Hitachi Cable Vietnam Co., Ltd.
	Cleaning activities in areas near business sites*4	Various Hitachi Metals works and global Group companies
Community activities, preservation of historical sites and traditional culture	Participated in Eco Forums in Sendai and Tagajo	Tohoku Rubber Co., Ltd.
	Supported Nittoho Tatara operations, guided operations of mini-tatara	Yasugi Works, Hitachi Metals, Ltd. HMY, Ltd.
	Sponsored regional festivals and sporting events	Various Hitachi Metals works and global Group companies
Disaster area support	Supported victims of the eruption of Taal Volcano	San Technology, Inc.
Urban development and disaster prevention	Participated in traffic safety and disaster prevention events	Various Hitachi Metals works and global Group companies
	Support for local fire stations	Waupaca Foundry, Inc. Ward Manufacturing, LLC
Facility open days	Opened sports grounds, gymnasia, tennis courts, welfare facilities, parking lots, etc. to local communities	Various Hitachi Metals works and domestic Group companies
	Opened facilities to local events	Various Hitachi Metals works and domestic Group companies
Other	Sponsored Christmas light-up event	Hitachi Metals Singapore Pte. Ltd.
	Sponsored various organizations, including the Hitachi Global Foundation	Hitachi Metals, Ltd. and global Group companies

*1. Donated masks (NEOMAX Kinki Co., Ltd.)

*2. Sponsored the Mie Prefecture Rubber Baseball Association Kuwana Branch Junior High School Baseball Pennant Tournaments (Kuwana Works, Hitachi Metals, Ltd.)

*3. Support for local school boards for education promotion (Yasugi Works, Hitachi Metals, Ltd.)

*4. Cleaning activities in areas near business sites (Hitachi Ferrite Electronics, Ltd.)

3. Responsibility to Employees

(1) Labor and Management Relations

Hitachi Metals sincerely addresses common management-labor issues, respecting the basic rights and responsibilities of each, built on a “foundation of mutual trust.” The Company provides full explanations of management policies, business plans, management measures, etc., at various meetings, while at the same time listening to feedback from the employee union as Company management works for the rapid implementation of various corporate measures. We will advance and deepen our labor-management relations by building a labor and management structure that corresponds to the business division system and by fostering closer communication. The employee unions of the Hitachi Metals Group companies have formed a union council, using the forum to periodically exchange opinions and clarifying Group management policies and plans, enhancing mutual understanding.

(2) Promoting Diversity

Hitachi Metals considers diversity and inclusion to be important management strategies, and is pursuing various measures based on the belief that “resolutely implementing diversity management will increase corporate value.”

In particular, we are actively implementing measures to promote the participation and advancement of women in the workplace, based on our management’s firm commitment regarding this issue as an important theme in diversity promotion.

[Policy on promoting the participation and advancement of women in the workplace]

1) Setting targets for the ratio of women among newly hired graduates (Technical positions: 10%, administrative positions: 40%)
2) Enhancing support for retention (Career support, awareness-raising for those in management-level positions, networking among women in career-track positions, etc.)
3) Systematic promotion of female employees (Target ratio for women in management-level positions: 1.8% in fiscal 2022)

In May 2020, in recognition of the above efforts, the Company was certified as an excellent employer with respect to women’s empowerment (generally referred to as the *Eruboshi* certification) based on the Act on the Promotion of Female Participation and Career Advancement in the Workplace. Going forward, we will encourage male employees to take child care leave, as part of our continued efforts to create an environment where each individual can thrive.

(a) Promoting Employment of People with Disabilities

Regarding the hiring of people with disabilities, Hallow, Ltd. (currently, Hitachi Metals Hallow, Ltd.), a special subsidiary, was established in 1998, to support the employment of people with disabilities and help them become socially and financially independent. In addition, in 2006, Kuwana Create Co., Ltd.

(currently, Hitachi Metals FineTech, Ltd.) received special government certification as a company offering employment opportunities to people with disabilities.
The Hitachi Metals Group has received high marks for these efforts, including awards from local communities. Meanwhile, HMY, Ltd. maintains a program through which supervisors themselves acquire qualification as employees of private companies who assist disabled co-workers at the job site. In addition, HMY has a history of actively hiring people with disabilities through job centers, independent living support centers, special needs schools, and “Hello Work” Public Employment Security Offices. In fiscal 2021, the employment ratio of people with disabilities for Hitachi Metals (non-consolidated) in Japan was 2.36%, exceeding the legally required ratio of 2.3%. We plan to continue working to further expand employment throughout the Hitachi Metals Group.

(b) The Act on Advancement of Measures to Support Raising Next-Generation Children, and the Act on the Promotion of Female Participation and Career Advancement in the Workplace

Starting from fiscal 2008, the Company has established a child allowance benefit for employees as a policy for supporting the development of the next generation, strengthening our support of employees who are raising children.
In 1992, Hitachi Metals was also one of the first companies to adopt a system to reemploy individuals who had to give up their jobs due to childbirth or home care, demonstrating once again our proactive and forward-thinking policies. With regard to leave related to child care, nursing care for the elderly, and time needed to care for someone who is sick, we have created and improved a number of programs to support employees with addressing various family responsibilities without worrying about job security. For example, the period of child care leave has been extended, with a limit of three years, to the end of the month in which a child completes the first year of the elementary school, which was started in fiscal 2018, and from fiscal 2022, child care leave can be divided into separate terms, while a child birth leave was newly created in the same year. For employees taking nursing care leave, we provide an amount equivalent to 50% of their salary as family care leave benefits during the relevant leave of absence. In addition, we provide employees with generous conditions in terms of the scope and period of leave that exceed the requirements under the revised Child and Family Care Leaves Act. As such, employees can take leave for a variety of reasons: nursing care, child care, or to look after their parents, spouse, same-sex partner, or the parents of their spouse or same-sex partner.
Furthermore, following the introduction of the Act on the Promotion of Female Participation and Career Advancement in the Workplace, effective from April 2016, we prepared an integrated action plan covering that Act as well as the Act on Measures to Support Raising Next-Generation Children. We have disclosed the content of this action plan, namely, initiatives over three years to reduce overall annual work hours in back-office departments and establish diversity-oriented hiring ratio targets.

Number of Employees Using Work-Life Balance Support Systems

	FY2017	FY2018	FY2019	FY2020	FY2021
Number of employees taking child care leave	32	27	32	41	49
Number of employees using shorter working hours for child care	40	45	55	46	45
Number of employees taking nursing care leave	1	2	5	2	1
Number of employees using shorter working hours for nursing care	1	1	1	1	6

(3) Occupational Health and Safety

(a) Action to Eliminate Work Accidents

The safety results for the Hitachi Metals Group in 2021 revealed three accidents involving lost working time at Hitachi Metals and six such accidents in the Hitachi Metals Group in Japan. The number of cases increased by two from 2020, which remained high. In particular, accidents involving inexperienced workers (with less than three years' experience) were still dominant, accounting for more than 50% of the total, and there were also incidents that could have resulted in serious disasters if something had gone wrong. Given this situation, in fiscal 2021, we are promoting occupational health and safety activities throughout the entire Group, under the slogan, "Entrench the concept of 'Safety always comes first' in the culture of the Hitachi Metals Group with all-out efforts by each employee." For promoting activities to eliminate work accidents, we have specified four priority areas: 1) eliminate serious accidents and similar accidents; 2) abide by health and safety rules, laws and regulations, and basic rules; 3) reinforce safety culture; and 4) pursue health management to ensure the health of employees.

Frequency of Occupational Injuries

	2017	2018	2019	2020	2021
All industries	1.66	1.83	1.80	1.95	2.09
Manufacturing	1.02	1.20	1.20	1.21	1.31
Steel	0.83	1.16	0.89	0.87	0.90
Hitachi Metals Group	0.55	0.42	0.27	0.23	0.30

(b) Promoting Everyone's Mental and Physical Health

We actively support health management that promotes good mental and physical health.

To promote physical health, we recommend that all employees undertake a secondary checkup following their regular medical examination, and we focus on lifestyle diseases and other health guidance. Regarding mental health, the stress check system is implemented every year. In addition to encouraging individuals to pay attention to their own mental health, we strive to improve the work environment through Groupwide analysis of the stress check results.

(4) Human Resources Training

(a) Basic Approach

Bearing in mind its corporate creed to "contribute to society by being the best enterprise," Hitachi Metals is striving to grow its business globally. To grow as a global company amid turbulent market conditions, we need to cultivate human resources who can constantly develop and put on the global market products that are original.

Our approach to our people is the distillation of “Wa sureba tsuyoshi” (united by respect), our fundamental spirit since the inception of our company. Based on this philosophy, we continue to develop “People of action with a global perspective” who are able to demonstrate their own personality and values through good teamwork at Hitachi Metals.

Under the determination that each and every employee within the organization be a driver of growth, a sentiment incorporated into our communications symbol “Materials Mag!c,” we support our employees in developing their expertise so that they become an efficient workforce who can actively seek out challenges and take action to achieve success or solve problems, as well as being shining examples for the Company.

(b) Training and Education Systems

We are building a personnel education system that links three elements: OJT, a personnel system that supports OJT, and OFF-JT for training, etc. OFF-JT training, etc., in planning fields sets personnel targets and requirements based on Hitachi Metals’ Corporate Creed and Corporate Philosophy, plans training to match requirements, and implements training accordingly. We have formulated a training system by global categories of management, planning/administration, technical, sales, and core business divisions.

(c) Developing the Next Generation of Human Resources

In the interest of sustainable corporate growth, we are deliberately cultivating the next generation of human resources who will take responsibility for operations on a global scale.

- **Cultivating the next generation of human resources**

  We have formulated a plan for cultivating the personnel who will take responsibility for the Company in the next generation, and are conducting regular employee rotations, challenging assignments, and OFF-JT training programs. We also support employees who study abroad to earn an MBA.

- **Cultivating local management personnel at each location**

At Group companies outside Japan, we are supporting efforts to cultivate locally hired personnel, with an emphasis on future executive candidates. We are also proceeding with measures to cultivate such personnel and promote them into positions of responsibility.

(5) Employee Benefits and Welfare

To make the lives of employees and their families more affluent and stable, Hitachi Metals offers a comprehensive range of measures to support them. These include housing support systems such as providing dormitories and housing allowances, as well as asset-building savings and group insurance.

As one of the employee benefits and welfare initiatives to support self-help efforts and the independence of employees, in 2003, the Company implemented the “Cafeteria Plan System” (selective benefit and welfare system), and began to offer a range of options to meet the different lifestyles and needs of individual employees. The lineup has been expanded to deal with ability and skill development, child rearing, nursing, health development, and preparation of a remote work environment, in addition to such conventional benefits as dormitories for single employees and company-run houses and the provision of medical services for employees. Each employee can choose the type of support they desire, when necessary, based on “Cafeteria Points” they have earned.

(6) Life Plan Support

In this day of declining birthrates and an aging population, and as lifestyles in old age become more diversified, having a definitive life plan is becoming more and more important. Hitachi Metals provides information to serve as the basis for life planning after retirement (retirement benefits, company pension, welfare pension, health insurance, employment insurance, etc.) and hosts Life Plan Seminars as an opportunity to think about one’s current work style and one’s lifestyle after retirement.

(7) Composition of Employees

	FY2017 (As of the end of March 2018)	FY2018 (As of the end of March 2019)	FY2019 (As of the end of March 2020)	FY2020 (As of the end of March 2021)	FY2021 (As of the end of March 2022)
Number of employees	6,315	7,067	7,022	6,623	5,889
5,654	6,227	6,215	5,826	6,215	5,068
661	790	807	797	807	821
Ratio of female employees	10.5	11.2	11.5	12.0	13.9
Average age (years)	43.6	43.1	43.5	43.4	44.2
Average service (years)	21.0	18.4	18.8	20.1	19.2

Number of female managers	16	19	19	18	20
Employment rate of people with disabilities	2.31	2.21	2.26	2.27	2.36

4. Responsibility to Shareholders and Investors

(1) Information Disclosure and IR Activities

To earn trust as a highly transparent “open firm,” the Hitachi Metals Group is working to enhance in-house systems to appropriately implement prompt, accurate, and fair disclosure of company information and publish information in a timely manner.

We disclose financial closing information on a quarterly basis. Necessary reports are prepared by the Corporate Communications Department of the Corporate Management Planning Division, in cooperation with other divisions. In addition to financial information disclosure, we actively publish information on topics from individual businesses and our medium-term management plans. We also communicate our management policies via integrated reports, corporate websites, and numerous other communication channels.

VI. Report on Environmental Aspects

1. Environmental management

(1) The Hitachi Metals Group's Environmental Vision

The Hitachi Metals Group promotes "efforts toward a decarbonized society," "contribution to a resource-efficient society," and "biodiversity conservation" as the three key pillars of its environmental vision. We aim to achieve both higher quality lifestyles and a sustainable society by resolving environmental issues in collaboration with our stakeholders. The Group will implement the FY2022 Environmental Action Plan by category, at each business site, in order to reduce CO_2 emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout its value chain. In addition, we have set long-term targets to achieve carbon neutrality—effectively zero carbon emissions—by 2050, an approach to realizing the vision of a decarbonized society by 2050.

Hitachi Metals Group Codes of Conduct

Toward a Sustainable Society

1. We will contribute to resolving social issues by promoting innovative solutions , accelerating collaborative creation with partners and stakeholders, and further integrating social and environmental responsibility into our business activities.

2. We will strive to develop technologies that contribute to social development and use them with due consideration of their impact on society.

3. We envision a low-carbon society, a resource efficient society, and a society in harmony with nature.
To this end, we will endeavor to reduce CO_2 emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout our value chain.

4. As a corporate citizen, we will make efforts to build a rapport with local communities and contribute to their development by working together to resolve social issues.

(2) Hitachi Metals Group Basic Environmental Protection Policies

Hitachi Metals Group Basic Environmental Protection Policies

Philosophy
Hitachi Metals' Corporate Creed is to "contribute to society by being the best enterprise." In line with this, we regard it as crucial to ensure that humanity's shared environmental resources can be passed down to future generations in the best possible condition. Accordingly, throughout our operations we treat environmental considerations as an issue of the highest importance and strive actively to promote environmental protection efforts on both the global and local community levels.

Slogan
- With a deep awareness that environmental protection is a major issue for all humanity, fulfill social responsibilities by striving to establish a sustainable society in harmony with the environment, regarding it as one of the essential aspects of corporate activity.
- Contribute to society by developing highly reliable technologies and products in response to needs for environmental protection and the limited nature of resources.

Business Conduct Guidelines

1. Compliance with environmental laws and regulations, and prevention of pollution
Comply with all applicable laws and regulations concerning environmental issues on all levels, from international laws to national, regional, and local pacts. Establish voluntary environmental standards as needed in order to assure compliance.
Identify potential environmental problems and take action to prevent pollution. In the event that environmental problems have occurred, take appropriate countermeasures to minimize environmental impact.

2. Maintenance of environmental organizational structure and enhancement of environmental supervision
Maintain an organizational structure that includes leadership by an executive responsible for managing environmental issues, as well as an underlying administrative structure. Promote environmental protection activities by applying voluntary environmental standards and establishing clear environment-related goals.
Additionally, strive to continually improve our environmental management through confirming that our environmental protection activities are being carried out in an adequate, effective, and proper manner.

3. Promotion of global manufacturing with consideration of LCA (Life Cycle Assessment)
Endeavor to reduce the environmental burden in the entire life cycle, including R&D, product design, manufacture, distribution, sale, use, and disposal. Promote the following as global manufacturing priorities:
1) Environment-conscious products, 2) prevention of climate change, 3) conservation and recycling of resources, 4) chemical management, and 5) conservation of biodiversity.

4. Environmental consideration at sites all over the world
Consider environmental impact in the areas around our manufacturing sites, and strive to carry out policies responsive to the requirements and needs of the local communities.

5. Education and training to increase environmental awareness
Educate and train employees about environmental protection and the importance of compliance with environmental laws and regulations to raise employees' awareness of the environment from a broad perspective.

6. Information disclosure
Promote positive communication through the disclosure of information regarding environmental protection activities to stakeholders, strengthen mutual understanding and foster a collaborative relationship.

