

Hitachi Metals Group

CSR Detailed Activity Report

2019

Published: January 2020

 **Hitachi Metals, Ltd.**

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About This Document

Purpose of Publication

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.

Note: The main activities for fiscal 2018 are stated in "The Hitachi Metals Group Report 2019 (Integrated Report)."

Publication Date

January 2020

The Scope of This Report

Period covered: The report is centered on fiscal 2018 (April 1, 2018 to March 31, 2019).

Organizations covered: Hitachi Metals, Ltd. and consolidated subsidiaries

Scope of recorded data:

Finance	Hitachi Metals, Ltd. and 63 consolidated subsidiaries, and 10 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.

This report has been translated into English from the Japanese version. In cases where the Japanese description is different from the English description, the Japanese description shall take preference.

Hitachi Metals Corporate Creed

The origins of our company can be traced back more than one hundred years, and our main products have been standing at the top in each industry both qualitatively as well as quantitatively.

We devote ourselves to technology and aspire to contribute to society by being the best enterprise based on “*Wa sureba tsuyoshi*” our people possess and their loyalty to the company.

Corporate Philosophy

和則強

Wa sureba tsuyoshi

“*Wa*” refers to “individuals with different characters coming together to create harmony.” “*Tsuyoshi*” means “strength to accomplish the results we hope for.” “*Wa sureba tsuyoshi*” portrays our endeavor to work as one while improving ourselves individually in order to create the best possible company.

Hitachi Metals Group Codes of Conduct

Preface

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 CO₂ 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 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, 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

Top managers 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 violation of the Codes of Conduct, top managers 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

I. Message from Management

The Hitachi Metals Group began operating under a new medium-term management plan from fiscal 2019. Under this new plan, all of us will move forward one step and one day at a time, and thus be “One step ahead tomorrow of where you are today!” so as to build innovation that contributes to the resolution of issues facing customers and society at large, and become a high-performance materials company supporting a sustainable society.

The Hitachi Metals Group Report 2019 Integrated Report is a communications tool to help our stakeholders understand how we are working to enhance our corporate value, including the Group’s strengths, Corporate Philosophy, and process for creating value, together with a systematic compilation of financial and non-financial information that is considered important for continuous growth.

This document, the Hitachi Metals Group CSR Detailed Activity Report 2019, reports in detail our environmental, social, and governance activities.

Koji Sato

Representative Executive Officer,
President and Chief Executive Officer

II. About the Hitachi Metals Group

1. Corporate Profile

Corporate Name	Hitachi Metals, Ltd.
Established	April 10, 1956
Head Office	2-70, Konan 1-chome, Minato-ku, Tokyo 108-8224, Japan
Representative	Koji Sato Representative Executive Officer President and Chief Executive Officer
Capital	¥26,284 million (As of the end of March 2019)
Number of Employees	Hitachi Metals, Ltd., Non-consolidated: 7,067 Hitachi Metals Group, Consolidated: 30,304 (As of the end of March 2019)
Products and Businesses	Manufacture and marketing of metallic materials and advanced components and materials
Group Companies	63 consolidated subsidiaries (23 in Japan, 40 outside Japan) 10 equity method companies (6 in Japan, 4 outside Japan) (As of the end of March 2019)

2. Consolidated Operating Performance

(Millions of yen)

	FY2017	FY2018
Revenues	988,303	1,023,421
Adjusted operating income*	65,130	51,427
IFRS operating income	46,326	42,442
Total assets	1,058,832	1,099,252
Interest-bearing debt	160,844	202,098
Total equity	570,192	595,211
Capital expenditures	91,786	95,389
Research and development expenses	17,749	18,604

* 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.

Main Sales Bases

[WEB](http://www.hitachi-metals.co.jp/e/corp/bases01.html) <http://www.hitachi-metals.co.jp/e/corp/bases01.html>

Major Operation Bases / R&D Bases



















[WEB](http://www.hitachi-metals.co.jp/e/corp/bases02.html) <http://www.hitachi-metals.co.jp/e/corp/bases02.html>

The Hitachi Metals Group

[WEB](http://www.hitachi-metals.co.jp/e/corp/corp08.html) <http://www.hitachi-metals.co.jp/e/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.

	Business segment	Industrial infrastructure	Automobiles	Electronics
Advanced Metals Division	Specialty steel products	 Tool steel and rolls  Rolls for steel mills  Industrial equipment and aircraft/energy materials Turbine case materials	 Hot-rolled tool steel  CVT belt materials	 Alloys for electronic products Lead frame materials  Clad metals
	Functional components and equipment	 Piping components Pipe joints  Polyethylene gas piping systems	 Automotive casting Cast iron products	 "HERCUNITE™" heat-resistant cast components
Advanced Components and Materials Division	Magnetic materials And power electronics materials	 Magnetic materials and applications "NEOMAX®" neodymium magnets  "NMF®" ferrite magnets  Power electronics materials "Metglas®" amorphous metals  Silicon nitride substrates		
	Wires, cables, and related products	 Wires for rolling stock  Wires and cables for FA/robots Electric wires and cables  Automotive components Harness for electric parking brakes		

III. Corporate Governance

1. Basic Approach

The underlying basis for corporate governance at Hitachi Metals is to ensure transparent, sound, and efficient management, meet the needs of our stakeholders, and increase corporate value. We believe increasing corporate value to be one of our most important management challenges.

Accordingly, it is imperative that we create an organizational structure in which management oversight and business operations function effectively and in balance. We also believe that timely, high-quality information disclosure contributes to the improvement of corporate governance. In pursuit of this philosophy, we go beyond simple financial disclosure, regularly publishing the details of individual business segments and medium-term management plans.

We acknowledge that compliance is the linchpin of corporate governance. Nonetheless, our corporate activities go beyond mere compliance with laws and internal regulations, extending to the role we must fulfill as a member of society, based on respect for social ethics and morality. We established the Hitachi Metals Group Code of Conduct (posted on our corporate website at <https://www.hitachi-metals.co.jp/corp/corp15.html>) to give form to this perspective and establish specific standards of conduct for officers and employees.

The policy concerning compensation for directors and executive officers is that the Company shall compensate directors and executive officers for executing management that enhances the Company's corporate value and contributes to stakeholders by formulating, deciding, and implementing management policies, medium-term management plans, and annual budgets from a medium- to long-term perspective, and that the compensation system shall reflect the Company's performance over the short, medium, and long terms.

The Company has prescribed its framework for corporate governance in the Corporate Governance Guidelines (the "Guidelines") and the fundamental policy concerning the system of internal controls established by the Board of Directors based on the Companies Act. The Guidelines are posted on the Company's website (<https://www.hitachi-metals.co.jp/e/ir/ir-csr.html>). The details of the fundamental policy concerning the system of internal controls are disclosed in the annual securities reports, etc.

2. Overview of the Corporate Governance Structure

(Supervisory System)

Hitachi Metals has adopted the system of a company with a nominating committee, etc. This system helps the Company to swiftly implement bold policies and measures as well as Companywide management that encompasses business reorganization and strategic investments. The Company has outside directors on its Board of Directors, who also serve on the Nominating, Audit, and Compensation committees. Well versed in general societal matters and possessing extensive experience and advanced knowledge, these outside directors contribute to the strengthening of the decision-making and oversight functions as well as the improvement of management transparency, integrity, and efficiency. Under this system, the Company elects nine directors, including one woman and three outside directors,

and has established the Board of Directors, Nominating Committee, Audit Committee, and Compensation Committee, in accordance with the provisions of the Companies Act. In addition, the Board of Directors Office has been established and staffed to assist the Board of Directors and the committees in executing their duties. The purpose, authority, and names of the members of these organizations are described below, along with other details.

- (1) The purpose of the Board of Directors is to decide on the Company's business execution and to supervise the execution of duties by the directors and executive officers. The Board of Directors is authorized to make decisions on the matters specified by the Company's Articles of Incorporation and Board of Directors Rules, in addition to those specified by laws and regulations. The Board of Directors met 14 times in fiscal 2018. The directors serving during this fiscal year attended all meetings held during their terms of office, where they heard reports from executive officers and committees on the status of their execution of duties and made decisions on matters for which authority could not be delegated to executive officers under laws and regulations and the Articles of Incorporation, and critical matters specified by the Board of Directors Rules.

As of the end of June 2019, the Board of Directors consists of nine directors (including three outside directors), as listed below.

Chairperson of the Board	Shinichiro Omori	(Chair)
Deputy Chairperson of the Board	Akitoshi Hiraki	
Director	Makoto Uenoyama	(Outside)
Director	Toshiko Oka	(Outside)
Director	Koichi Fukuo	(Outside)
Director	Katsuro Sasaka	
Director	Koji Sato	
Director	Toyoaki Nakamura	
Director	Kenichi Nishiie	

- (2) The purpose of the Nominating Committee is to make decisions on matters relating to items concerning proposals on the appointment and dismissal of directors to be submitted at a General Meeting of Shareholders. The Committee is authorized to decide such matters as well as to designate persons entitled to convene a Board of Directors meeting and persons to report on the status of the Committee's execution of duties to the Board of Directors from among its Committee members. The Nominating Committee met seven times in fiscal 2018. Directors serving during this fiscal year attended all meetings of the Nominating Committee held during their terms of office, where they determined candidates for outside directors, deliberated the executive officer system, and discussed plans for management successor development.

As of the end of June 2019, the Nominating Committee consists of four directors (including three outside directors), as listed below.

Director	Shinichiro Omori	(Chair)
Director	Makoto Uenoyama	(Outside)
Director	Toshiko Oka	(Outside)
Director	Koichi Fukuo	(Outside)

- (3) The purposes of the Audit Committee are to audit the execution of duties by directors and executive officers and resolve issues such as matters relating to items concerning proposals on the appointment, dismissal, and non-reappointment of the Accounting Auditor to be submitted at a General Meeting of Shareholders, so as to ensure that the Company's business is operated lawfully and properly. The Committee is authorized to resolve such issues as well as to formulate policies for the determination to dismiss or not reappoint the Accounting Auditor or to nominate persons entitled to convene a Board of Directors meeting from among its members.

The Committee also has the authority to appoint committee members who may request reports on matters relating to the business of or the execution of duties on behalf of the Company or its subsidiaries and who may investigate the status of the operations and the financial status of the Company or its subsidiaries under Article 405 of the Companies Act. Further information on the Audit Committee, including its activities, is provided later in this document ("The Audit Committee as an Audit Organization").

As of the end of June 2019, the Audit Committee consists of five directors (including three outside directors), as listed below.

Director	Kenichi Nishiie	(Chair)
Director	Makoto Uenoyama	(Deputy Chair, Outside)
Director	Toshiko Oka	(Outside)
Director	Koichi Fukuo	(Outside)
Director	Shinichiro Omori	

- (4) The purpose of the Compensation Committee is to determine the compensation and its components received by each director and executive officer. The Committee is authorized to decide such matters as well as to formulate policy on the determination of compensation and its components received by each director and executive officer. In addition, it designates persons entitled to convene a Board of Directors meeting and persons to report on the status of the Committee's execution of duties to the Board of Directors from among its members. The Compensation Committee met three times in fiscal 2018. Directors serving during this fiscal year attended all meetings of the Compensation Committee held during their terms of office, where they formulated policy on the determination of compensation and its components received by directors and executive officers, and determined compensation and its components for each director and executive officer accordingly.

As of the end of June 2019, the Compensation Committee consists of four directors (including three outside directors), as listed below.

Director	Koji Sato	(Chair)
Director	Makoto Uenoyama	(Outside)
Director	Toshiko Oka	(Outside)
Director	Koichi Fukuo	(Outside)

(Business Execution System)

Regarding business execution, the Board of Directors delegates a great deal of decision-making authority concerning business execution to the 14 executive officers (all male) to achieve prompt decision-making. The Company has established the Executive Committee to ensure that the president and chief executive officer makes decisions on and executes business operations in compliance with laws and regulations and the Articles of Incorporation, and does so efficiently based on a multifaceted perspective. The Committee deliberates on certain important management matters that impact the Company or the Group, and makes decisions regarding these matters.

The Executive Committee consists of the president and chief executive officer, the executive officers in charge of corporate administration, the executive officers in charge sales, and the general managers of divisions. Other members may be appointed as necessary by the president and chief executive officer, who serves as chair. As of April 1, 2019, the Company shifted its corporate structure from an internal company system to a business division system with the aim of further strengthening synergies between its businesses that share the same markets, customer needs, and element technologies as well as to enhance cross-sectional functions and strengthen its strategic functions and corporate governance.

(Internal Audit Organization)

The Company's Internal Auditing Office (with 10 dedicated staff members) is in charge of internal audits. The Internal Auditing Office formulates annual audit policies and audit implementation plans for internal audits targeting the Group. Based on these policies and plans, the office conducts on-site audits on the status of management and business execution at the Company's offices and subsidiaries in Japan and overseas over the course of three years, in principle, and collaborates with the Audit Committee and the Accounting Auditor to promote tripartite cooperation for a tripartite audit function.

In addition to these audits, a special audit may be conducted upon special request, etc. of the president and chief executive officer. The Internal Auditing Office also reports to the president and chief executive officer and the Audit Committee its audit implementation plans in advance, and generally reports the audit results once a month. In addition, the Internal Auditing Office in principle meets monthly with a representative of each business division and each department of the corporate division and gives instructions for implementing improvements. If necessary, it also carries out audits in collaboration with individual divisions in charge of the environment, safety, and systems within the Company.

(The Audit Committee as an Audit Organization)

The Audit Committee is in charge of auditing business execution by directors or executive officers in accordance with laws and regulations and the Articles of Incorporation, the appropriateness of management decisions, the adequacy of internal control systems, and the accounting audit.

The execution of duties by the Audit Committee is assisted by a dedicated staff member at the Board of Directors Office. To ensure independence from executive officers, the dedicated staff member does not concurrently serve in any other position at any other business operating division. The Audit Committee formulates annual auditing policies and audit implementation plans, and performs audits based on said policies and plans by hearing reports on important items and by its members visiting each facility, etc. and each subsidiary to conduct regular audits.

In addition, the Audit Committee conducts special audits if it discovers potential violations of laws,

regulations, or the Articles of Incorporation by the directors or the executive officers.

In fiscal 2018, the Audit Committee met 15 times, and every meeting was attended by all members. Following are the major items on the agenda for the Audit Committee meetings, at which the members held profound discussions and vigorously debated the issues.

- (a) Reports and deliberations on the Accounting Auditor's audit plans, quarterly review results, and audit results
- (b) Reports on the Internal Audit division's audit policy, audit plans, and individual internal audit results, and reports and deliberations on the status of follow-up on the management and operational issues found through internal audits
- (c) Regarding internal controls over financial reporting, reports on the implementation policy and plans, and on the results of four rounds of evaluation of the effectiveness of internal controls, and discussions for enhancing the effectiveness of internal controls and improving management
- (d) Reports on the current issues faced by business execution divisions and their actions on these issues, and discussions for improving governance

The Audit Committee conducts a preliminary review of materials prepared in relation to priority items on the agenda for the Board of Directors meetings to foster effective discussions.

All members of the Audit Committee attend a session to exchange views with the representative executive officer twice a year in order to share awareness of the current issues and other outstanding problems.

Full-time members of the Audit Committee mainly conduct the following activities.

- (a) Auditing business reports, checking statements of accounts, hearing from the Accounting Auditor on procedures and recommendations on critical issues, and reporting to the Audit Committee findings from business reports and observations on the audits conducted by the Accounting Auditor
- (b) Conducting visiting audits of the Group's sites and subsidiaries in accordance with the above audit plans, informing the Internal Audit division and the Accounting Auditor of any issues detected through these audits, and reporting governance issues to the Board of Directors

Through these activities, the Audit Committee strives to strengthen internal controls and improve the quality of operational performance.