Formulated: April 1, 2010
Revised: December 1, 2016

(3) The Hitachi Metals Group's Environmental Management Promotion Structure

(a) Governance

In April 2010, Hitachi Metals Group established the Hitachi Metals Group Basic Policy on Environmental Preservation to clarify the Group's unified approach to environmental management. In June 2021, we registered our support for the TCFD Recommendations, and in August of that year, following a report to the Board of Directors, we established a new environmental policy named "Aiming for Green Growth while taking Risks as Opportunities."

The Hitachi Metals Group Environmental Committee (Group Environmental Committee, hereinafter) has been established as a framework for promoting environmental activities such as climate-change countermeasures. The Group Environmental Committee is chaired by the Technology Development Executive Officer, and its executive office is the Environmental Strategy Department, Technology Development Division. Its activities are promoted in cooperation with the environmental management managers of each business division, business sites, and group companies. The Group Environmental Committee is responsible for developing environment-related regulations, setting targets for reducing environmental impact, and confirming that activities are appropriate and effective.

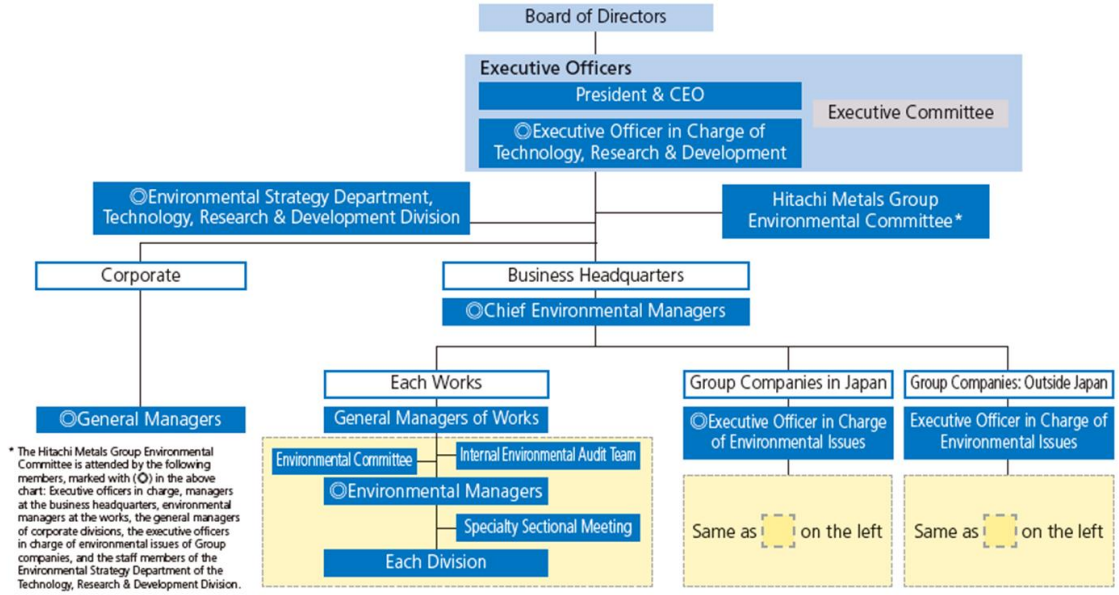
Policies and targets concerning environmental activities are discussed and set by the Group Environmental Committee as mid-term and annual environmental-action plans. With regard to climate-change countermeasures, the Environmental Action Plan sets targets for reducing CO_2 emissions within the Hitachi Metals Group. On the basis of those targets, energy-saving activities and the use of renewable energy are being promoted at each manufacturing site. The status of reductions in CO_2 emissions is monitored regularly, and the Group Environmental Committee meets once a year to share the results of the previous year, the status of numerical targets for the current year, and major initiatives to promote continuous improvement of activities.

From fiscal year 2021, the Technology Development Executive Officer, who chairs the Group Environmental Committee, reports to the Executive Committee and the Board of Directors twice a year on the status of efforts, including climate-change measures, to address environmental issues.

Status of important decisions on climate change in fiscal year 2021

Month/Year	Decisions on important issues related to climate change	Meeting body
June 2021	Endorsement of TCFD	Executive Committee
August 2021	New Environmental Action Policy "Aiming for Green Growth by Taking Risks as Opportunities"	Board of Directors
October 2021	Introduction of "Internal Carbon Price" Internal rules on capital investment stipulate that the effect of CO_2 reduction by capital investment must be calculated as profit on the basis of the "internal carbon price" and incorporated into profit plans.	Executive Committee

Environmental Promotion Structure



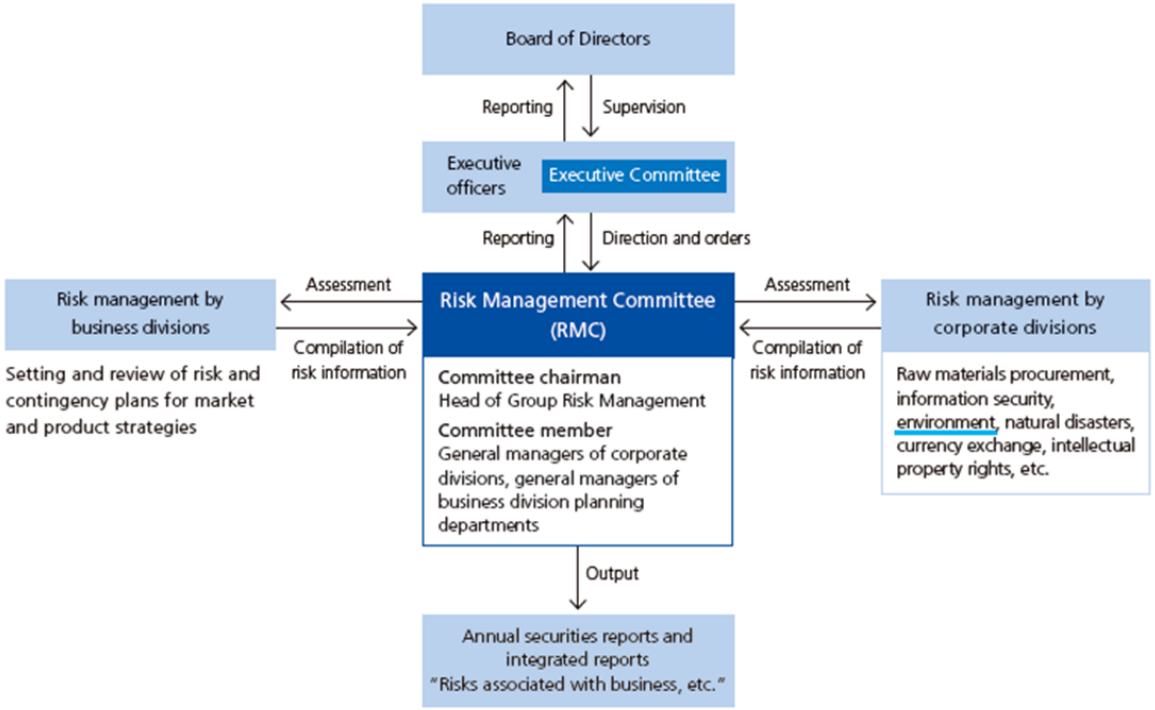
Roles in the Promotion Structure

Executive Officer in ChargeCharge	The Technology Development Executive Officer is in charge of the environment and exercises overall control through the Group Environmental Committee.
Hitachi Metals Group Environmental Committee	Deliberate and determine policies, targets, etc. related to environmental activities within the Hitachi Metals Group.
Chief Environmental Management Officer	Oversee environmental management activities within business headquarters.
Environment Committee Members	Deliberate and determine policies, targets, etc. related to environmental activities at each business site.
Environmental managers	Take responsibility for and promote environmental-management activities at each business site.

(b)Risk Management

In April 2022, Hitachi Metals Group established a “Companywide Risk Management Committee” (RMC) under the supervision of the Executive Officer responsible for group-risk management. The RMC summarizes various business risks surrounding the Group and contingency plans for those risks, and evaluates their coverage and weighting. Risks related to climate change identified by the Group Environmental Committee, corporate administrative divisions, and business divisions are reported to the RMC together with other risks as risks related to environmental regulations. The RMC is scheduled to meet twice a year, and the results of the interim and year-end risk-management assessments of the RMC are reported to and reviewed by the Executive Committee and the Board of Directors.

Risk Management Structure



(4) Fiscal 2019–Fiscal 2021 Medium-Term Environmental Action Plan and Fiscal 2021 Results

The Hitachi Metals Group's Medium-Term Environmental Action Plan for fiscal 2019 to fiscal 2021, along with results and assessments for fiscal 2021, are summarized in the table below.

Achievement rating: ○: fully achieved; △: 90% achieved; ×: not achieved

		Item	Action Target	2019			2020			2021		
				Target	Actual	Rating	Target	Actual	Rating	Target	Actual	Rating
Governance		Adhere to environmental compliance practices and reduce risks	Internal audit implementation rate	100 %	100 %	○	100 %	100 %	○	100 %	100%	○
		Cultivate environmental literacy	Implement environmental auditor development training	1 or more	Twice	○	1 or more	Once	○	1 or more	Once	○
			e-learning Participation rate	100 %	—*1	—*1	100 %	92%	△	100%	97%	△
		Improve environmental activity level	GREEN21-2021	140 GP	166 GP	○	210 GP	180 GP	×	280 GP	213 GP	×
Low-carbon society	Products	Sales ratio of key environmentally conscious products		23%	20.2%	×	24%	21.2%	×	25%	21.4%	×
		Conduct environmentally conscious design assessments (20 over three years)		7	11	○	9 (Two years)	9	○	9 (Two years)	9	○
	Factories	Reduce CO_2 emissions from Works	Improvement rate of CO_2 emissions per production unit (vs. FY2010)	5%	1.4%	×	6%	-2.3%	×	7%	2.1%	×
		Reduce CO_2 emissions during transportation	Improvement rate of energy consumption per transportation unit (vs. FY2010)	19%	31.9%	○	20%	29.6%	○	21%	33.4%	○
Resource efficient society	Resource circulation	Reduce and recycle waste	Improvement in the rate of waste and valuables generated per production unit (vs. FY2010)	12%	16.6%	○	13%	15.2%	○	14%	18.9%	○
			Waste landfill rate*2	14%	13.7%	○	13%	10.9%	○	12%	11.7%	○
	Water resources	Improve water-use efficiency	Improvement rate of water usage per production unit (vs. FY2010)	22%	22.2%	○	24%	12.2%	×	26%	29.9%	○
Society in harmony with nature	Chemical substances	Reduce output of chemical substances	Improvement rate of per unit rate of chemical substances released into the atmosphere*3	26%	22.6%	×	27%	34.2%	○	25%	33.7%	○

	Preservation of ecosystems	Impact on natural capital	Forest conservation activities (number of initiatives)	4	4	○	4	2	×	4	5	○
		Preservation of ecosystems	Activities for preservation of ecosystems (cumulative total number of initiatives)	4	17	○	8	9	○	12	14	○
Collaboration with stakeholders		Social contribution	Community cleanup activities, Lights Down campaigns, etc.	Continue activities and reduce environmental impact in aspects other than the protection of ecosystems		○	Continue activities and reduce environmental impact in aspects other than the protection of ecosystems		○	Continue activities and reduce environmental impact in aspects other than the protection of ecosystems		○

*1. Environmental e-learning is implemented as new general environmental education starting from FY2020 after educational methods and contents (teaching materials) are reviewed. In FY2019, e-learning was not conducted as it was under preparation. At each business site, general environmental education is conducted as usual.
*2. Excluding household waste, hazardous waste, and in-house landfills (landfills on the Company's sites)
*3. Excluding Kumagaya Light Alloy Plant from Actual values for fiscal 2020, due to its withdrawal from business

Fiscal 2022–Fiscal 2024 Medium-Term Environmental Action Plan

The Hitachi Metals Group's Medium-Term Environmental Action Plan for fiscal 2022 to fiscal 2024 is implemented as follows.

		Item	Action Target	Numerical Target (FY)		
				2022	2023	2024
Governance		Adhere to environmental compliance practices and reduce risks	Internal audit implementation rate	100%	100%	100%
		Cultivate environmental literacy	Implement education for new hires	Once	Once	Once
			Implement environmental auditor development training	1 or more	1 or more	1 or more
			e-learning attendance rate	100%	100%	100%
Low-carbon society	Products	Sales ratio of key environmentally conscious products		23%	24%	25%
	Factories	Reduce CO_2 emissions from Works	Reduce CO_2 emissions (vs. FY2015) (total)	20%	20%	22%
		Reduce CO_2 emissions during transportation	Improvement rate of energy consumption per transportation unit (Japan) (year-on-year)	1%	1%	1%
Resource-efficient society	Resource circulation	Reduce and recycle waste	Improvement in the rate of waste and valuables generated per production unit (vs. FY2010)	33%	34%	35%
			Waste landfill rate	11.5%	11.0%	10.5%
	Water resources	Improve water-use efficiency	Improvement rate of water usage per production unit (vs. FY2010)	33%	34%	35%
Preservation of ecosystems	Chemical substances	Reduce output of chemical substances	Improvement rate of per unit rate of chemical substances released into the atmosphere	26%	27%	28%

	Preservation of ecosystems	Promote and contribute to activities for preservation of ecosystems		Continue activities and contribute to preservation of ecosystems through overall corporate activities
Collaboration with stakeholders		Social contribution	Community cleanup activities, Lights Down campaigns, etc.	Continue activities and reduce environmental impact from aspects other than the protection of ecosystems

(5) Environmental Accounting

The Hitachi Metals Group has introduced environmental accounting to allocate corporate resources appropriately and continuously improve the efficiency of environmental investments and activities. The Group also aims to increase the understanding of its stakeholders by disclosing information about the effect and efficiency of its activities.

Environmental costs include things like environment-related capital investment, equipment maintenance and administration costs, and R&D costs.

Environmental effects include economic effects measured in monetary terms and categorized under waste processing and recycling, energy conservation, and others (R&D, recycling of products and packing materials, etc.).

The results for fiscal 2020 are as follows:

(a) Environmental Costs

Our environmental costs in fiscal 2021 were 9.79 billion yen in expenses and 0.3 billion yen in investment, for a total of 10.09 billion yen.

(b) Environmental Effects

The economic effects amounted to a total of 14.67 billion yen, primarily due to waste elimination, recycling, and energy conservation.

(c) Results of Environmental Accounting

■Environmental Costs

(100 million yen)

Cost classification			FY2020		FY2021	
			Expense	Investment	Expense	Investment
	Business area costs	Pollution prevention	14.3	1.5	14.2	1.2
		Global environmental preservation	19.0	3.9	18.6	1.5
		Resource recycling	23.8	0.5	34.7	0.3
		Subtotal	57.1	5.8	67.5	3.0
	Upstream and downstream costs		2.4	0.0	2.4	0.0
	Management activity costs		6.9	0.0	18.3	0.0
	Research and development costs		11.0	0.0	9.2	0.0
	Community activity costs		0.0	0.0	0.0	0.0
	Other		0.6	0.0	0.4	0.0
	Total		78.0	5.8	97.9	3.0

■Environmental Effects

(100 million yen)

	Item	FY2020	FY2021
Economic Effects	Waste processing and recycling	100.5	142.8
	Energy conservation	1.8	1.6
	Other	2.4	2.3
	Total	104.7	146.7

●Scope of disclosure: The Hitachi Metals Group in Japan
●Calculation period: April 1, 2021 to March 31, 2022

(6) Integrated Environmental Management System (Integrated EMS*1)

The Hitachi Metals Group has introduced ISO 14001 as its environmental management system.
We began acquiring certification for individual factories in 1997, and then built integrated Environmental Management Systems (integrated EMS*1) at each segment of the Business Headquarters (specialty steel as well as functional components and equipment of the Advanced Metals Division, and magnetic materials and applications as well as wires, cables, and related products of the Advanced Components and Materials Division). This action was prompted by the increasing necessity of close links with headquarters departments in areas such as engineering, planning, and sales, to comply with product environmental regulations and expand sales of eco-products.
ISO 14001:2015, revised in September 2015, requires that environmental management be in balance with the strategic direction of the business and integrated with business processes. We strove to transition to the 2015 requirements as we worked toward an integrated EMS for each segment of the Business Headquarters, and completed the transition during fiscal 2017.
Since April 2019, we have shifted to a two-division organization consisting of the Advanced Metals Division and the Advanced Components and Materials Division. However, the EMS of each segment (the former four internal companies) has been implemented within the new system of the Business Headquarters.
*1: Environmental Management System

(7) Environmental Auditing

The Environmental Management Department, Technology, Research and Development Division, conducts companywide environmental audits in an attempt to achieve thorough adherence and compliance with environment-related laws and regulations, appropriate EMS management regarding environmental action plan, and comprehensively mitigate environmental risks.
In fiscal 2021, environmental affairs audits were conducted at seven sites (six in Japan and one outside Japan) in conjunction with internal audits. We confirmed that there were no major non-conformities requiring immediate administrative guidance. Although 15 minor non-conformities were revealed, actions to correct them are underway according to plan.