Among the members of the Audit Committee, Mr. Kenichi Nishiie once worked for the audit division of the Company and its subsidiary's finance division, Mr. Makoto Uenoyama once served as a director in charge of accounting and finance at Panasonic Corporation, and Ms. Toshiko Oka has obtained abundant experience and in-depth knowledge as corporate manager of a consulting firm. Each of their career histories thus demonstrate their considerable expertise in finance and accounting.

(Accounting Auditor)

Accounting audits for fiscal 2018 were conducted by certified public accountants Mr. Takashi Ouchida and Mr. Seiji Kuzunuki, engagement partners of Ernst & Young ShinNihon LLC. The number of continuous years of conducting audits of the Company by these accountants has not exceeded seven. Under the direction of said certified public accountants, as necessary, certified public accountants, certified public accountant assistants, and other personnel from Ernst & Young ShinNihon LLC assisted with the execution of accounting audit duties. Seven certified public accountants and 25 other personnel assisted with the Company's accounting audit duties.

(Coordination among the Audit Committee, Accounting Auditor, and Internal Audit Division)

The Audit Committee (1) receives explanations from the Accounting Auditor regarding audit implementation plans, and engages in consultation and adjustments when necessary; (2) receives audit result reports and engages in an exchange of opinions; and (3) in the event that the Accounting Auditor, during the course of executing its duties, discovers misconduct or material facts in violation of laws and regulations or the Articles of Incorporation regarding the execution of duties by executive officers, receives reports on these matters. The Audit Committee receives reports from the Internal Audit division on its audit implementation plans and regularly examines reports. Furthermore, to promote collaboration between the Internal Audit division and the Audit Committee in auditing, the committee can instruct the Internal Audit division to (1) conduct a special audit of certain divisions deemed to be required by the Audit Committee, and (2) decide on critical audit items in audits conducted by the Internal Audit division. The Internal Auditing Office is also in charge of evaluating internal controls, and reports the status of such to the Audit Committee. Corporate divisions, etc., other than the Internal Audit division, in charge of finances, compliance, risk, and other areas also play a certain role in the Company's internal controls, and report the status of the execution of their duties to the Audit Committee.

Moreover, the Company considers the promotion of tripartite audit function to be its primary theme regarding audit and supervisory functions. The Company, therefore, ensures that the Audit Committee, the Accounting Auditor, and the Internal Audit division share the issues they have respectively detected, going a step beyond one-way evaluation of the Accounting Auditor from the Company's side, based on the evaluation standards for an accounting auditor, and promoting mutual checks and evaluation. In particular, the Company considers the risk detection function of the Accounting Auditor, which is an external institution, as an important aspect of overall risk detection for the Group. In order to reinforce that function, the Company is expanding mutual evaluations between the Accounting Auditor and the Company's finance divisions, the Internal Audit division, and the Audit Committee, respectively. Specifically, based on the evaluation standards for accounting auditors defined by the Audit Committee, the Audit Committee performs a comprehensive evaluation considering the following major factors evaluated by the Company: the Accounting Auditor's communication with the Audit Committee, senior management, the Internal Audit division and others; the audit quality control system; audit plans; the audit team; audit reports and quarterly review reports; and consistency between audit plans and audit hours as a basis of determining the amount of auditing compensation. The Accounting Auditor, on the other hand, evaluates basic operations of the finance division, the Internal Audit division, and the Audit Committee of the Company, the handling of audit requirements, cooperation, risk recognition, activity status, resources, and other factors, and reports the results to the relevant counterparties. The Company utilizes the above feedback to strengthen its functions. The Company is also starting mutual evaluations between the Accounting Auditor and the finance divisions at its business offices and subsidiaries.

(Outside Directors' Functions and Roles)

Three of the Company's nine directors, Mr. Makoto Uenoyama, Ms. Toshiko Oka, and Mr. Koichi Fukuo, are outside directors (as of the end of June 2019).

Outside directors act as members of the Board of Directors and members of the Nominating Committee, Audit Committee, and Compensation Committee. The Company believes they possess extensive experience and advanced knowledge, are well versed in the general norms of society, and use their broad perspectives to contribute to the enhancement of decision-making and supervisory

functions and efficiency of the Company's management.

(Independence of Outside Directors)

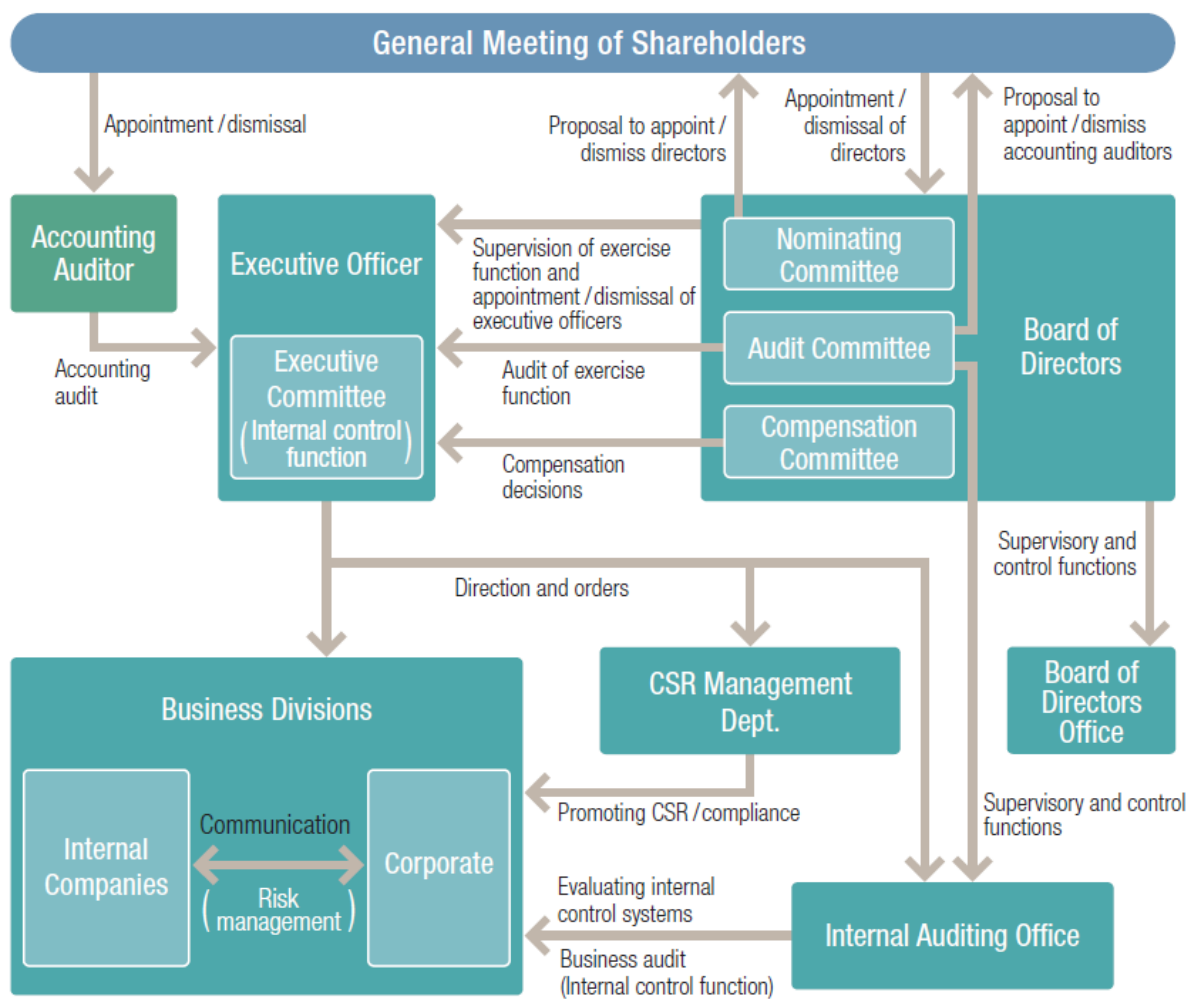
In nominating candidates for outside directors, the Nominating Committee shall consider that the candidate has the highest personal and professional ethics, integrity, and insights regardless of his or her nationality or gender; has abundant experience and in-depth knowledge in business management, law, administration, accounting, education, etc.; is well versed in social norms; and is expected to contribute to the strengthening of the decision-making and supervisory functions of the management of the Company as well as the enhancement of its effectiveness from a wide perspective. In addition, the Nominating Committee judges an outside director to be independent if he or she does not fall under any of the following items:

- (a) a person who has received or who serves or has served within the last one year as an executing person (that is, an executive director, executive officer, or employee; hereinafter the same) of a corporation that has received from the Company a payment of 2% or more of the entity's consolidated annual revenues for products or services in the most recent fiscal year;
- (b) a person who has paid the Company or who serves or has served within the last one year as an executing person of a corporation that has paid the Company 2% or more of its consolidated annual revenues for products or services in the most recent fiscal year;
- (c) an attorney, a certified public accountant, a licensed tax accountant, or a consultant who has received from the Company an annual payment of 10 million yen or more of monetary or other property benefits other than compensation for directors and executive officers within the last one year, or a person who is or has been within the last one year a member, a partner, an associate, or an employee of a law firm, an auditing firm, a tax accountant corporation, a consulting firm, or other professional advisory firm that has received from the Company a payment of 2% or more of the firm's consolidated annual revenues in the most recent fiscal year;
- (d) a person who serves or has served within the last one year as an officer of a not-for-profit organization that has received from the Company discretionary charitable contributions of monetary or other property benefits of 10 million yen or more, or 2% or more of that organization's annual gross revenues or ordinary income, whichever amount is higher, during the most recent fiscal year;
- (e) a person who serves or has served within the last one year as an executing person or a non-executive director of a parent company of the Company;
- (f) a person who serves or has served within the last one year as an executing person of a brother company of the Company;
- (g) a person who is a spouse or a relative within the second degree of kinship of a person (excluding a person who has or had no important position of the following) who falls under the items of the following:
 - (1) who falls under the items of the above (a) through (f);
 - (2) who is, or has been within the last one year, an executing person of a subsidiary of the Company;
 - (3) who is an executing person or non-executive director of a parent company of the Company;
 - (4) who is an executing person of a brother company of the Company;

- (5) who is, or has been within the last one year, an executing person of the Company; and
- (h) a person who has a risk of having material conflicts of interests with ordinary shareholders for reasons other than those stated above.

There are no personnel relationships, transactional relationships, etc., that fall under any of the items in the criteria stated above, and no other special-interest relationships between any of the outside directors and the Company. The Company considers each outside director to be fully independent from the Company, and has registered all of these directors with the Tokyo Stock Exchange as independent directors.

Corporate Governance Structure



(Compensation, etc. for Directors and Executive Officers)

Pursuant to provisions of the Companies Act, the Compensation Committee formulated a policy for determining the individual compensation packages, etc., of directors and executive officers. A summary of the policy is as follows:

- (a) The directors and executive officers who manage the Corporate Governance Guidelines determine management policies from a long-term perspective, and formulate and execute medium-term management plans and annual budgets. By doing so, they enhance the corporate value of the Corporate Governance Guidelines and perform management that contributes to shareholders and other stakeholders, for which they are compensated.
- (b) A compensation system shall be implemented that reflects the Company's performance over the short, medium, and long terms. Compensation shall be provided for outstanding performance in an effort to take full advantage of the management expertise, skills, and know-how of directors and executive officers and to serve as a source of motivation.
- (c) Compensation paid by the Company shall consist of base compensation and a term-end bonus.
 - (1) Base compensation: Base compensation payments shall be determined on the basis of individual director and executive officer performance, reflecting individual responsibility, experience, knowledge, acumen, and specialist skills. In addition, compensation for directors and executive officers shall be consistent with levels paid by other companies.
 - (2) Term-end bonus: A term-end bonus shall be linked to the business performance of the Company.
- (d) To share interests with shareholders by holding treasury stock and thereby promote sustainable growth and the enhanced corporate value of the Company over the medium to long term, directors and executive officers shall, as a general rule, contribute part of their compensation to the officers' shareholding association and acquire treasury stock until such stock reaches a certain number. The acquired stock shall be held continuously during the terms of office of directors and executive officers and, as a general rule, one year after retiring from their posts.

The value of compensation disclosed in the Annual Securities Report for the 82nd business term (April 1, 2018 to March 31, 2019) is as follows:

Director/executive officer category	Total amount of compensation, etc. (millions of yen)	Total amount of compensation, etc., by type (millions of yen)		Number of directors and executive officers who received compensation, etc.
		Base compensation	Term-end bonus	
Directors (excluding outside directors)	77	67	10	6
Executive officers	509	375	134	13
Outside directors and officers	53	45	8	3

Note: Directors who work as executive officers receive compensation as executive officers and do not receive compensation as directors.

(Relationship with the Parent Company)

In principle, the business operations and transactions of the Company are conducted on an autonomous basis and are independent of Hitachi, Ltd., the parent company, and its group companies. In the implementation of its business operations, however, and as a member of the Hitachi Group, the

Company has a close collaborative relationship with Hitachi, Ltd. and its Group companies through joint research and development and other initiatives. Based on the effective use of shared management resources, the Company aims to provide high-quality products and services.

Hitachi, Ltd. owns 53.5% of the total number of voting rights of the Company (including indirect ownership) as of the end of March 2019. As for personnel relationships with Hitachi, Ltd., one director of that company also serves as a director of the Company (as of the end of June 2019). Through its expression of opinions and participation in votes at meetings of the Board of Directors of the Company, Hitachi, Ltd. could have an influence on the determination of management policies and other aspects of the Company. Nevertheless, three outside directors have been appointed as independent directors according to the rules of the stock exchange, contributing to and diversifying the opinions expressed by the Board of Directors. Therefore, it is our view that the Company is in a position to be able to make independent management judgments. No executive officers of the Company who perform executive duties are also directors or executive officers of Hitachi, Ltd.

The Company also conducts a range of transactions with Hitachi, Ltd. based on the Hitachi Group's pooling system. These include borrowing and lending as well as other activities. The Company remains convinced, however, that its business activities are not significantly dependent on transactions with Hitachi, Ltd. The Company has adopted a policy that regulates transactions with Hitachi, Ltd. so that they are carried out in a fair manner, based on market prices. The Company has established rules stipulating internal procedures for deciding the terms of transactions, with the aim of ensuring appropriate operations related to transactions in general. All transactions such as sales of products and procurement of materials, etc., including those with Hitachi, Ltd., are conducted according to these rules. If the need arises to conduct transactions with Hitachi, Ltd., the Company's parent company, that could create a material conflict of interest with minority shareholders, the matter shall be referred to the Board of Directors and a decision made based on careful deliberation.

3. Internal Control System

The Company's Board of Directors has established a fundamental policy concerning the system of internal controls pursuant to the Companies Act, and is developing an internal control system based on this policy. Details of the fundamental policy are disclosed in the annual securities reports, etc.

The summary of the implementation status of the internal control system in fiscal 2018 is as follows:

(a) Compliance

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

In fiscal 2018, we fully revised the Hitachi Metals Group Codes of Conduct to respond to changes in the business environment and emerging social problems. Awareness of the principles set forth in it has been fostered through such measures as employee training and the distribution of a pocket card containing a summary of the Codes of Conduct. As an ongoing effort to strengthen compliance, we require employees to check their own overall awareness of compliance and adherence to laws and regulations using a checklist.

(b) Risk Management

With respect to risk management, each executive officer identifies and analyzes business risks including changes in political, economic, and social situations, currency fluctuations, rapid technological innovations, as well as changes in customer needs, examines measures against such risks, and reviews these measures whenever necessary through discussions at the Board of Directors, the Audit Committee, the Executive Committee, and other meeting bodies. In addition, each of the Group's sites has established a system to promptly share information that has come to light regarding risks related to compliance, antisocial forces, finance, procurement, the environment, disasters, quality, information security, export control, legal affairs, etc., with each business division. Meanwhile, each corporate administrative division has prepared internal rules, guidelines, etc., conducts education and enlightenment activities, preliminary checks, audits of business operations, etc., and cooperates with relevant internal business divisions to avoid, prevent, and manage risks. Furthermore, with regard to business continuity plans (BCPs), the Company has not only prepared the plans but also implements business continuity management (BCM) that periodically and continually improves BCPs in response to changes in the business structure or risks.