(8) Environmental Education and Awareness Promotion

The Hitachi Metals Group has set up training systems as part of our EMS, and has established clearly defined roles for companywide training and individual factory-level training for further improvement of the employees' environmental awareness as well as the enhancement of knowledge and skills relevant to each workplace.

Environmental Training Systems

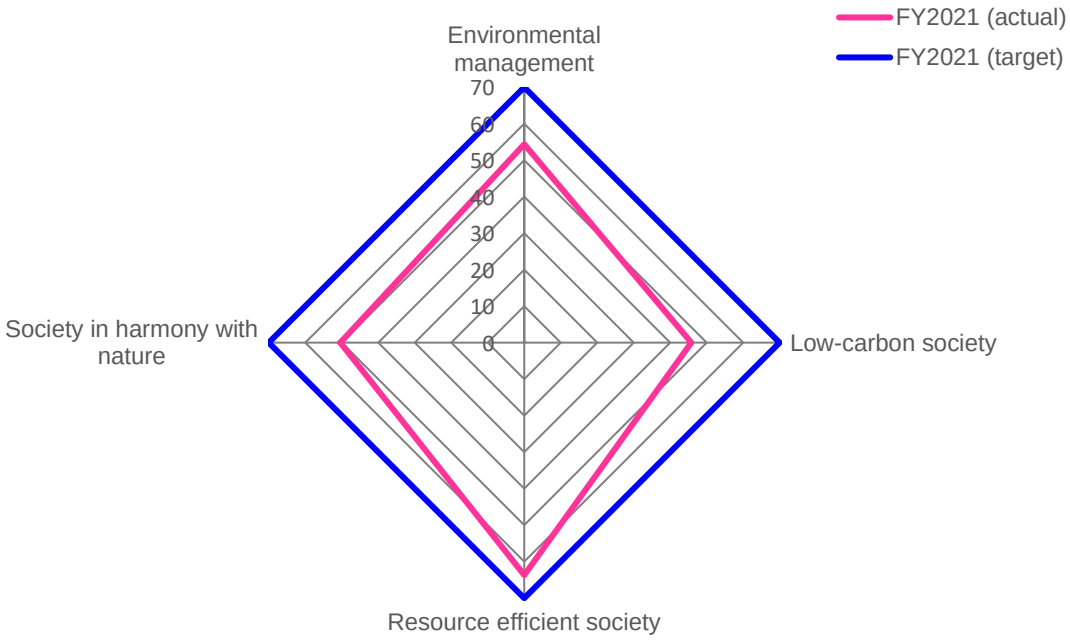
Target		Description	
General education	All employees	e-learning	Eco-mind training (Hitachi Metals Group)
	On-site employees	On-site environmental education	General education on ISO14001 and environmental management performed by general employees
Professional education	New supervisor	Education for new supervisor	Environmental issues and workplace responsibilities
	Environmental Internal Auditors	Environmental Internal Auditor training	Environmental laws and regulations, EMS recognition and environmental skills
	Environmental officers	Environmental officer training	Education for staff responsible for environmental affairs, and comprehensive risk management
	Legally qualified personnel	Qualification-based training	Education to develop legally qualified personnel (including external training)

(9) Environmental Management Level “GREEN21-2021” Activities

The Hitachi Group promotes “GREEN21” as a system to assess point scores for ongoing improvement in environmental activities and for raising the level of activity. The Group revised GREEN21 for the fifth time in fiscal 2019, and pursues activities under GREEN21-2021 during the three years from fiscal 2019 to fiscal 2021.

In GREEN21-2021, activities are categorized under the four items in the table below, and are assessed and scored in accordance with the achievement status of the Environmental Action Plan. Additional points are provided for upward revision of targets, external awards, etc.

In fiscal 2021, the Hitachi Metals Group scored 213 Green Points (GPs) in the four categories, failing to achieve our target of 280 GPs. We will continue our efforts to achieve the targets of the Environmental Action Plan and make further progress.



No.	Category (Rating Form)	Main Rating Contents
1	Environmental management	Enhancement of global environmental management; enhancement of management at small and medium-sized sites; HR development for environmental management; legal compliance; decreasing number of complaints
2	Low-carbon society	CO_2 emissions reduction amount/rate related to products and services Improvement of CO_2 emissions per production unit Reduction of CO_2 emissions attributable to transportation (shippers)
3	Resource efficient society	Improvement rate of water usage per production unit; reduction of water usage Response to water-related risks Reduction of waste valuable resources; improvement of such resources per unit; waste landfill rate; raw material usage status; product recycling implementation status
4	Society in harmony with nature	Improvement rate of per unit rate of chemical substances released into the atmosphere Activities for preservation of ecosystems

GREEN21-2021 Targets and FY2020 Achievement

(FY)	FY2019	FY2020	FY2021
Target	140	210	280
Actual	166	180	213

(10) The State of External Communications about the Environment

(a) Participation in Exhibitions

The Hitachi Metals Group participates in various exhibitions and introduces its environmentally conscious lineup of technologies that help customers make their products more efficient, compact, and lightweight, and products that feature longer-life performance. The Group tries to show how its products contribute to the reducing of environmental burden.

Main Exhibitions in which the Hitachi Metals Group Participated (Fiscal 2021)

Program date	Exhibition name (location)	Major items on display
May 26–July 30, 2021	Automotive Engineering Exposition2021 (ONLINE)	Exhibited advanced technologies and products that contribute to the evolution of EVs, from five categories: motor; power electronics-related; battery-related materials; light weight; and new manufacturing technology, a new category created this year.
Online: June 8–July 16, 2021 Physical exhibition: June 23–25, 2021	TECHNO-FRONTIER 2021 (Tokyo Big Sight)	Exhibited advanced materials and technologies, including lightening technologies, that support the advancement of motors and electronic components, from five categories: motor-related materials; inverter/rechargeable battery-related materials; housing-related functional components and equipment; FA/motion engineering; and new manufacturing technology, a new category created this year.
December 8–10, 2021	1st Material Expo (Makuhari Messe)	Exhibited new materials developed by applying material technologies essential to create higher value added products, such as environmentally friendly products and materials that enable reduced workloads for maintenance and other duties.

External Awards

The Hitachi Metals Group's products and environmental activities won the following external awards in fiscal 2020 for their contribution to energy conservation and to reductions in size and weight.

Major External Environmental Awards (Fiscal 2021)

Business division/group company	Product/technology/project awarded	Title of award	Awarding body	Reasons for award
(CD) Electric Wire & Cable Business Unit (Wires and Cables)	Medical Silicone Cable SilMED®	2021 Super Monodzukuri Parts Award Nippon Brand Award	MONODZUKURI Nippon Conference Nikkan Kogyo Shimbun	The product was awarded for its high sliding performance, which was made possible by developing a unique surface coating process. This excellent function is expected to help ensure safe and secure medical services, particularly by preventing hospital acquired infections.
(HMK) Pyeongtaek Works	Corporate activities that have contributed to environmental conservation	Environmental Enterprise Excellence Award	Pyeongtaek Industrial Park Corporation	The organization was awarded for its highly effective environmental conservation activities, which have been enabled by building systematic environmental management structures to establish the autonomous operation of management systems. With these systems, the organization makes ongoing efforts to prevent water leakage and reduce air pollutant emissions.

(11) Consideration for the Preservation of Biodiversity

The Hitachi Metals Group's ecosystem preservation measures include tree planting and forest conservation activities, cleanup activities in areas surrounding plants, and environmental education.

① Examples of Major Ecosystem Preservation, Tree Planting, Forest Conservation, and Social Contribution Activities


Tree-planting activities (Hitachi Cable (Suzhou)

Cleanup activities at Moka City Shizen-fureai Park (Moka Works,

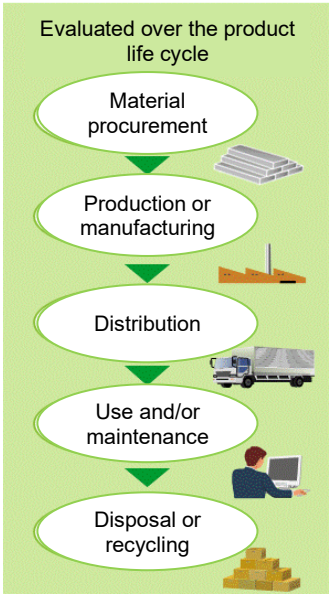

Cleanup activities around the Kanzaki River (Suita Works,


Green curtain activities (Santoku Corporation) *Seedlings planted (left);

2. Environmental Consideration in Products

The Hitachi Metals Group considers “Thinking about the next generation—An environment-friendly solution” an important managerial issue. We contribute to the realization of a sustainable society through the creation of new products and new technologies that meet such needs, as well as through the provision of advanced environmentally conscious products.

(1) Environmental Consideration (Life Cycle Assessment [LCA]) in Products and Services



For the purpose of contributing to the realization of a sustainable society, the Hitachi Metals Group is focusing attention on the environmental and energy sectors when promoting the development of new products. Moreover, for the development and design of such new products, we promote environmentally friendly product development based on the “Hitachi Group Eco-Design Management Guidelines” (revised version), which takes product life cycles into account.

Eco-design that takes product life cycles into account has begun to be required by various international initiatives, including the revision of ISO 14001:2015 and the establishment of IEC 62430[*1] as well as national regulations for energy-saving products. In order for evaluations to be made from the viewpoint of life cycles based on IEC 62430, the Hitachi Metals Group revised its environmentally conscious design assessment and LCA systems in fiscal 2016. Using these assessment tools, we promote product development and design in consideration of environmental impacts the product will have on the environment throughout its entire life cycle that ranges from procurement and manufacturing to use and disposal by the customer.

The table below shows examples of the Hitachi Metals Group’s environmentally friendly products and technologies that are applied to the environment and energy-related fields.

*1. IEC 62430: The standards set by the International Electrotechnical Commission (IEC) for “Environmentally conscious design for electrical and electronic products”

Examples of the Hitachi Group’s environmentally friendly products and technologies applied to the environment and energy-related fields

Field of application			Products and development technologies
Energy	Renewable energy	Solar cells	Amorphous cut core, dust choke coil, target materials
		Wind-power generation	Rare earth magnets, amorphous metal materials, fine met core, magnet wires
	Energy saving and high efficiency	Power generation facilities	Super-heat-resistant metal materials, precision cast blades for turbine wheels
		Home appliances	Magnets for air conditioners and refrigerator compressors, high-efficiency amorphous motor components
	Electricity storage/transformation	Transformers	Amorphous metal materials for low-loss transformers
		Batteries	SOFC[*2] fuel cell parts (interconnector materials, heat-resistant parts), electrode members for secondary batteries, clad metals, xEV battery cases
Mobility	Automobiles	Emissions control	Components that help clean exhaust gas
		Light weight	Lightweight undercarriage, magnets for EPS[*3], various sensors

		High efficiency	Heat-resistant cast steel materials, CVT*4 belt materials
	Hybrid/EVs	Motors	Rare earth magnets, amorphous metal materials, amorphous motors, fine met core, clad metals for secondary battery electrodes, highly efficient magnet wires
		Inverters and other devices	Members for fast charging, aluminum cast inverter cases, silicon nitride substrates, power harnesses
	Railway	More efficient, compact, lighter weight	Cables for rolling stock
	Aviation	Longer life and higher efficiency	Ni-based alloy large forged parts for aircraft engines, high-heat-resistance/high-corrosion-resistance alloys
All industries/ Infrastructure	Industrial equipment, etc.	Aircraft components	Long-life die steel, carbide rolls, corrosion/heat-resistant fittings, Eco-Green cables, additive manufacturing technology
	Water treatment	Seawater desalination	Ceramics adsorption filters for pretreatment of seawater desalination
	Electronics	More efficient, compact, lighter weight	Communication modules, multilayer ceramics components, silicon nitride substrates

*2. Solid Oxide Fuel Cell; *3. Electronic Power Steering
*4. Continuously Variable Transmission

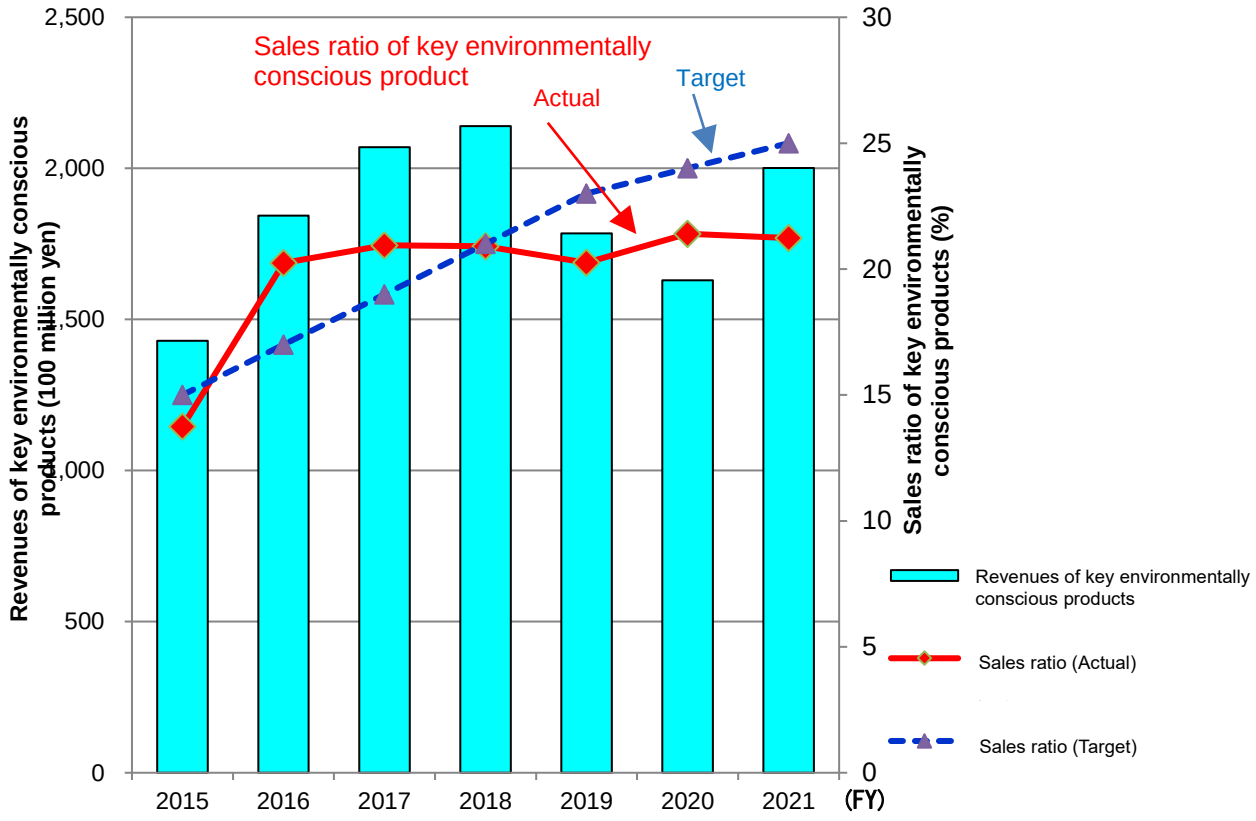
(2) Expansion of Key Environmentally Conscious Products

The Hitachi Metals Group defines environmentally conscious products as those targeted for growth based on a management strategy and that make a significant contribution to resolving environmental issues such as climate change and resource recycling. The Group is promoting the increase of revenue from environmentally conscious products.