In fiscal 2018, the Company prepared for a large-scale BCP drill involving the Group's domestic locations to identify problems and make improvements through the actual implementation of the current BCP. The drill was conducted in April 2019. In addition, the Company periodically conducts a drill to respond to the Group's system designed to confirm the safety of all employees during times of disaster.

(c) Evaluation of the Effectiveness of Internal Controls over Financial Reporting

The Company has set up an Internal Controls Committee, chaired by an executive officer and its secretariat at the Internal Auditing Office, to enhance internal control functions within the Company. The secretariat formulates an evaluation policy every fiscal year and evaluates the development and implementation status of internal controls over financial reporting. The Internal Controls Committee reviews the evaluation results at its meetings (five meetings in fiscal 2018), and provides necessary instructions for the relevant divisions. The Committee's review results are reported to the Executive Committee and the Audit Committee.

(d) Internal Audit

The Internal Auditing Office formulates annual audit policies and audit implementation plans for internal audits of the Group. Based on these policies and plans, the Office conducts audits on the status of management and business execution of the Company's offices and subsidiaries in Japan and overseas over the course of three years, in principle (in fiscal 2018, audits were conducted at the Company and 15 subsidiaries in Japan and overseas), and collaborates with the Audit Committee and the Accounting Auditor to promote tripartite cooperation for a tripartite audit function. In addition, special audits may be conducted based on orders of the president and chief executive officer and others. The Internal Auditing Office also reports to the president and chief executive officer and the Audit Committee its audit policies and audit implementation plans in advance, and reports audit results to them on a monthly basis, in principle. The Internal Auditing Office in principle meets monthly with a representative of each business division and each department of the corporate division and gives instructions for implementing improvements.

4. 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.

- (a) The compliance department will address risks involving antisocial forces, and an officer and a person in charge will be appointed for each business office. These people will collect and provide risk-related information, and explain response procedures for risk scenarios.
- (b) 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.
- (c) To eliminate antisocial transactions, we will work to enact rules on the prevention of such transactions, establish a system for the compliance department in all divisions to vet new trading partners, and introduce clauses for the elimination of gang activity from contracts and transaction terms. The compliance department will conduct internal audits to confirm the state of compliance.
- (d) To raise awareness among employees on how to handle antisocial forces, we distribute the Hitachi Metals Group CSR Guidebook, declaring, "We absolutely refuse all contacts and demands from antisocial forces and groups," and strive to make all employees aware of the declaration.

IV. CSR Management

1. CSR Activities at the Hitachi Metals Group

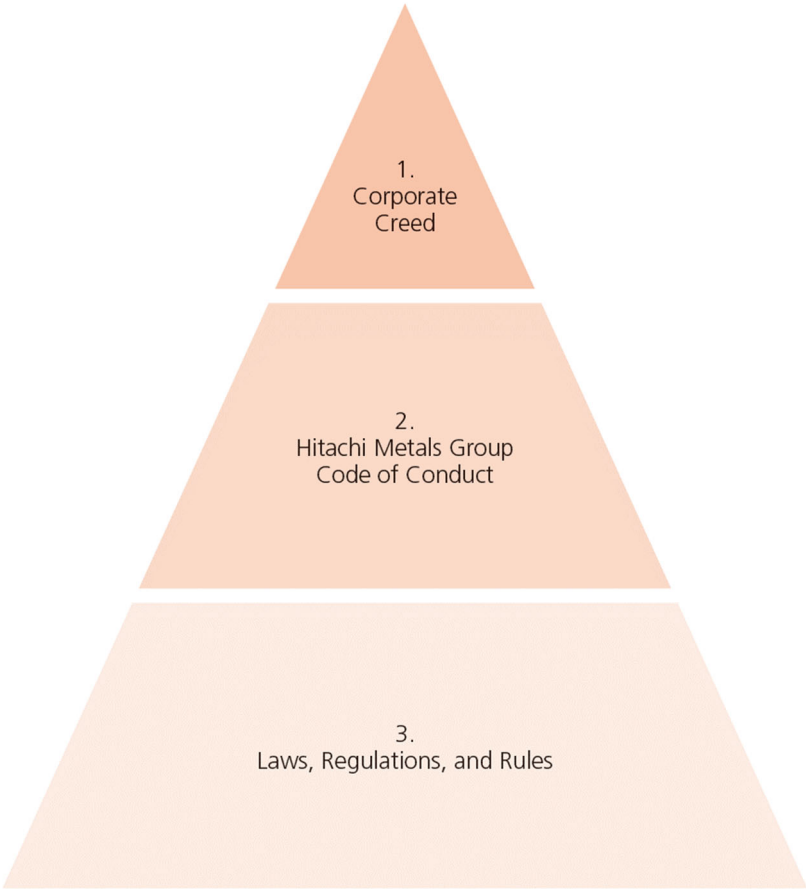
Since our independence from Hitachi, Ltd. in October 1956, we at Hitachi Metals have operated under our Corporate Philosophy of “*Wa sureba tsuyoshi*” (strength through harmony), and our Corporate Creed of contributing to society by being “the best enterprise.” Accordingly, we have worked to help solve social issues by utilizing our advanced technologies and capabilities.

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 Creed. It is fair to say that the guiding principles of CSR are the Corporate Creed that we have embraced since our independence.

We at the Hitachi Metals Group promote CSR activities based on our Corporate Creed, aiming to contribute to society through our business operations.

(1) Guidelines for CSR Activities

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



IV. CSR Management

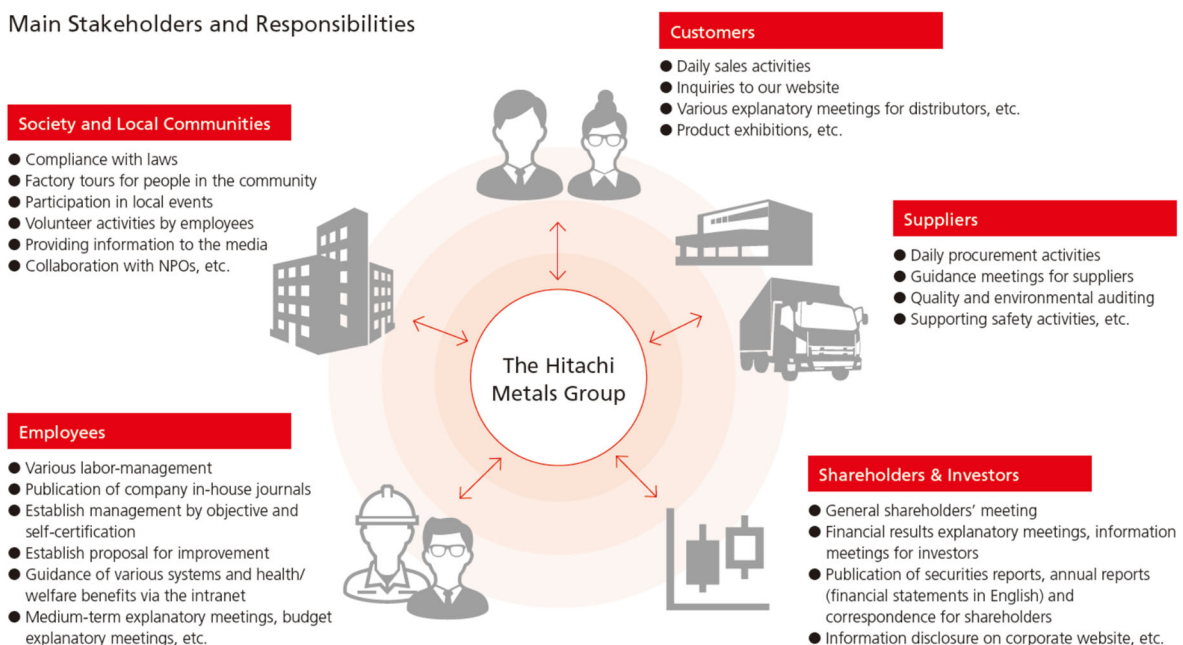
1. The Corporate Creed governs all corporate activities of the Hitachi Metals Group. It also functions as the guiding principles of our CSR activities.
2. The Hitachi Metals Group Code of Conduct defines the basis for the decision making and conduct carried out by all Hitachi Metals Group Directors and employees in order to realize the Hitachi Metals WAY, based on our Corporate Creed and Corporate Philosophy, adhering to the principle of “obey the law and walk the path of virtue.” 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 the basic rules of corporate activity. It should be noted, however, that they stipulate minimum requirements only.

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 Code of Conduct, by all Directors 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 requests and expectations from those stakeholders and contributing to society’s connectivity.

Main Stakeholders and Responsibilities



(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.

As an organization to achieve these goals, 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 evaluated its activity results, set targets and measures for the upcoming fiscal year, and integrated the evaluation results into a road map. By repeating this cycle of road map setting and implementation, the Group is continually enhancing the quality of management.

(b) Fiscal 2018 Initiative Results and Fiscal 2019 Plans

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

Some of the FY2018 measures (planned) have been reviewed.

FY2018 Measures (Planned)	FY2018 Measures (Results)	Self-assessment	Measures Planned for FY2019
1. Recognition of Social Responsibility			
· Seek advice on/assessment of the Company's CSR activities from outside experts (ongoing)	· Received advice on/assessment of the Company's CSR activities from outside experts (ongoing)	★★★	· Seek advice on/assessment of the Company's CSR activities from outside experts (ongoing)
2. Organizational Governance			
· Hold regular meetings regarding compliance to 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 Company and subsidiaries in Japan and overseas (ongoing) · Conduct environmental education at the Head Office and each company (ongoing)	· Conducted compliance training (80 times at the Company and subsidiaries in Japan and overseas) · Conducted environmental e-learning (100% of employees) and environmental auditor development training (once)	★★★	· Conduct compliance training at the Hitachi Metals Group (ongoing) · Conduct environmental e-learning (100% of employees) and environmental auditor development training (at least once)
· Ongoing implementation of Hitachi Insights, the Hitachi Group employee satisfaction survey targeting all back-office workers	· Conducted Hitachi Insights, the Hitachi Group employee satisfaction survey targeting all back-office workers in September (7,189 employees responded on a consolidated basis)	★★★	· Ongoing implementation of Hitachi Insights, the Hitachi Group employee satisfaction survey targeting all back-office workers
3. Human Rights			
· All employees receive human rights training every three years, based on the Hitachi Metals Group Human Rights Policy, according to Hitachi Group policies	· Systematically conducted human rights training throughout the entire Hitachi Metals Group (5,892 employees participated on a consolidated basis)	★★★	· Conduct human rights training systematically throughout the entire Hitachi Metals Group (ongoing)
4. Labor Practices			
· Further promote "work style reform" through awareness-raising for those in management positions, measures to improve operational efficiency (reduce paperwork and meetings, etc.), a reduction in total annual working hours, and providing support through systems · Continue to set a target rate of 50% or more for diversity employment · Set the ratio of women in career-track positions (4%)	· Reduced total annual working hours per back-office worker by 43 hours from the previous year and increased the number of days of annual leave taken by 1.5 days through the implementation of the "work style reform" project, and saw the number of employees using telecommuting increasing year by year · At 56%, achieved the diversity employment target rate · At 4.7%, achieved the target ratio of women in career-track positions	★★★	· Reduce total annual working hours per back-office worker further by improving operational efficiency (based on workflows, RPA, etc.) through the back-office operations reform project and measures to increase the ratio of annual leave taken · Continue to set a target rate of 50% or more for diversity employment · Set the target ratio of women in career-track positions (5%)

IV. CSR Management

FY2018 Measures (Planned)	FY2018 Measures (Results)	Self-assessment	Measures Planned for FY2019
<ul style="list-style-type: none"> · Formulate an action plan integrating the Act for Measures to Support the Development of the Next Generation and the Act on Promotion of Women's Participation and Advancement in the Workplace, and proactively disclose related figures to the public · Increase the ratio of women in management positions · Continue to create opportunities for information exchange for women in career-track positions to strengthen coordination among them 	<ul style="list-style-type: none"> · Formulated an integrated action plan and announced it to the public. Related figures were also disclosed as widely as possible · Achieved the target ratio of women in management positions by raising the ratio to 1.5% from 1.2% · Held a Hitachi Metals Women's Forum, a networking event targeting all women in career-track positions 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Formulate an action plan integrating the Act for Measures to Support the Development of the Next Generation and the Act on Promotion of Women's Participation and Advancement in the Workplace, and continue to proactively disclose related figures to the public · Increase the ratio of women in management positions · Continue to hold Hitachi Metals Women's Forums for information exchange between women in career-track positions and strengthen coordination among them
<ul style="list-style-type: none"> · Exceed the legal employment rate of employees with disabilities 	<ul style="list-style-type: none"> · The actual figure for FY2018 was 2.21%, achieving the target 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Exceed the legal employment rate of 2.2%
<ul style="list-style-type: none"> · Confirm 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 offices, and implement health and safety training for supervisors · Conduct stress checks throughout the Hitachi Metals Group · Carry out a health and safety diagnostic program as part of Hitachi Group's safety activities 	<ul style="list-style-type: none"> · Conducted health and safety audits at 15 domestic business offices with priority placed on checking the management status of chemical substances and gave instructions · Continued to conduct stress checks throughout the Hitachi Metals Group · Conducted a safety diagnosis of the Yasugi Works from April to September and developed improvement measures 	<p>★ ★</p>	<ul style="list-style-type: none"> · Confirm 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 offices, and implement health and safety training for supervisors (ongoing) · Conduct stress checks throughout the Hitachi Metals Group and enhance feedback (ongoing) · Enhance efforts toward health-oriented management · Carry out improvement measures for safety diagnosis as part of Hitachi Group's safety activities · Introduce the Hitachi Group's accident investigation system
<ul style="list-style-type: none"> · Implement a selective development program for management candidates, targeting individuals at the general manager level · In addition to securing a certain number of human resources by hiring new graduates, continue to conduct midcareer hiring in the interest of personnel rotation and to adjust the age composition 	<ul style="list-style-type: none"> · Sent individuals selected from among those at the general manager level to external training for executives · Conducted training of individuals selected from among those at the manager level to develop global leaders · In addition to securing human resources by hiring new graduates, continued to conduct midcareer hiring proactively 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Continue to implement a selective development program for management candidates, targeting human resources at the general manager level · Continue the selective training program to develop global leaders at the manager level · In addition to securing a certain number of human resources by hiring new graduates, continue midcareer hiring in the interest of personnel rotation and to adjust the age composition