In fiscal 2021, revenues from sales of key environmentally conscious products increased to 200.1 billion yen, reflecting an improvement of 37.1 billion yen from the previous year, when sales declined chiefly due to production being reduced globally as a result of the spread of COVID-19. However, the revenue ratio on a consolidated basis remained unchanged from the level of the previous year at 21.2%, falling short of the target (24%).

Going forward, we will expand the lineup of target products and promote sales, aiming to contribute to tackling environmental issues facing our society (climate change, resource recycling, etc.).

Revenues and Sales Ratio of Key Environmentally Conscious Products

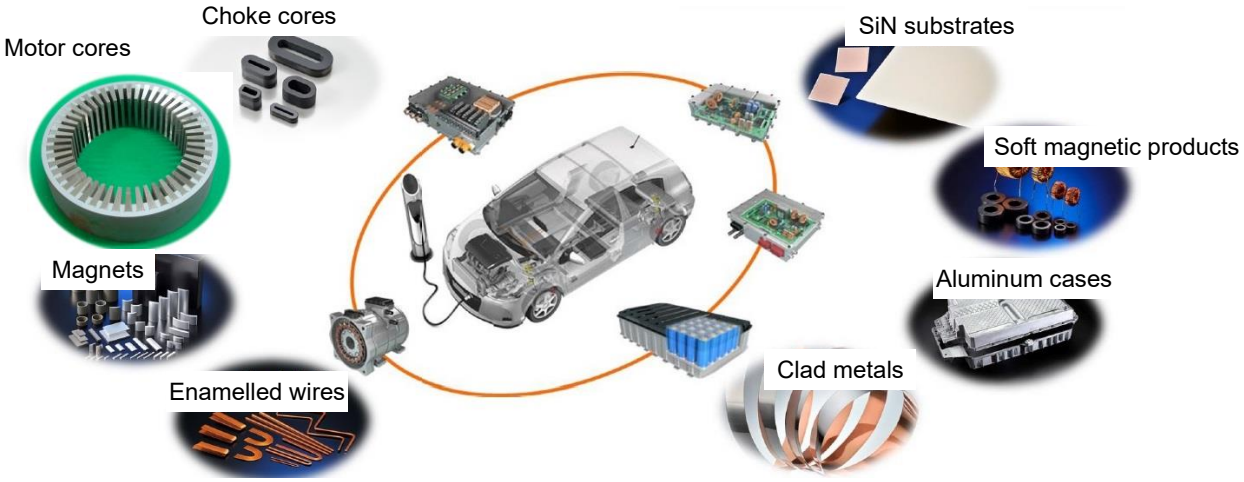


(3) The Hitachi Metals Group's Environment- and Energy-related Products

The Hitachi Metals Group develops and delivers materials and products in fields ranging from generators and transformers through to factories, plants, offices, homes, and vehicles, contributing to the environment and energy across wide-ranging areas of society.

Introducing Environment- and Energy-related Products

■List of our xEV*1-related products



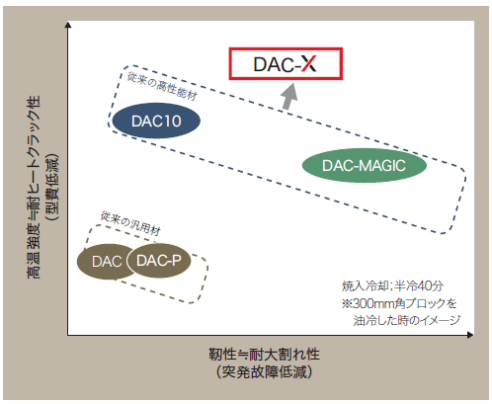
*1. xEV: A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs)

■Die steel for die-casting DAC-X® with outstanding strength at elevated temperatures

Tool Steel Department, Specialty Steel Business Unit, Advanced Metals Division

Recently, as the application of diecast parts for xEVs has been expanding, die-casting molds have been required to withstand severer usage conditions, including for use of high-melting point aluminum alloy and higher-cycle casting of products. Particularly, for molds to be applied to produce gate-related parts and small and medium-size nested structures, high strength at elevated temperatures is required to endure softening temperature conditions. In response to this requirement, we have developed DAC-X®, steel for die-casting with outstanding strength at elevated temperatures. DAC-X® represents a new high-performance die-casting steel with strength at elevated temperatures and toughness achieved at higher levels than previous products, which has been made possible through ingredient improvement and process innovation.

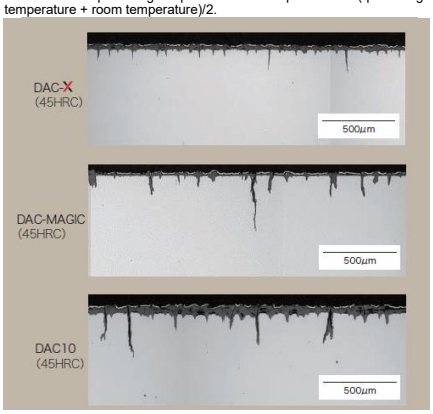
The new product can improve the heat crack resistance, effecting longer mold life, which will contribute to effective use of resources and decarbonization.



Hitachi Metal's die-casing steel lineup

DAC, DAC-X, and DAC-MAGIC are registered trademarks of Hitachi Metals, Ltd.

Quenching temperature: 1,030°C; quench cooling: half temperature time (40 min.)
Half temperature time: time (minutes) required for the material to cool down from the quenching temperature to that equivalent to: (quenching temperature + room temperature)/2.

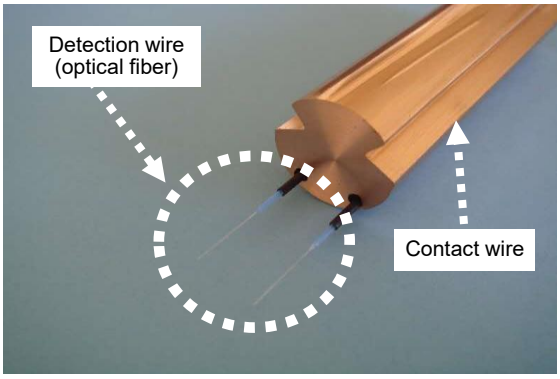


Microscopic cross-section view of the material subject to 3,000 heating (650°C) and quenching cycles

■ Fiber-optic contact wires

Casting & Wiring Department, Electric Wire & Cable Business Unit, Advanced Components and Materials Division

In the electric railway system, including for Shinkansen lines, the train vehicle receives electric current fed from the overhead line (contact wires) through the pantograph mounted on the roof while on the track. The contact wire is in direct contact with the pantograph. Due to this structure, the contact wire is inevitably susceptible to abrasion wear, which may cause broken wires resulting in a stoppage of train service in the worst-case scenario. As a measure to solve this problem, a contact wire wear detection system was developed. The previous model was equipped with metallic wires built in to monitor abrasion wear by sensing the current flow, and this configuration limited the detection functionality to non-service nighttime hours when it was not disturbed by noise from the running train. To address this issue, Hitachi Metals launched a joint project with Central Japan Railway Company (JR Central) to develop a new model adopting optical fibers for the detection wire. This was designed to enable around-the-clock real-time monitoring of the wear status of contact wires. The new fiber-optic contact wire wear detection system was successfully commercialized in 2021. In addition, this system has enabled the centralized monitoring of the wear status from the Shinkansen General Control Center, as opposed to the previous system requiring on-site checks, resulting in a significant decrease in maintenance work hours.



Fiber-optic contact wires

Shinkansen General Control Center

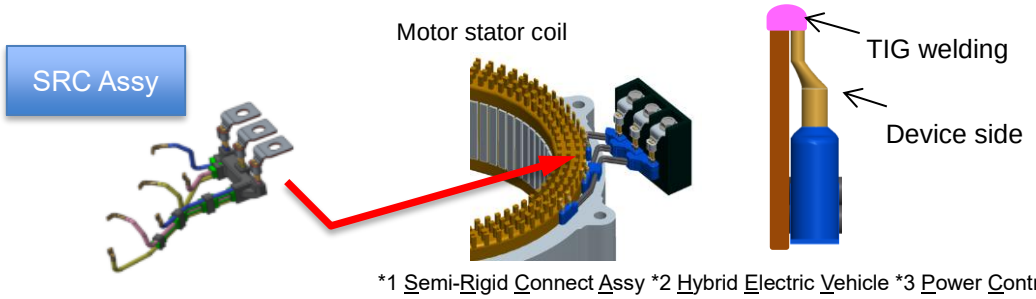
■ High-accuracy and high-configurability xEV motor wiring components (SRC Assy*1)

Automotive Components Business Unit, Advanced Components and Materials Division

Aiming for carbon neutrality, national and regional governments as well as auto manufacturers around the world are announcing various plans and targets, represented by the commitment made by Europe, the US, and Japan individually to ensuring that all new vehicles sold in and after 2035 will be electric.

In this situation, the HEV*2 market is expanding currently in response to transition demand, and targeting this market, we are increasing the supply and marketing of xEV wiring harnesses and SRC assy, which went into mass production in 2019. The SRC assy supplies electric power from the motor or generator to the PCU*3, a critical function for the vehicle to serve its essential purpose of “running.” This product is designed to be connected by welding to the customer’s device containing the stator coil, which requires a high level of wiring configurability and high dimensional accuracy to lay out six wires so that the device can perform effectively. In order to address this challenge, we discussed plans from the development stage

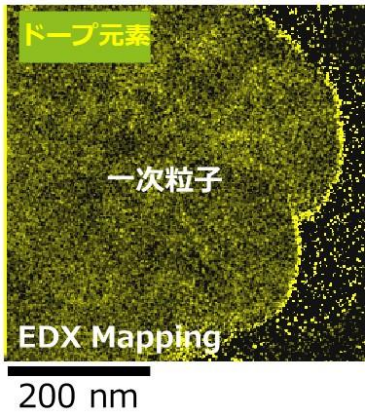
to satisfy the customer's requirements and worked on the plans by trial and error. Furthermore, we developed a full automatic mass-production line for high-accuracy products. The line was expanded to increase output at the China base. Going forward, we plan to expand the development of these products, as part of our efforts to increase contribution to carbon neutrality. For this purpose, we will promote development and marketing activities to cater to customer needs in a fine-tuned manner.



*1 Semi-Rigid Connect Assy *2 Hybrid Electric Vehicle *3 Power Control Unit

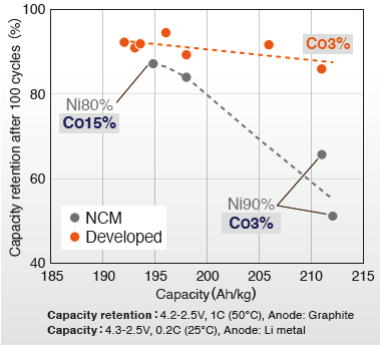
■ High-capacity nickel-based cathode materials for lithium-ion batteries (development technology)

Global Research & Innovative Technology Center



Lithium-ion batteries (LIBs) are used in a wide range of fields, from mobile devices to hybrid and electric vehicles, and demand for LIBs is expected to grow rapidly, especially for use in electric vehicles (EVs). In order to facilitate the popularization of EVs, it is necessary to improve the total and per-charge mileage. One key solution to this issue can be provided by cathode materials that achieve LIBs with high capacity and long life at the same time. Generally, the cathode of automotive LIBs is fabricated with three-element layered materials.

One method for expanding the capacity of this type of cathode is to raise the content of nickel, the base metal, to increase the lithium-ion insertion/de-insertion capacity. The problem of this method, however, is that higher content of nickel lowers the material's endurance to charge/discharge cycle, resulting in shorter battery life.



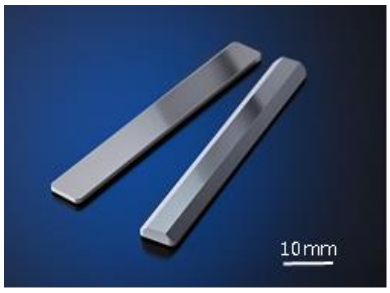
To address this problem, we have developed a micro-structure control technique to suppress degradation of the crystal structure of the cathode subject to the charge/discharge cycle. This technique can prevent a shorter battery life while the nickel content is raised from the conventional 80% to 90% in order to increase the capacity. At the same time, this process has allowed for a reduction in the content of cobalt (by 80% against our comparable products), an essential component of the cathode material especially for the purpose of stabilizing the crystal structure. Given that cobalt is a scarce resource and generates a significantly larger amount of greenhouse gases (GHGs) than the other base components,

reducing the cobalt content constitutes a substantial contribution to reduced GHG emissions from the manufacturing of cathode materials and LIBs.

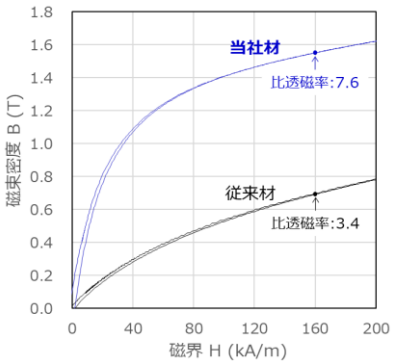
■Magnetic materials for motors 楔 (development technology)

Global Research & Innovative Technology Center
Power Electronics Materials Business Unit, Advanced Components & Materials Division

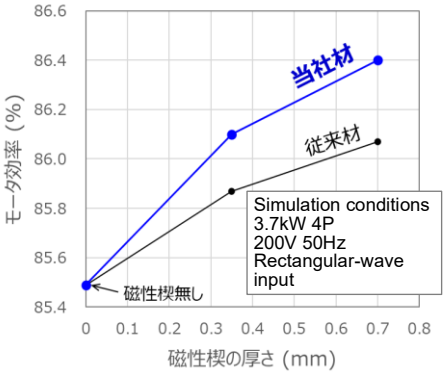
It is said that motors consume nearly 50% of the global supply of electric power, and as such, improving the efficiency of this mechanism is one of the most overriding issues of energy-conserving and CO_2 emissions reducing technologies. Against this background, we have developed new high-performance magnetic slot wedges. This represents the technology that is often used to increase motor efficiency, specifically by improving the magnetic flux distribution within the motor. With previous products, however, the improvement effect was limited due to the inadequate density of magnetic particles and magnetic permeability. In comparison, our recent development technology, an application of our proprietary powder metallurgy technique, provides a higher density of magnetic particles, and achieves permeability that is about double the level of the previous products. A computer simulation suggests that use of the new high-permeability magnetic slot wedges is expected to increase the motor efficiency by about 0.9% compared to no technology of this kind being used and about 0.3% compared to use of previous products. We plan to mass-produce this magnetic slot wedge technology, looking to contribute to a low-carbon society.