IV. CSR Management

FY2018 Measures (Planned)	FY2018 Measures (Results)	Self-assessment	Measures Planned for FY2019
5. The Environment			
<ul style="list-style-type: none"> · Increase the sales ratio of key environmentally conscious products^{*1} (21%) 	<ul style="list-style-type: none"> · Increased the sales ratio of key environmentally conscious products (21%) 	★★★	<ul style="list-style-type: none"> · Increase the sales ratio of key environmentally conscious products (23%)
<ul style="list-style-type: none"> · Reduce active mass per production unit of energy consumption (13% compared to base year FY2005) 	<ul style="list-style-type: none"> · Reduced active mass per production unit of energy consumption (6.6% compared to base year FY2005) 	★	<ul style="list-style-type: none"> · Reduce CO₂ emissions per production unit (5% compared to base year FY2010)
<ul style="list-style-type: none"> · Reduce active mass per production unit of waste/valuables generation (8% compared to base year FY2005) · Increase the recycling rate (74%) 	<ul style="list-style-type: none"> · Reduced active mass per production unit of waste/valuables generation (12% compared to base year FY2005) · Increased the recycling rate (78%) 	★★★	<ul style="list-style-type: none"> · Reduce the ratio of waste and valuables generation per production unit (12% compared to base year FY2010) · Improve the waste landfill rate (14%)
<ul style="list-style-type: none"> · Reduce chemical substance emissions per production unit (34% compared to base year FY2006) 	<ul style="list-style-type: none"> · Reduced chemical substance emissions per production unit (18% compared to base year FY2006) 	★	<ul style="list-style-type: none"> · Reduce the ratio of chemical substance emissions per production unit (26% compared to base year FY2010)
6. Fair Operating Practices			
<ul style="list-style-type: none"> · Conduct special compliance (Anti-Monopoly Act) audit (ongoing) 	<ul style="list-style-type: none"> · Conducted special compliance (Anti-Monopoly Act) audit (document review, hearing with sales department managers) 	★★★	<ul style="list-style-type: none"> · Continue to conduct audits related to compliance (including compliance with the Anti-Monopoly Act)
<ul style="list-style-type: none"> · Survey the status of CSR efforts by the Company's suppliers based on the Hitachi Group's CSR procurement guidelines 	<ul style="list-style-type: none"> · Shared issues with suppliers based on the results of surveys conducted in accordance with the Hitachi Metals Group Supply Chain CSR Procurement Guidelines, using the CSR Procurement Check Sheet 	★★★	<ul style="list-style-type: none"> · Raise awareness of the Hitachi Metals Group Supply Chain CSR Procurement Guidelines and continue to address issues
<ul style="list-style-type: none"> · Conduct Corporate Ethics Month in October (ongoing) · Audit the compliance status of compliance-related laws and regulations (ongoing) 	<ul style="list-style-type: none"> · Carried out various measures to ensure thorough legal compliance and ethical behavior, such as the lectures of management executives by external instructors, during Corporate Ethics Month in October · Confirmed the compliance status of compliance-related laws and regulations during an internal audit 	★★★	<ul style="list-style-type: none"> · Conduct Corporate Ethics Month in October (ongoing) · Audit the compliance status of compliance-related laws and regulations (ongoing)

IV. CSR Management

FY2018 Measures (Planned)	FY2018 Measures (Results)	Self-assessment	Measures Planned for FY2019
<ul style="list-style-type: none"> · Conduct information security education (ongoing) · Conduct information security self-audits (ongoing) · Make an online pledge not to retain business information on privately-owned computers · Conduct targeted e-mail attack simulations (ongoing) · Implement measures against missent e-mails and expand said measures throughout the Group · Comply with EU General Data Protection Regulation (GDPR) 	<ul style="list-style-type: none"> · 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 · Implemented measures against missent e-mails and expanded said measures throughout the Group · Complied with EU General Data Protection Regulation (GDPR) 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · 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 missent e-mails (ongoing) · Comply with personal information protection laws in relevant countries, including the EU General Data Protection Regulation (GDPR)
7. Customers (Consumer Issues)			
<ul style="list-style-type: none"> · Conduct gleaning meetings² at consolidated companies (ongoing) · Expand mini gleaning meetings sponsored by business divisions and global regional headquarters at business offices in Japan and overseas (ongoing) 	<ul style="list-style-type: none"> · Conducted gleaning meetings at consolidated companies as planned · Held company-sponsored mini gleaning meetings sponsored by business divisions and global regional headquarters at 12 business offices in Japan and overseas 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Conduct gleaning meetings at consolidated companies (ongoing) · Expand mini gleaning meetings sponsored by business divisions and global regional headquarters at business offices in Japan and overseas (ongoing)
<ul style="list-style-type: none"> · Implement tasks for the creation of new business and select ongoing themes · Process research (develop industrial technologies using AI and robotics) · Promote cooperation and collaboration with customers and research institutions in Japan and overseas (expand open innovation) 	<ul style="list-style-type: none"> · Implemented tasks for the creation of new business (13 themes ongoing, four themes completed) · 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) 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Create new products/businesses that can contribute to a sustainable society (implement tasks in companywide research themes and select themes) · Process research (promote development of industrial technologies using AI and robotics) · Promote cooperation and collaboration with customers and research institutions in Japan and overseas (expand open innovation)
8. Community Involvement and Development			
<ul style="list-style-type: none"> · Consider social contribution activities enabling a closer relationship with regional citizens and culture (ongoing) 	<ul style="list-style-type: none"> · Conducted regional contribution activities mainly in regions where offices and factories are located (social contributions amounting to 170 million yen) 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Consider social contribution activities enabling a closer relationship with regional citizens and culture (ongoing)

IV. CSR Management

FY2018 Measures (Planned)	FY2018 Measures (Results)	Self-assessment	Measures Planned for FY2019
<ul style="list-style-type: none"> · Contribute to material science technical research through support of Hitachi Metals · Materials Science Foundation (ongoing) · Support <i>tatara</i> method of iron manufacture (ongoing) 	<ul style="list-style-type: none"> · Contributed to material science technical research through support of Hitachi Metals · Materials Science Foundation · Supported <i>tatara</i> method of iron manufacture (operations and personnel) conducted by the Society for Preservation of Japanese Art Swords at <i>Nittoho Tatara</i> in Okuizumo, Shimane Prefecture 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Contribute to material science technical research through support of Hitachi Metals · Materials Science Foundation (ongoing) · Support <i>tatara</i> method of iron manufacture (ongoing)
9. Review and Improvement of CSR Activities			
<ul style="list-style-type: none"> · Improve management quality using CSR research (ongoing) 	<ul style="list-style-type: none"> · Provided feedback from the CSR research results to relevant divisions. Implemented measures to improve management quality in each division based on these results 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Improve management quality using CSR research (ongoing)
<ul style="list-style-type: none"> · Develop activities conforming to international standards for CSR and requests from various research and assessment institutions (ongoing) · Improve responses to the Carbon Disclosure Project (CDP)^{*3} 	<ul style="list-style-type: none"> · Applied the PDCA cycle to CSR activity issues based on ISO 26000, social responsibility guidance of the International Standard for Organization (ISO) · Improved scope of disclosure in accordance with sustainability reporting international guideline GRI Standards · Provided responses to the Carbon Disclosure Project (CDP) 	<p>★ ★ ★</p>	<ul style="list-style-type: none"> · Develop activities conforming to international standards for CSR and requests from various research and assessment institutions (ongoing) · Improve responses to the Carbon Disclosure Project (CDP) (ongoing)

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

*2 Meetings conducted from the customers' perspective to determine the primary causes of product accidents and deliberate preventative measures

*3 Project in which institutional investors request information about climate change from major corporations

(5) Economic Performance

(a) Direct Economic Value Generated and Distributed

Please refer to the following pages.

Investor Package

[WEB](http://www.hitachi-metals.co.jp/e/ir/library/ifrs.html) <http://www.hitachi-metals.co.jp/e/ir/library/ifrs.html>

Social Contribution Activities

V. Report on Social Aspects

3. In Cooperation with Society and the Local Community

(2) Our Social Contribution Activities in Fiscal 2018

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 both lecture and e-learning formats on a regular basis. In addition, the Company has set October of each year as Corporate Ethics Month, and holds compliance lectures delivered by outside instructors, primarily for employees in management-level positions, as well as various other events to cultivate an awareness of compliance.

To ensure more thorough compliance, ongoing improvement activities were carried out by the corporate division at the Company and Group companies in Japan and overseas with regard to tasks to be addressed to prevent the occurrence of inappropriate issues.

(2) Compliance Education Activities

(a) Revision of the Hitachi Metals Group Code of Conduct

We revised the Hitachi Metals Group Code of Conduct on October 1, 2018 and implemented the following associated measures.