Magnetic slot wedges
(external view)



Comparison of magnetic properties



Comparison of motor efficiency

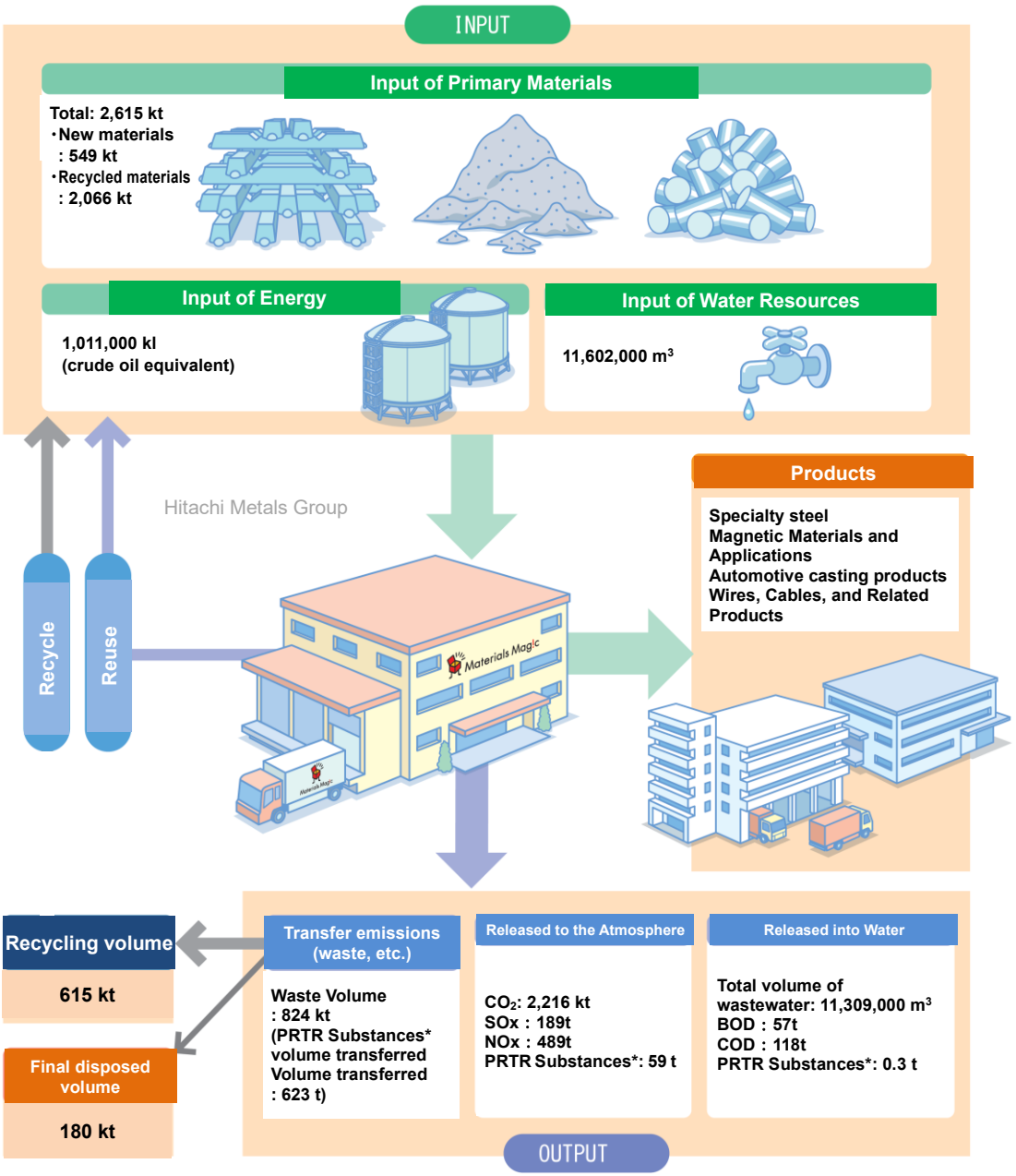
3. Environmental Consideration in Manufacturing

This is a graphical representation of the balance of materials in manufacturing processes at the Hitachi Metals Group for fiscal 2021.

The Hitachi Metals Group is promoting the reduction of the environmental burden in two directions: reducing the volume of input through the efficient use of resources and energy, and reducing the volume of output by controlling atmospheric releases and wastewater discharges, reducing and recycling waste, and so on.

(1) Material Balance

The Hitachi Metals Group's Material Balance for Fiscal 2021 (Global)



* PRTR emission quantities are totals of those released by domestic companies in the Hitachi Metals Group

(2) Climate Change Prevention

The Hitachi Metals Group is a materials manufacturer and uses significant amounts of energy in its manufacturing processes. For this reason, the Group positions the prevention of climate change as a management priority. The Group has established medium- to long-term targets and is now working on energy conservation measures to reduce its energy consumption rate and CO_2 emissions.

(a) Addressing Climate Change

1. Disclosure in accordance with TCFD Recommendations

As countries around the world intensify their efforts to address climate change in accordance with the Paris Agreement, the Japanese government announced in October 2020 its policy goal of reducing emissions of greenhouse gases, as typified by carbon dioxide (CO_2), to virtually zero by 2050. Accordingly, companies are expected to be more proactive than ever in their efforts to transition to a decarbonized society.

Hitachi Metals Group considers the impact of climate change on its business as one of our most important management issues, and we believe that enhanced disclosure of climate change-related information is a key factor in building a relationship of trust with our stakeholders. Accordingly, in June 2021, we registered our support for the TCFD* Recommendations. We will continue to enhance our disclosure of information on the impact of climate change on our business activities in accordance with the TCFD Recommendations.

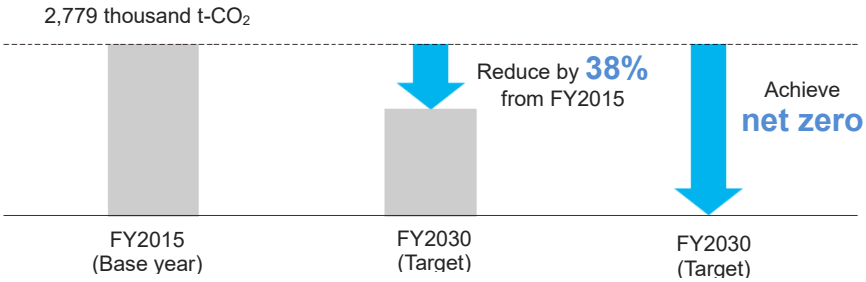
*TCFD (Task Force on Climate-related Financial Disclosures):

Created in 2015 by the Financial Stability Board (FSB) in response to the related request from the G20 summit meeting. In June 2017, the TCFD published the final recommendations, specifying items for business and other organizations to deal with when disclosing information on climate-related risks and opportunities.

2. Indicators and Targets

The Hitachi Metals Group has set targets for reducing CO_2 emissions* as shown in the illustration below. In promoting carbon neutrality, we will implement various measures, such as process improvement particularly through facility investment, fuel conversion for melting and heating furnaces and other equipment, technology development for expanding usage of carbon-free fuels, and introducing renewable energy in addition to continuing with previous energy-conserving activities.

CO_2 emissions reduction targets



*Scope 1: direct CO_2 emissions by the Company

Scope 2: indirect emissions associated with the use of electricity, heat, and steam supplied by other companies (absolute value)

Actual achievements for Scopes 1 and 2 (1000t-CO_2)

Item	FY2019	FY2020	FY2021
Scope1	927	777	876
Scope2	1,392	1,218	1,340
Scope1+Scope2	2,319	1,995	2,216

*Executive Compensation

Executive compensation in the Hitachi Metals Group is determined on the basis of the achievement of annual targets. Starting in fiscal 2022, the extent to which the CO_2 emissions reduction targets have been achieved will be added to the index as an evaluation item for our climate change response.

*Internal carbon price

To promote CO_2 emissions reduction, we have added the concept of “internal carbon pricing” to our internal regulations related to capital investment. In detail, we set a carbon price (8,000 yen/t CO_2) based on the total amount of CO_2 emissions after capital investment, and the effect of the CO_2 reduction of the capital investment is calculated as profit. (October 2021)

3. Strategy (Scenario Analysis)

The Hitachi Metals Group has begun “scenario analysis” to clarify the risks and opportunities posed by future climate change and to develop business strategies to reduce risks and expand opportunities. While we recognize that scenario analysis should cover the entire group, including the supply chain, in fiscal year 2021, we limited our analysis to a limited number of scenarios and scope of coverage. In fiscal year 2022, we plan to complete the analysis regarding domestic business, and
from fiscal year 2023 onward, we will promote scenario analysis including overseas operations.

• Scenario-analysis Process

Scenario analysis—consisting of the four steps shown in Figure 1—aims to assess (i) financial and business impacts under different scenarios and (ii) resilience of the Hitachi Metals Group strategy in regard to climate-related risks and opportunities.

• Assumptions for scenario analysis

Scenario: Refer to “Below-2°C scenario” for risks and opportunities excluding physical risks, and refer to “4°C scenario” for physical risks.

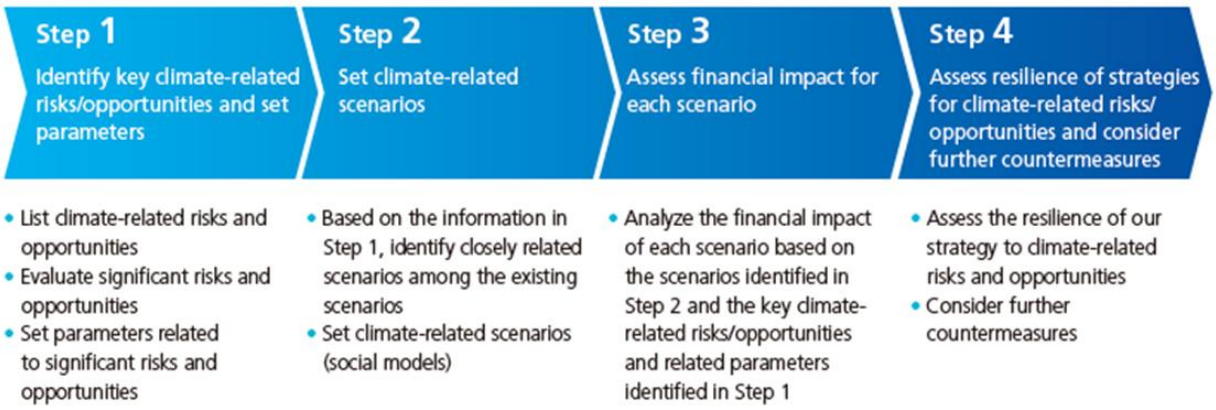
Target businesses: (FY2021) Advanced Metals Division (domestic sites)
(FY2022) Advanced Components and Materials Division (domestic sites); Advanced metals Division (domestic sites)

Target year: Impact as of 2030

・ Reference scenario

Classification	Main reference scenario
Less-than 2°C scenario	・IEA World Energy Outlook 2020. Sustainable Development Scenario ・IPCC RCP2.6
4°C scenario	・IEA World Energy Outlook 2020. Stated Policy Scenario ・IPCC RCP8.5

・Steps of scenario analysis



The following table summarizes the results of examinations on risks and opportunities posed by climate change.

■ Business and financial impacts and responses under the assumption of the year 2030 (Advanced Metals Division [domestic sites])

Classification		Type	Content	Business/ financial impact	Our response
Risk	Transition	Policy/regulations	Increased production and operating costs owing to stricter regulations, such as the introduction of carbon pricing (CP), which includes carbon taxes, taxes on fuel and energy consumption, and emissions trading.	Medium	Currently, we are working to reduce CO_2 emissions by promoting various energy-saving measures (e.g., LED lighting and introduction of or switch to high-efficiency equipment) and activities to improve productivity. From now onwards, we will actively promote fuel conversion and the introduction of renewable energy (i.e., installation of solar panels) so as to achieve our CO_2 reduction target for 2030.

			Higher procurement costs for raw materials (including rare metals and auxiliary materials such as direct complementary materials) due to stricter CP and other regulations.	Medium	As for principle raw materials, we will work to strengthen surcharges (price sliding-scale system) and consider and implement plans to find new suppliers. From the perspective of life-cycle assessment (LCA), we will increase the utilization ratio of scrap generating low CO_2 emissions and find new suppliers.
		Technology	Increased operating costs associated with the introduction of manufacturing processes (based on electrification and alternative fuels) to meet decarbonization requirements.	Medium	When introducing new manufacturing processes, we will examine equipment specifications with the aim of reducing its impact on operating costs.
		Market	Decreased sales of peripheral components of internal combustion engines owing to the expansion of xEVs.	Medium	As for capturing demand for components of automotive internal combustion engines, we will target the commercial vehicle and agricultural/construction equipment fields.
			Decreased sales due to changes in customer procurement standards (RE100 and other compliance requirements) in accordance with decarbonization.	Small	As for reducing CO_2 emissions from manufacturing processes, we will continue to promote both energy conservation and renewable energy, and we will focus on how to respond to customer requests for decarbonization.
			Increased costs of developing new products for a decarbonized society.	Small	We will develop environmentally conscious products and launch them onto the market sequentially while not being restricted to our conventional business areas.
			Increased procurement risk due to increased demand for raw materials.	Small	We will develop processes that utilize overseas scrap alloys and low-grade raw materials as well as processes for reducing the use of rare metals.
		Reputation	Decreased sales due to lower customer evaluations resulting from delays in the development and launch of environmentally	Medium	We will strengthen cooperation between sales departments and research and development departments with the aim of developing environmentally conscious products, and address the issue as a company-wide top priority.

			conscious products onto the market.		
	Physical risk	Acute and chronic	Orders and sales decreased as a result of delays in delivery owing to operations suspended due to abnormal weather-induced natural disasters.	Large	We will systematically improve our production systems in anticipation of extreme weather events. We will expand the BCP system and refine the action manual for emergencies.
			Increased business costs due to rising insurance costs	Small	In areas where disasters such as tidal waves and floods are anticipated based on the local history of disasters, we will systematically implement disaster preparedness measures such as relocation of factories and product warehouses, protection of production lines, etc.

Classification	Type	Content	Business/ financial impact	Our response
Opportunity	Resource efficiency	Sales increased by raising product value through efficient production and effective use of materials and energy.	Medium	To achieve the 2030 CO_2 emissions reduction target, we will promote various energy-saving measures (e.g., LED lighting and introduction of or switch to high-efficiency equipment) and productivity-improvement measures while promoting fuel conversion and introduction of renewable energy (i.e., installation of solar panels) in a proactive manner. Naturally, we will publicize our efforts and achievements.
	Source of energy	Sales increased through an improvement in the customer's evaluation for supplier selection by working on decarbonization.	Medium	We will actively promote CO_2 reduction by introducing renewable energy and switching to carbon-neutral fuels.
	Products/Services	Sales increased by developing and launching environmentally conscious products onto the market.	Large	We will receive new orders and increase market share of target products by shortening the development lead time and reducing the costs of environmentally conscious products. We will continue to

				expand sales of environmentally conscious products, which are expected to be in more demand in the future. Examples: ・Mold materials that provide longer service life ・Materials for various industrial machinery, undercarriage parts, and exhaust-gas filters that contribute to improved fuel efficiency and reduced emissions by cars ・Aerospace products that are expected to improve the fuel efficiency of airplanes ・Battery materials (clad products) and power-semiconductor materials for use in batteries and other products ・Mass-flow controllers that enable semiconductor manufacturing equipment to save energy
	Market	Sales increased by expanding sales of environmentally conscious products into new global markets in response to increased demand.	Medium	As decarbonization progresses, products are expected to become smaller, more powerful, and lighter; accordingly, we will develop new applications with various alloys that can take advantage of different material properties.
		Sales increased by expanding into the xEV market.	Medium	Many of our products, including clad metals, are used in lithium-ion rechargeable batteries, for which demand is increasing with the expanding xEV market, so we expect sales to increase.

Business and financial impacts and responses under the assumption of the year 2030 (Advanced Components & Materials Division [domestic sites])

Classification		Type	Content	Business/ financial impact	Our response
Risk	Transition	Policy/regulations	Increased production and operating costs owing to stricter regulations, such as the introduction of carbon pricing (CP), which includes carbon	Medium	Currently, we are working to reduce CO_2 emissions by promoting various energy-saving measures (e.g., LED lighting and introduction of or switch to high-efficiency equipment) and activities to improve productivity.

			taxes, taxes on fuel and energy consumption, and emissions trading.		From now onwards, we will actively promote fuel conversion, purchase of renewable energy, and introduction of related equipment (i.e., installation of solar panels) so as to achieve our CO_2 reduction target for 2030.
			Higher procurement costs for raw materials (including rare metals and auxiliary materials such as direct complementary materials) due to stricter CP and other regulations.	Large	As for principle raw materials, we will work to strengthen surcharges and consider and implement plans to find new suppliers. From the perspective of life-cycle assessment, we will increase the utilization ratio of scrap generating low CO_2 emissions, and develop and market materials with low heavy rare earth content in a bid to reduce the usage amount and procurement costs of such elements in the magnet business.
		Technology	Increased operating costs associated with facility investment for introducing manufacturing processes (based on electrification and alternative fuels) to meet decarbonization requirements.	Small	When introducing new manufacturing processes, we will examine equipment specifications, such as introducing the latest energy-saving technologies, with the aim of reducing its impact on operating costs. Also, we will pass increased costs on to sales prices.
		Market	Sales decreased due to lowered prices and lost orders as a result of intensifying competition with xEV suppliers.	Small	We will promote cost reduction plans, such as introducing high-efficiency equipment, increasing productivity, and facilitating local procurement of parts.
			Sales decreased due to operations reduced as a result of rising copper demand causing tight supply of main materials.	Medium	We will work to increase productivity to reduce copper usage and find new suppliers to diversify procurement channels.
			Sales decreased as a result of existing products failing to respond to decarbonation requirements (RE100, etc.) in a timely manner or losing new marketing opportunities.	Medium	We will increase the renewable energy usage rate by promoting the introduction of renewable energy and choosing electricity companies that supply power with a higher percentage of renewable energy sources.

	Physical risk	Acute and chronic	Orders and sales decreased owing to operations suspended as a result of abnormal weather-induced natural disasters.	Medium	We will systematically improve our production systems in anticipation of extreme weather events. We will expand the BCP system and refine the action manual for emergencies.

Classification	Type	Content	Business/ financial impact	Our response
Opportunity	Resource efficiency	Sales increased by raising product value through efficient production and effective use of materials and energy.	Small	To achieve the 2030 CO_2 emissions reduction target, we will promote various energy-saving measures (e.g., LED lighting and introduction of or switch to high-efficiency equipment) and productivity-improvement measures while promoting fuel conversion and introduction of renewable energy (i.e., installation of solar panels) in a proactive manner.
	Source of energy	Sales increased through an improvement in the customer's evaluation for supplier selection by working on decarbonization.	Small	We will work to increase productivity to reduce electricity usage and raise the renewable energy usage rate.
	Products/Services	Sales increased by developing and launching environmentally conscious products onto the market.	Large	We will develop and expand sales of environmentally conscious products that contribute to a low-carbon society. ■ Products that contribute to improving the efficiency of xEVs ・Motor-related materials (rare earth magnets, ferrite magnets, magnet wires, power feeders) ・Power semiconductor-related materials (silicon nitride, silicon carbon) ・Automotive electronic components, such as harnesses ■ Amorphous alloys that contribute to the higher efficiency of transformers
	Market	Increased sales of low-heavy rare earth	Large	Targeting customers considering a switch from magnets with a

		magnets and ferrite magnets against the background of rising prices of heavy rare earth and increasing risks of procurement.		high heavy rare earth content, we will develop and market low-heavy rare earth magnets and high-performance ferrite magnets, aiming to expand sales.

xEV: A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs)

RE100: Global corporate initiative of businesses committed to 100% renewable energy

Definition for assessment of business/financial impact (*1 Net sales of target businesses)

- Large: cost or effect equal to or greater than 5% of sales*1
- Medium: cost or effect equal to at least 1% but less than 5% of sales*1
- Small: cost or effect equal to less than 1% of sales*1

As described above, the scenario analysis of the business areas of Advanced Components and Materials Division (domestic sites), in addition to that for the Advanced Metals Division (domestic sites) with the results disclosed on May 26, 2022, verified the response to each risk and opportunity with respect to the strategy for each business, and the analysis results confirmed that our strategy is resilient.

(b) Vision for Preventing Climate Change

The following presents the targets of the Hitachi Metals Group's three-year plan covering fiscal 2019 to fiscal 2021 and the results of fiscal 2021.

- **Targets for Fiscal 2021 in the Medium-Term Environmental Action Plan**
  Reduction of per unit of CO_2 emitted*1 in manufacturing processes by 7% from that in FY2010 (global)
  *1. (CO_2 emissions) / (amount of activity*2)
  *2: A figure representing the scale of business activities such as sales or production weight
- **Fiscal 2021 Results**
  Improvement ratio of CO_2 emissions per unit: 2.2%

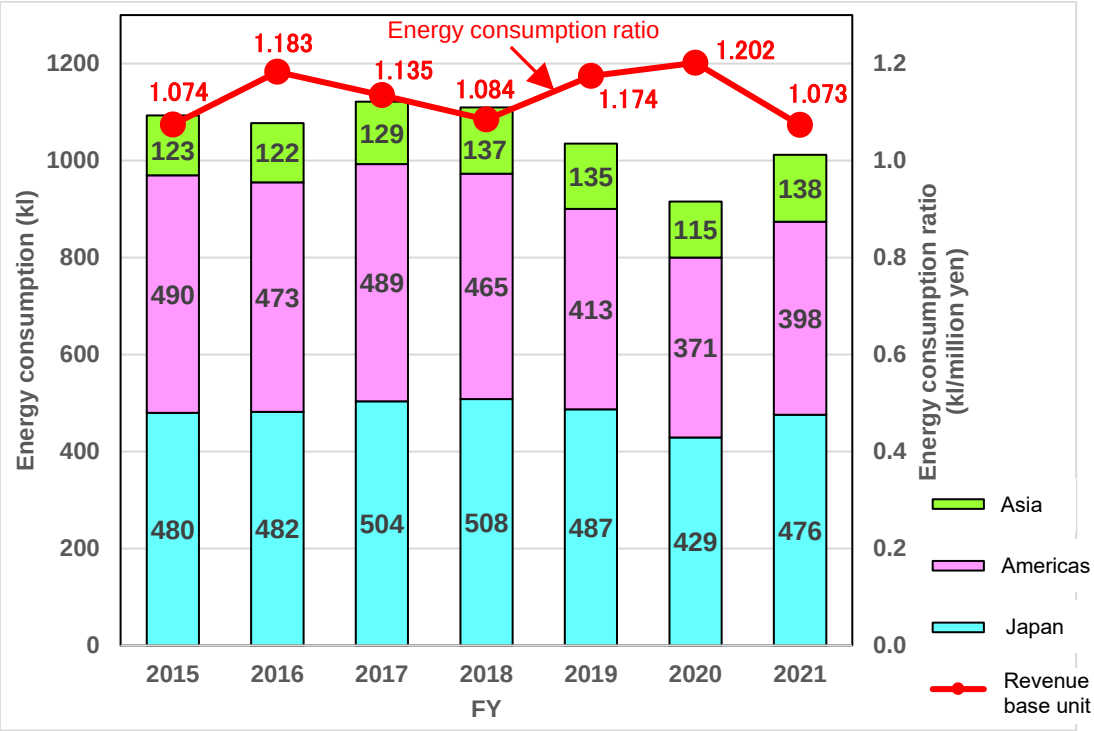
(c) Trends in Energy Consumption and Sales Energy Consumption Ratio

The Hitachi Metals Group's global energy consumption in fiscal 2021 was equivalent to 1,012 thousand kl of crude oil, up 97 thousand kl (10.6%) from fiscal 2020. This was down 23 thousand kl (2.3%) from fiscal 2019 before the outbreak of the COVID-19 pandemic.

In fiscal 2021, production recovered from a fall posted in the previous year, recording a revenue increase of 23.8% from fiscal 2020 and 7.0% from fiscal 2019. On the other hand, the basic unit for revenue was 1.073, down about 10.7% from fiscal 2020, and down 8.6% from fiscal 2019. Major factors contributing to the improved per unit value were various energy-saving measures (improved productivity, more efficient operation of facilities, introduction of high-efficiency equipment, and reduced consumption of fuels particularly by using alternative coke) and facility utilization increased by expanded production.

To reduce energy consumption even further, we will continue to pursue energy-saving activities linked to *monozukuri* (manufacturing). The emphasis is on eliminating excess processes, improving efficiency, boosting the yield rate, curtailing fixed energy, installing energy-saving equipment, fuel conversion and introducing renewable energy.

Trends in Energy Consumption and Sales Energy Consumption Ratio



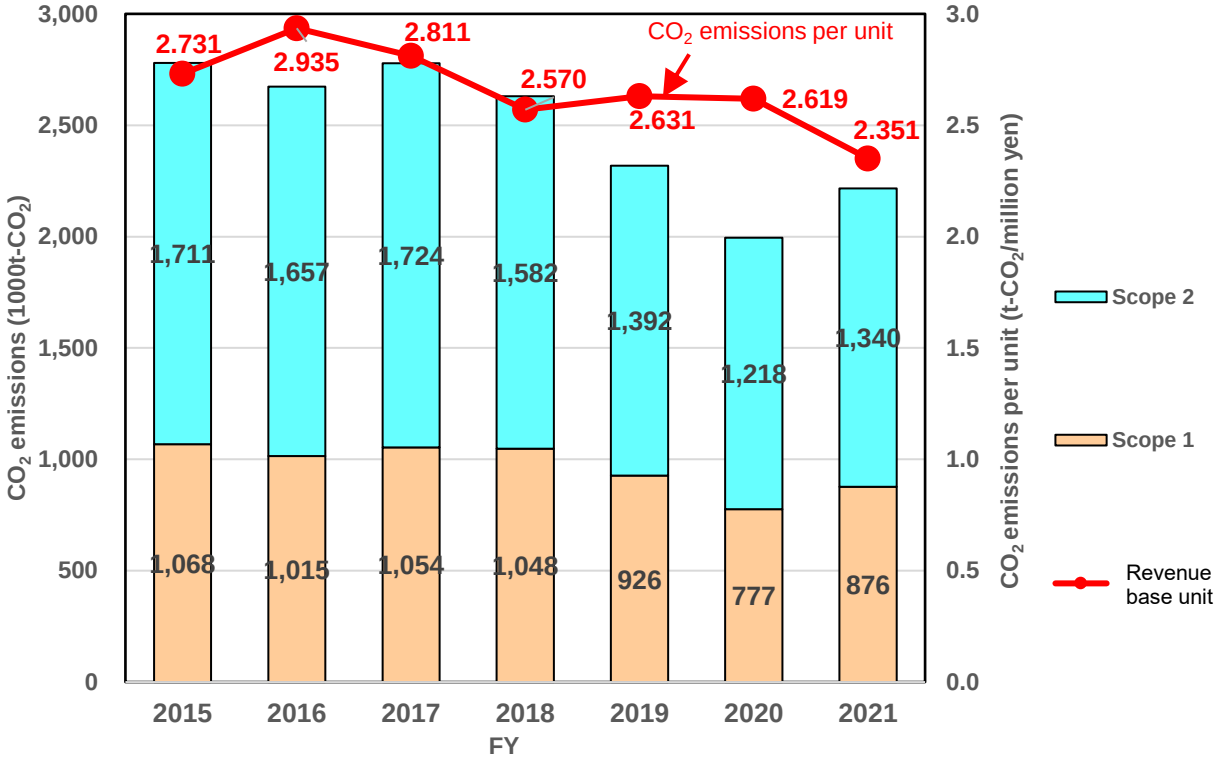
(d) Trends in CO_2 Emissions from Energy Usage and CO_2 Emissions per Unit

The Hitachi Metals Group's global CO_2 emissions from energy usage in fiscal 2021 were 2,216 thousand tons, up 221 thousand tons (11.1%) from fiscal 2020. This was down 103 thousand tons (4.4%) from fiscal 2019 before the outbreak of the COVID-19 pandemic.

In fiscal 2021, production recovered from a fall posted in the previous year, recording a revenue increase of 23.8% from fiscal 2020 and 7.0% from fiscal 2019. On the other hand, the basic unit for revenue was 2.351, down about 10.3% from fiscal 2020, and down 10.6% from fiscal 2019. Major factors contributing to the improved per unit value were various energy-saving measures (improved productivity, more efficient operation of facilities, introduction of high-efficiency equipment, and reduced consumption of fuels particularly by using alternative coke), facility utilization increased by expanded production, and introduction of carbon-free natural gas.

Going forward, we will step up our efforts to reduce CO_2 emissions, setting medium- to long-term targets aimed at achieving carbon neutrality in 2050, with a focus on introducing renewable energy while continuing with our energy-saving activities.

Trends in CO_2 Emissions from Energy Usage and CO_2 Emissions per Unit



Note: Approximately 60% of the Hitachi Metals Group's CO_2 emissions are attributable to Scope 2 (electricity). Within Scope 1 (fossil fuels), the largest emitter is coke, followed by city gas.
We use CO_2 emission factors of electric power on a regional basis: in Japan, emission factor for each electric power company published by the Ministry of the Environment; and in the Americas and Asian countries, the country-specific conversion factor issued in 2021 by the International Energy Agency (IEA).

(3) Effective Use of Resources

(a) Vision for Effective Use of Resources

The Hitachi Metals Group is using in-house reuse and recycling by way of intermediate processing to create a resource-efficient society and achieve the "thorough circulation of resources throughout the life cycle of goods and services," as stated in the 4th Fundamental Plan for Establishing a Sound Material-Cycle Society.

- **Targets for Fiscal 2021 in the Medium-Term Environmental Action Plan**
  - Reduction of waste generation per production unit[*1] by at least 14% compared to fiscal 2010 (global)
  - Waste landfill rate: 12% or less (global)

  *1. (Waste and valuables generation) / (amount of activity[*2])
  *2: A figure representing the scale of business activities such as sales or production weight
- **Fiscal 2021 Results**
  Rate of reduction of waste generation per production unit: 18.9%
  Waste landfill rate: 11.7%

We are working to reduce waste/valuables generation ("waste"), which is measured using the indicator of generation of waste per production unit. We are promoting efforts to reduce waste output, focusing on process innovation such as kaizen (improvement) of production processes. Furthermore, in response to

tight conditions in the final disposal site and requirements to respond to social demands regarding the effective use of resources,
we are working to improve the waste landfill rate to attain the targets set in fiscal 2019, chiefly by promoting recycling and reducing the final disposal volume.

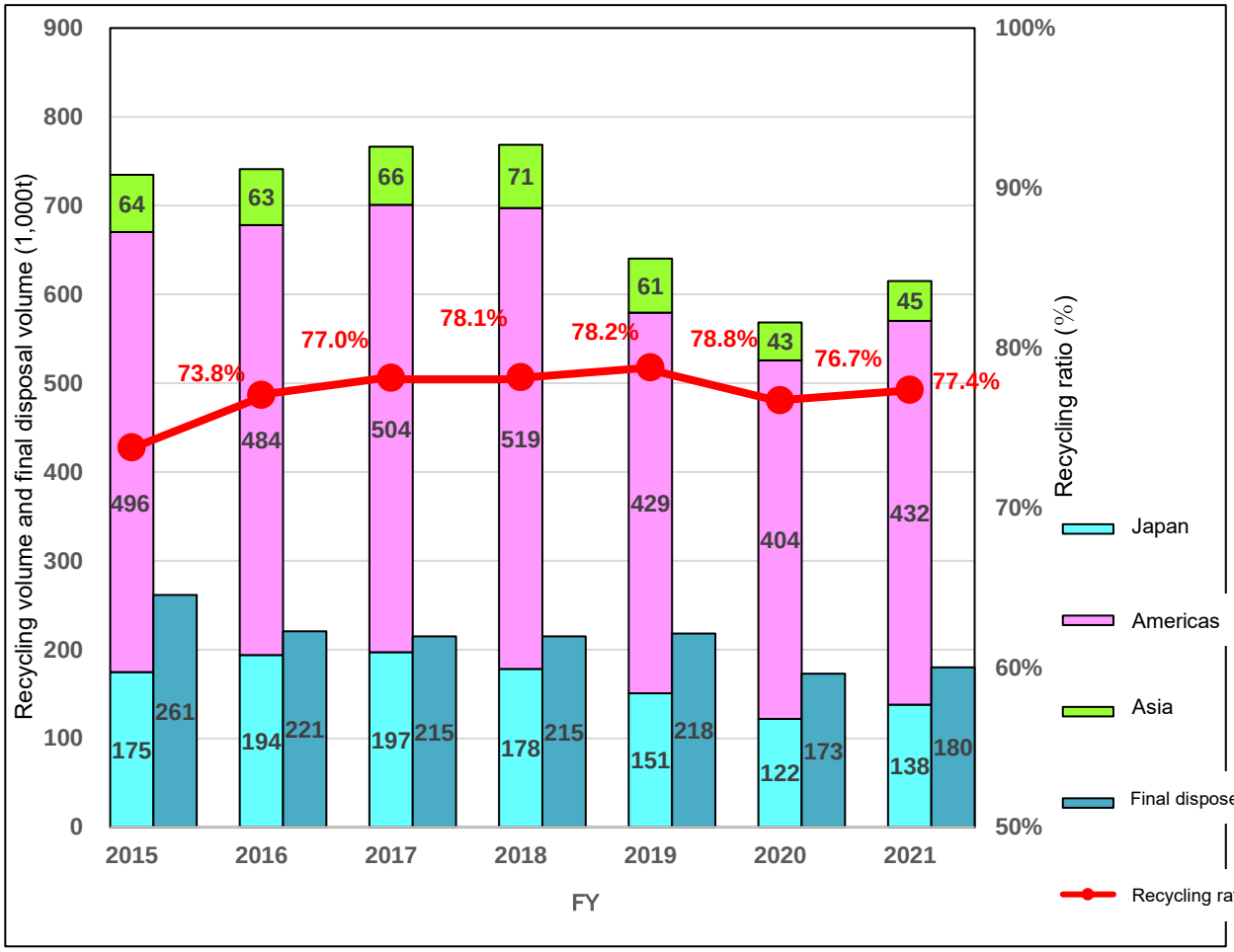
(b) Results of Waste Management

Total waste generated by the Hitachi Metals Group in fiscal 2021 reached about 824 thousand tons, up 63 thousand tons from 761 thousand tons in the previous fiscal year.
We achieved a 18.9% reduction from the base year in the generation of waste per production unit, a management indicator in our Environmental Action Plan, and exceeded our target. This was attributable to the launch of a sand recycling system at the U.S.-based Waupaca Foundry, Inc.
The amount of recycled resources was 138 thousand tons in Japan, 432 thousand tons in the Americas, and 45 thousand tons in Asia (total: 615 thousand tons). The final disposal amount was 15 thousand tons in Japan, 150 thousand tons in the Americas, and 15 thousand tons in Asia (total: 180 thousand tons). (The final disposal amount includes the amount of household waste, hazardous waste, and waste deposited on our premises.) The amount of recycled plastics waste was 0.5 thousand tons (0.2 thousand tons on a non-consolidated basis), and the recycling rate was 82.8% (82.7% on a non-consolidated basis). (Targets planned to be considered based on the results of fiscal 2022.)
There were many challenges to recycling waste in Japan, but thanks to recycling activities in the Americas and other factors, the waste landfill rate in fiscal 2021 was 11.7%, compared to the target value of 12%. Going forward, we plan to raise the bar overall through activities stepped up at overseas sites, where we believe that many recyclable items remain.

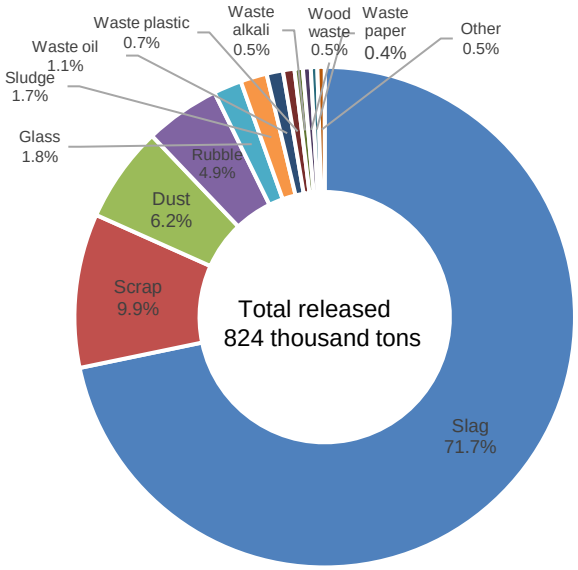
Also of note, we achieved zero emission status[*1] at 14 business offices.

*1. From fiscal 2011, deemed to be a final disposal volume of less than 0.5% of total emissions.

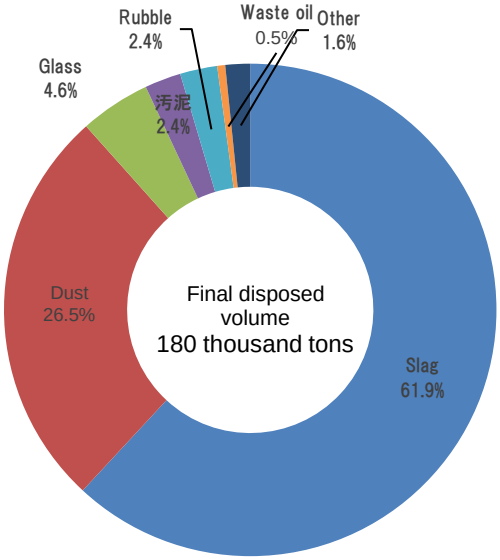
Trends in Recycling Volume, Final Disposal Volume, and Recycling Ratio



Breakdown of Waste Volume
(Hitachi Metals Group)



Breakdown of Final Disposal Volume
(Hitachi Metals Group)



Note: The final disposal amount includes household waste, hazardous waste, and in-house landfill.

(c) Reduction of Water Usage

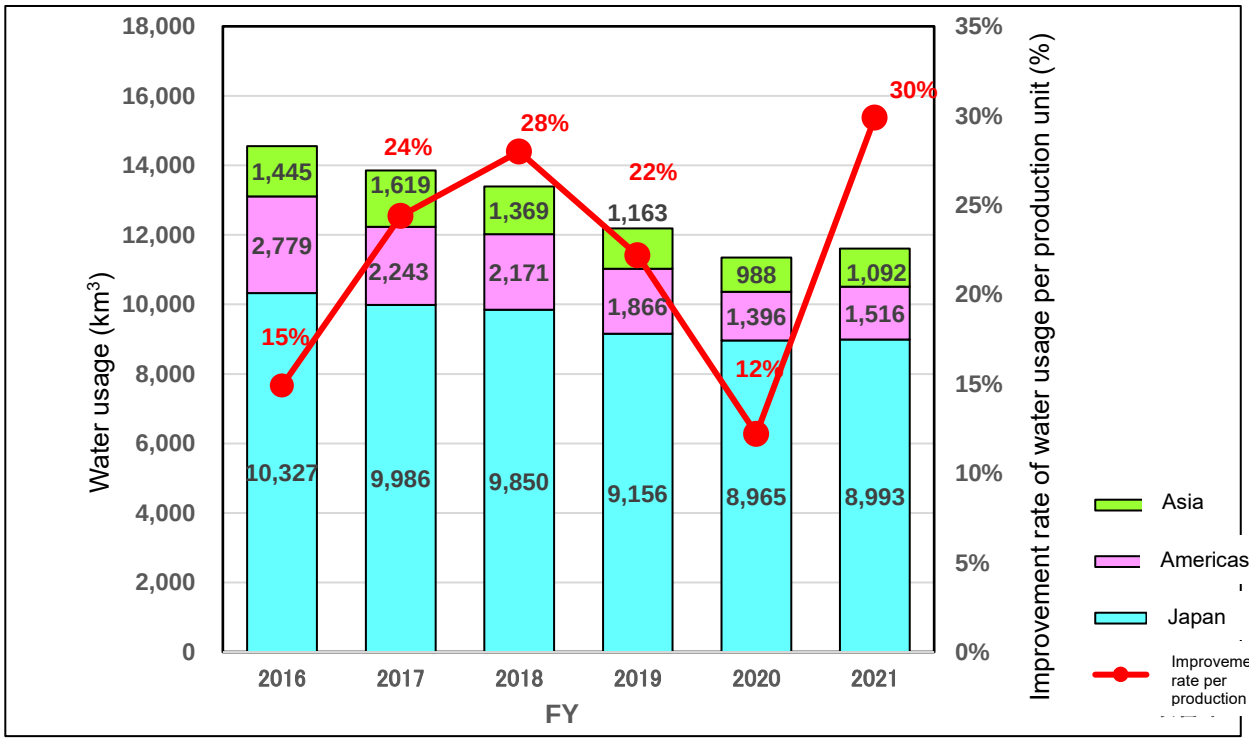
● **Targets for Fiscal 2021 in the Medium-Term Environmental Action Plan**
- Reduction of water usage per production unit[*1] by at least 26% compared to fiscal 2010 (global)

*1. (Water usage) / (amount of activity[*2])
*2. A figure representing the scale of business activities such as sales or production weight

● **Fiscal 2021 Results**
Improvement rate of water usage per production unit: 29.9%

Since fiscal 2016, we have been working to achieve the targets for effective use of water resources set in the Environmental Action Plan through global efforts. Our water usage amounted to 11,602 thousand m^3, an increase of 253 thousand m^3 from fiscal 2020. We reduced water usage per production unit by 29.9% compared to the base year, achieving our target. Major factors contributing to achieved per unit value targets were: recovery of production volume from the decline caused by the spread of COVID-19; and reduction of water usage through measures such as installing water recycling systems in equipment with less impact on quality, adopting functions to reduce water discharge, and repair of water leakage. We plan to work on raising water use efficiency, in order to further reduce water usage.

Trends in Improvement Rate of Water Usage per Production Unit



(4) Chemical Substance Management

(a) Reduction of Substances of Environmental Concern

Of the substances handled by domestic companies in the Hitachi Metals Group that are subject to the PRTR Law,*1 six materials which are nickel (including compounds), chromium, molybdenum, manganese, phthalic acid (2-ethylhexyl), and cobalt are essential raw materials used in Hitachi Metals' products. These six substances constitute 96% of regulated materials and 80% of the total amount transferred.

Of the total amount released into the atmosphere, 46% is attributable to toluene and xylene, which are volatile organic compounds (VOCs).

*1. Law Concerning Reporting, etc., of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

The State of PRTR Substance Handling in Fiscal 2021 (Domestic Group)

Fig. Breakdown of Volume Handled

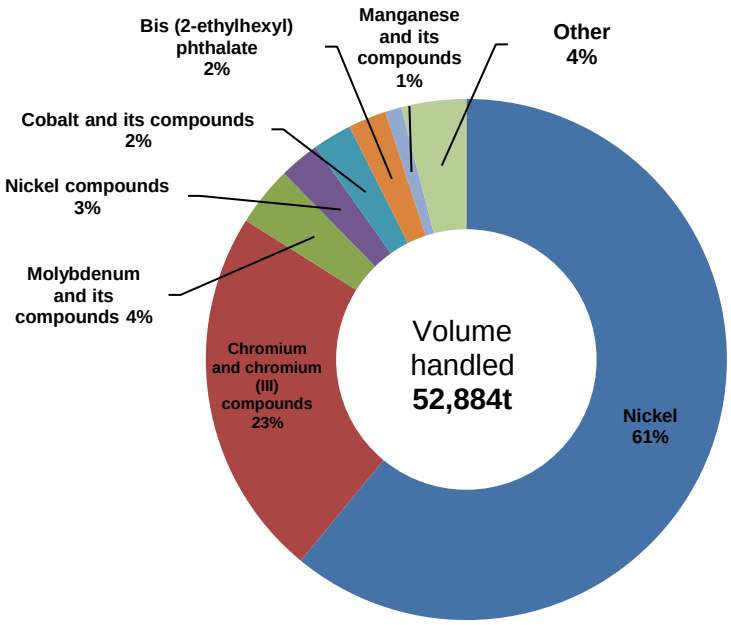


Fig. Volumes Consumed, Released, and Transferred, and Other Breakdowns

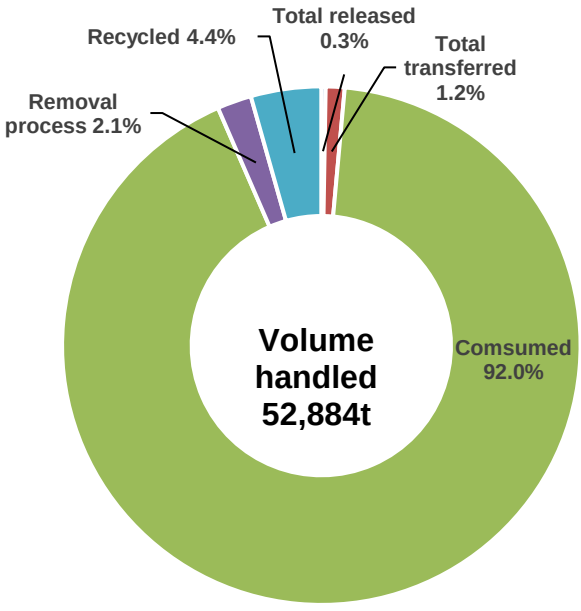


Fig. Breakdown of Release (atmosphere, water)

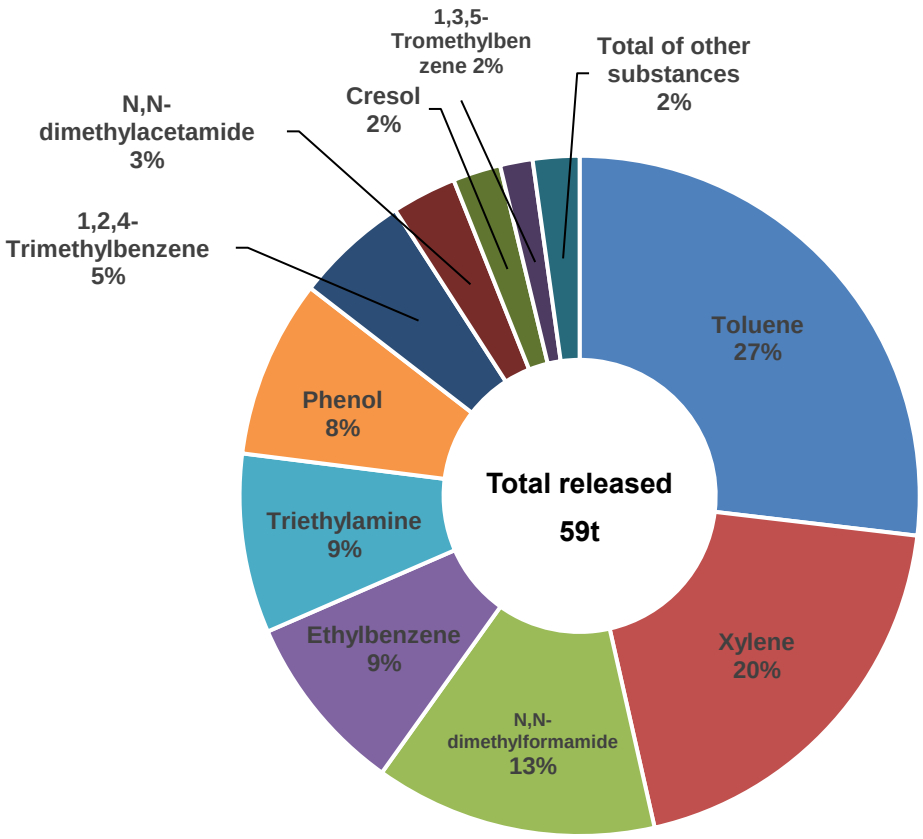
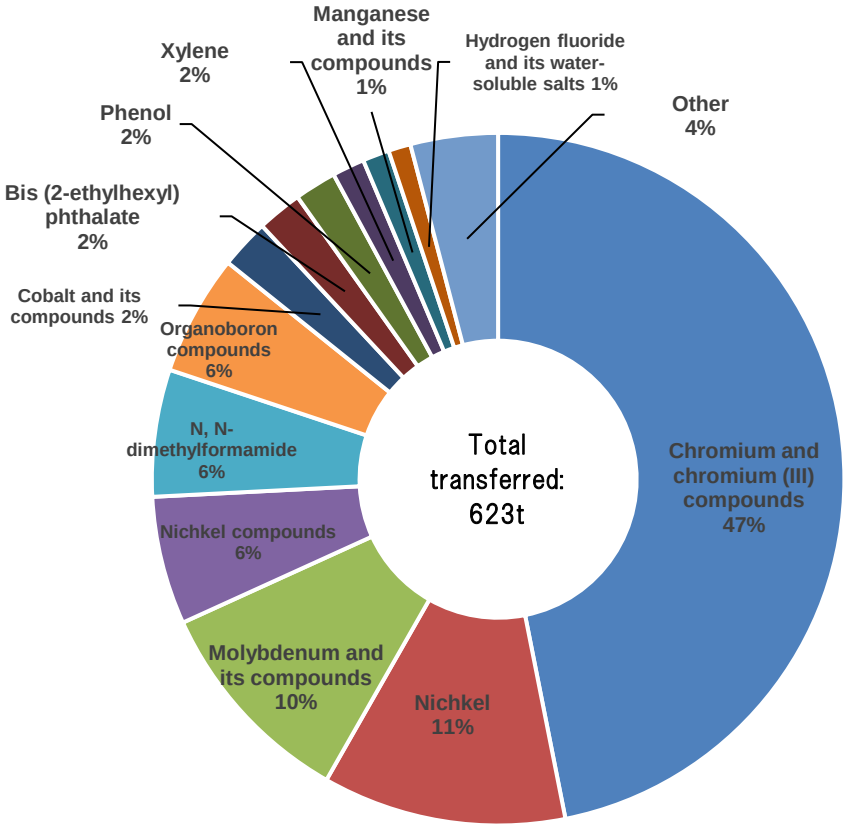


Fig. Breakdown of Transfer (waste, sewerage)



Fiscal 2021: PRTR Data (in Japan) (Unit: Tons/year)

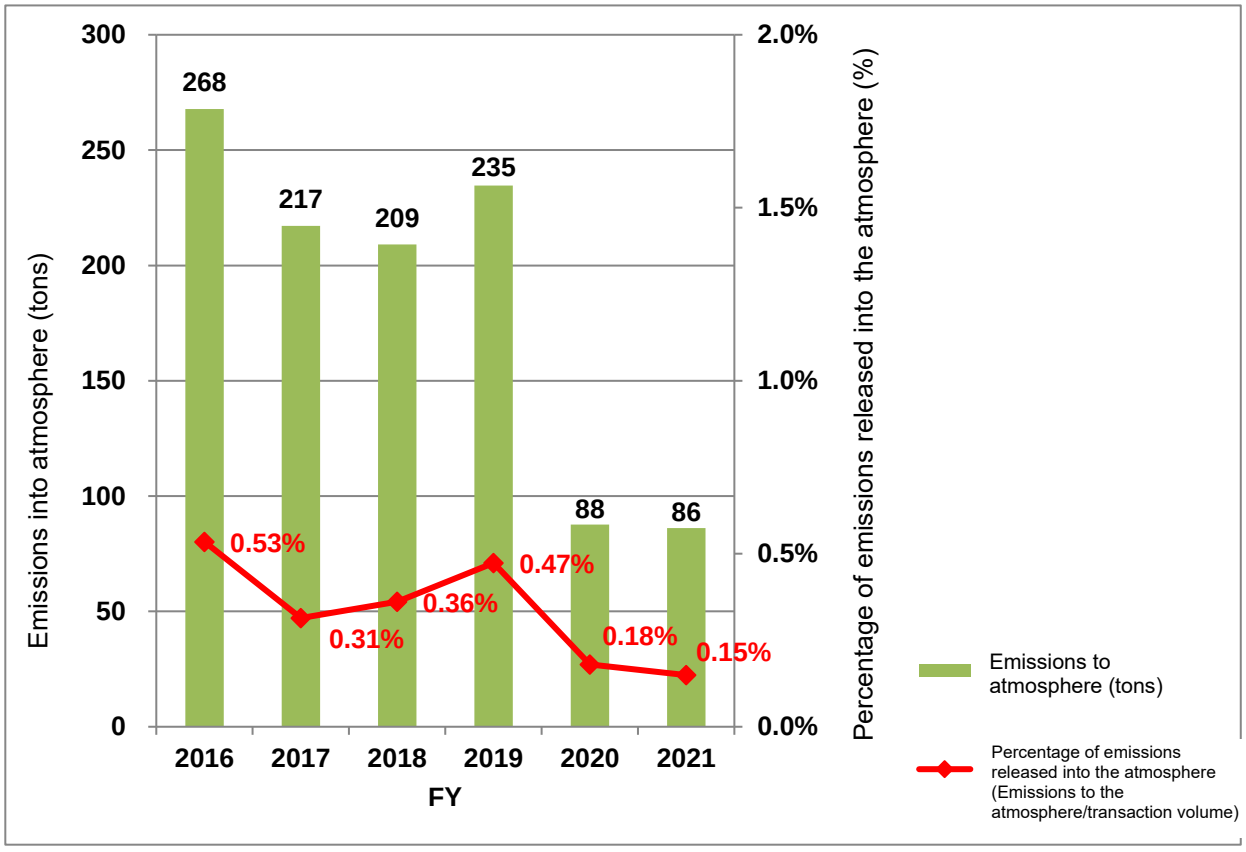
Number	Name	CAS Number	Volume handled	Volume released					Volume transferred		
				Atmosphere	Public water system	Soil	Landfill	Total	Sewerage	Waste	Total
31	Antimony and its compounds	-	95	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
37	4,4'-Isopropylidenediphenol (alias: bisphenol A)	80-05-7	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	2-imidazolidinone	96-45-7	1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
44	Indium and its compounds	-	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Ethylbenzene	100-41-4	32	5.1	0.0	0.0	0.0	5.1	0.0	4.6	4.6
71	Ferric chloride	7705-08-0	378	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	Xylene	1330-20-7	93	11.5	0.0	0.0	0.0	11.5	0.0	9.4	9.4
82	Silver and its water-soluble compounds	-	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	Cresol	1319-77-3	221	1.3	0.0	0.0	0.0	1.3	0.0	5.2	5.2
87	Chromium and chromium (III) compounds	-	12,161	0.0	0.1	0.0	55.5	55.5	0.0	292.2	292.2
132	Cobalt and its compounds	-	1,278	0.0	0.0	0.0	0.0	0.0	1.4	13.0	14.4
188	N,N-dicyclohexylamine	101-83-7	1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
213	N,N-dimethylacetamide	127-19-5	79	1.8	0.0	0.0	0.0	1.8	0.0	2.4	2.4
230	N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine	793-24-8	3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
232	N, N-dimethylformamide	68-12-2	310	7.9	0.0	0.0	0.0	7.9	0.0	37.0	37.0
272	Water-soluble copper salts (excluding complex salts)	-	40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
277	Triethylamine	121-44-8	90	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
296	1,2,4-Trimethylbenzene	95-63-6	40	3.2	0.0	0.0	0.0	3.2	0.0	3.0	3.0
297	1,3,5-Trimethylbenzene	108-67-8	12	0.9	0.0	0.0	0.0	0.9	0.0	0.4	0.4
300	Toluene	108-88-3	21	15.8	0.0	0.0	0.0	15.8	0.0	4.4	4.4
304	Lead	7439-92-1	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
305	Lead compounds	-	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
308	Nickel	7440-02-0	32,238	0.0	0.0	0.0	0.0	0.0	0.0	70.9	70.9
309	Nickel compounds	-	1,326	0.0	0.2	0.0	23.2	23.5	0.0	37.3	37.3
330	Bis (1-methyl-1-phenylethyl) peroxide	80-43-3	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
349	Phenol	108-95-2	262	5.0	0.0	0.0	0.0	5.0	0.0	12.2	12.2
355	Manganese and its compounds	117-81-7	1,253	0.0	0.0	0.0	0.0	0.0	0.0	13.1	13.1
374	Hydrofluoric acid and its water-soluble salts	-	20	0.0	0.0	0.0	0.0	0.0	0.1	6.4	6.5
391	Hexamethylene = diisocyanate	822-06-0	47	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0
392	Normal Hexane	110-54-3	2	0.8	0.0	0.0	0.0	0.8	0.0	0.8	0.8
405	Boron compounds	-	293	0.0	0.0	0.0	0.2	0.2	11.0	24.1	35.1
411	Formaldehyde	50-00-0	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
412	Manganese and its compounds	-	539	0.0	0.0	0.0	2.6	2.6	0.0	7.7	7.8
438	Methylnaphthalene	1321-94-4	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(A total of 40 substances with handled volumes of less than one ton)			7	0.3	0.0	0.0	0.0	0.3	0.0	1.1	1.1

(b) Reduction of Chemical Substance Emissions

We have revised our chemical substance management system launched in fiscal 2016, which had previously targeted only volatile organic compounds (VOCs), based on risks such as acute toxicity and carcinogenesis, and have identified 50 new substances for management from among substances handled in large amounts. We are engaged in activities aimed at controlling the release of these substances into the environment. Most are emitted into the atmosphere, and VOCs account for over 90% of the total. We are therefore continuing improvement activities that focus on the treatment of solvent components used for product coating, as in the past, working to reduce emissions by conducting technological investigations and making changes in equipment to find substitutes for coating materials and improve processes.

The amount of emissions released into the atmosphere was 86 tons, or 0.15%, in fiscal 2021, almost the same as fiscal 2020.

Trends in Percentage of Chemical Substance Emissions Released into the Atmosphere



(5) Eco-Factory Case Study

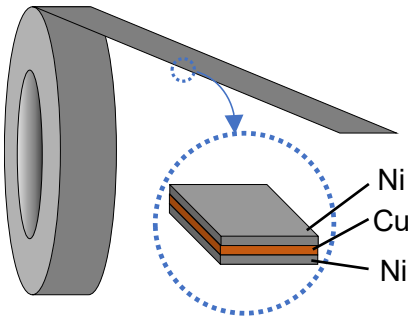
Reduction of CO_2 emissions by using alternative coke　　Waupaca Foundry, Inc.

Confirming the combustion condition in the cupola furnace

Waupaca Foundry, Inc. (hereinafter “WFI”) melts scrap metal, by primarily using cupola melting technology, to produce steel castings for fabricating various parts and components for automotive and other industries. Approximately 50% of WFI’s CO_2 emissions come from coke used as fuel and carbon additive in cupolas. To reduce CO_2 emissions, WFI adopted alternative coke as an additive in order to reduce coke usage. Alternative coke represents a method of reducing coke usage by replacing some of the coke with a calorie-free carbon additive, while adjusting the amount of carbon in the cast iron product. By implementing this measure, we reduced coke usage by 10,995 tons and CO_2 emissions by 31,616 tons in fiscal 2021. WFI also implemented CO_2 emissions reduction measures such as reducing coke consumption by dehumidifying the blast air of the cupola furnace and recovering waste heat from the furnace, resulting in a total reduction of 41,087 tons of CO_2 emissions in fiscal 2021.

In addition to the above-described measures, WFI is promoting various activities, such as introducing renewable energy, to reduce CO_2 emissions and eventually achieve carbon neutrality.

Clad metals for rechargeable batteries of xEVs　　Hitachi Metals Neomaterial, Ltd.



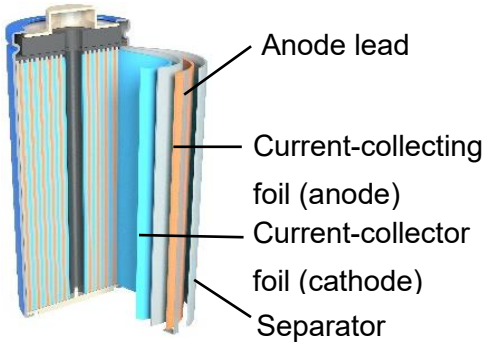
Clad metals for anode lead (Ni/Cu/Ni)

In recent years, demand for xEVs* has been increasing rapidly as people increasingly consider solving climate change issues. In line with this trend, demand for lithium-ion batteries, which are mainly used in xEVs, has also increased significantly.

Hitachi Metals Neomaterial, Ltd. (hereinafter “HMN”) provides materials for the anode leads used in lithium-ion batteries. The anode lead must have high electrical conductivity because it serves to extract electricity from the current-collecting foil. It must also have excellent weldability because it is incorporated into the battery after being welded to the current-collecting foil.

HMN has produced a number of clad metals that are made by joining two or more different metals, each with its own unique characteristics. To meet multiple requirements for anode leads, the Suita Works has developed a three-layer clad metal, consisting of nickel as the outer layers surface and copper as the inner layer, which is used in lithium-ion batteries for xEVs through various customers.

We have received many requests from customers to increase production, and we will strive to further improve production efficiency and contribute to solving environmental issues by providing materials for xEVs.



Anode lead for lithium-ion battery

* xEV is a generic term for electric vehicles (EV), hybrid electric vehicles (HEV), and plug-in electric vehicles (PHEV).

(6) Site Data

Materials Flow at Major Domestic Manufacturing Sites in the Hitachi Metals Group in Fiscal 2021

Classification	INPUT				OUTPUT									
	Raw materials, etc. (t / year)	Energy consumption (crude oil kl / year)	Water (thousand m³ / year)	PRTR chemical substances (t / year)	Emissions (t / year)	CO2*1 (t / year)	SOx*2 (t / year)	NOx*2 (t / year)	BOD*2 (t / year)	COD*2 (t / year)	PRTR emissions *3 (t / year)	Transferred amount of PRTR *3 (t / year)	Drainage (thousand m³ / year)	Main discharge destination
Kyushu Works	9,740	32,802	182	4,207	10,299	64,016	0.0	1.7	0.0	0.3	91.6	0.0	55	Seto Inland Sea
Moka Works	34,368	27,729	307	76	18,823	51,048	0.1	2.3	6.0	0.0	0.0	0.0	226	Kinugawa River
Kuwana Works	12,065	15,379	312	22	10,727	27,314	1.1	3.2	0.0	0.1	3.2	5.9	297	Inabegaw a River
Yasugi Works	######	158,667	5,262	18,748	61,079	352,665	21.2	155.0	0.8	12.8	0.3	424.5	5,125	Nakaumi Lake
Okegawa Works	52	14,724	311	696	505	27,731	0.2	9.8	3.4	3.2	0.0	7.2	306	Arakawa River
Kumagaya Magnetics Works	9,922	30,862	770	155	3,872	55,969	1.4	0.0	0.0	0.0	0.1	4.5	0	Arakawa River
Yamazaki Manufacturing Dept.	58	2,877	61	4	460	5,387	0.0	0.0	0.2	0.1	1.7	2.6	44	Sewerage
Metglas Yasugi Works	15,817	7,811	0	3	235	16,279	0.0	0.0	0.0	0.0	0.2	0.0	0	Nakaumi Lake
Saga Works	0	5,849	46	12	198	11,296	0.0	0.0	0.0	0.0	0.0	0.0	46	Rokkakugawa River
Ibaraki Plant	######	37,798	1,062	1,806	7,136	68,916	0.2	5.6	16.9	14.6	26.5	73.7	855	Pacific Ocean Kazu sawagawa River, Juo River
HMY, Ltd.	0	10,221	10	19,541	1,470	22,037	0.6	0.7	0.0	0.0	0.0	0.1	4	Nakaumi Lake
Hitachi Metals Precision, Ltd.	3,324	9,124	11	2,915	4,092	19,378	0.0	10.8	0.0	0.0	0.0	8.1	3	Nakaumi Lake
Hitachi Metals Neomaterial, Ltd.	53,075	41,616	481	2,856	13,522	78,424	0.9	3.2	2.4	1.1	1.0	1.1	437	Sewerage Yoneshirogawa River
Hitachi Metals Wakamatsu, Ltd.	42,216	27,080	145	731	38,894	48,002	0.0	8.2	0.0	0.0	0.4	49.2	78	Sewerage
Hitachi Metals Tool Steel, Ltd.	0	5,373	18	0	772	9,464	0.0	0.0	0.0	0.0	0.0	0.0	13	Sewerage
Hitachi Ferrite Electronics, Ltd.	1,702	6,615	73	132	1,558	13,812	0.0	0.0	2.5	0.0	0.0	2.2	71	Sewerage
NEOMAX KINKI Co.,Ltd.	2,893	16,650	186	0	1,412	34,294	0.1	1.1	0.3	0.4	0.0	0.0	186	Maruyamagawa River
NEOMAX KYUSHU Co., Ltd.	7,564	9,009	61	60	1,066	17,817	4.0	0.7	0.0	0.0	2.5	2.0	61	Rokkakugawa River
Tonichi Kyousan Cable, Ltd.	35,800	4,713	58	538	2,060	8,305	0.1	0.4	0.0	0.0	0.3	12.8	58	Kasumigaura
Tohoku Rubber Co.,Ltd.	1,217	1,514	74	30	422	3,244	0.7	0.6	0.4	0.6	13.7	4.1	66	Pacific Ocean
Santoku Corporation	8,816	5,397	184	350	2,020	10,105	0.0	0.0	0.0	0.0	0.0	25.2	184	Sewerage

*1. Calculations of CO_2 emissions for electric power use the adjusted emission coefficients for each power company.

*2. Atmospheric emission concentrations measured based upon the Air Pollution Control Law and Water Pollution Prevention Act.

*3. PRTR emission quantities are totals of emissions to the atmosphere, public waterways, and soil. PRTR transfers are totals of transfers to waste materials and to sewers.

VI. Report on Environmental Aspects