- i) Education for Group employees:
 - Employees learned about the background to the revision of the Hitachi Metals Group Code of Conduct, the revised contents, and other associated information during the compliance training conducted by business offices and Group companies.
 - An e-learning program titled “Hitachi Group Code of Conduct” was conducted.
- ii) Revision of the Hitachi Metals Group Code of Conduct as part of the company rules of Group companies
- iii) Display of a framed poster containing a summary of the Hitachi Metals Group Code of Conduct in each office
- iv) Distribution of a pocket card containing a summary of the Hitachi Metals Group Code of Conduct to every employee

(b) Hitachi Metals Group Corporate Ethics Month

To thoroughly instill compliance, we designated October as the 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 prepared the “President’s Message for the Hitachi Metals Group Corporate Ethics Month,” discussing adherence to compliance in his own words. The message was translated into 11 languages, and distributed and publicized throughout the Group companies.
- ii) We held compliance lectures (led by outside instructors) for those in management-level positions. (Targets were executive officers and other management, and general managers working at the head office.)
- iii) We distributed workplace compliance education materials for use in the workplace during morning huddles and monthly meetings.
- iv) All employees checked their own compliance based on a check sheet regarding compliance awareness and measures taken.
- v) The Group companies conducted self-audits of their compliance.

(c) 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 Code of Conduct and the Antimonopoly Act, prevention of acts of bribery, and prevention of transactions with antisocial forces. Training related to compliance was included in the curriculum for new employees and in education for specific levels and positions, etc.

No.	Type	Name	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 working at the head office
3		Hitachi Group compliance e-learning	Managers and professionals
4	Education for new employees	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 appointed assistant managers	Newly appointed assistant managers
7		Training for newly promoted managers and professionals	Newly promoted managers and professionals
8		Training for newly promoted managers	Newly promoted line managers
9		Training for newly promoted managers at Group companies	Newly promoted line managers at Group companies
10		Training for employees on overseas assignments	Employees on overseas assignments

(3) Compliance Audits**(a) Antimonopoly Act Special Audit (Term: February–April 2019)**

The compliance department conducts Antimonopoly Act special audits of Hitachi Metals business offices and Group companies each year. In fiscal 2018, our priority audit items covered findings from previous Hitachi audits and internal audits, such as the price setting process and compliance with the rules for participation in meetings attended by competitors (including prior applications and prohibition of joining the same table, group, or room as competitors). We confirmed that there were no violations of the Antimonopoly Act by interviewing officers in general manager or higher-level positions at business divisions and in Group companies' domestic sales-related departments and by reviewing relevant materials.

(b) Compliance Audits

The Internal Auditing Office conducted internal audits of all of its 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.

(4) Export Controls

In its Code 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.

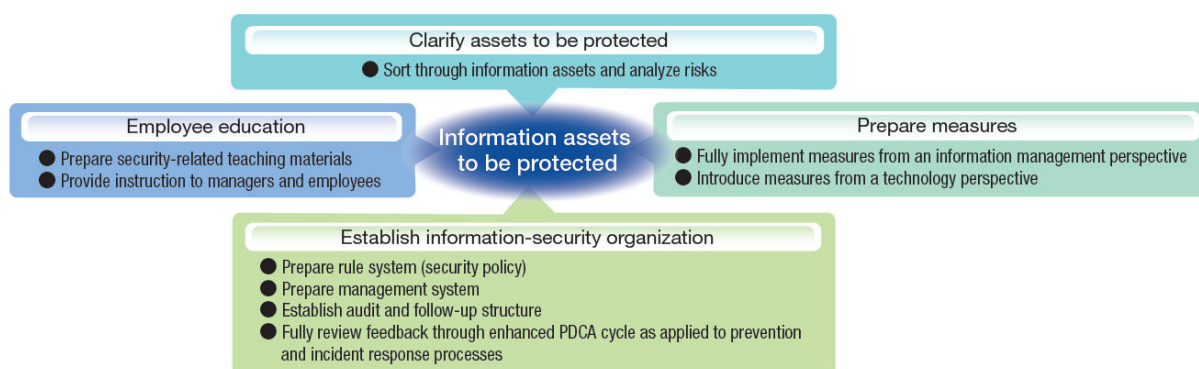
In fiscal 2018, the Hitachi Metals Group committed no major violations of export controls.

3. Information Protection and Management

(1) Basic Approach

The evolution and spread of IT, particularly in the form of the Internet and social networking services (SNSs), have resulted in an expanded litany of security risks. Managing and protecting corporate information, including personal information, is more important than ever as a corporate social responsibility. The Hitachi Metals Group established a “Basic Policy of Information Security” in April 2004, followed by a “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 on Protection of Information Assets



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 shareholders' 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 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 basic policy for information security and rules pertaining to management of personal information that hinged on 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.

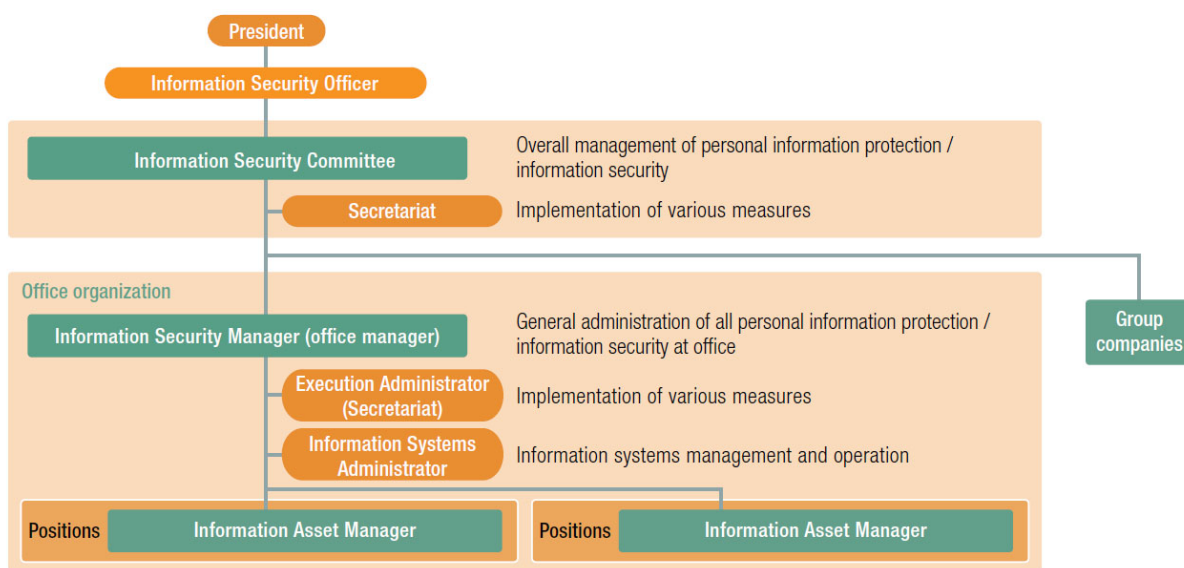
In December 2015, Hitachi Metals unified existing rules related to information security and rules related to management of personal information along with rules related to the handling of confidential documents, and then merged them into rules related to information security, which are the mainstay of 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—and 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.



(3) Information Security Measures

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

The Hitachi Metals Group has been searching the personal computers owned by employees continuously since fiscal 2006, to find and delete business information, and this was done again in fiscal 2018. Since fiscal 2007, the Company has also requested its business partners to deploy equivalent measures to prevent business information leakage via file-sharing software, etc., on personal computers. 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 fiscal 2018, mobile computers, mobile phones, and other devices were reported lost or stolen, and the Hitachi Metals Group experienced problems with e-mails sent to unintended recipients. Nevertheless, there were no incidents involving breach of customer privacy or leaked 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. During fiscal 2018, the Company conducted on-site training at Hitachi Metals Group locations (simultaneously with compliance training) and training using simulated e-mails about targeted attacks, as a means of countering targeted attacks on corporate information from outside the Company. Both initiatives were designed to improve the security awareness of every Hitachi Metals Group employee.

	On-site training at global offices	Training using simulated e-mails about targeted attacks
Implementation timing	September 2018–April 2019	July–August 2018
Training recipients and number of sessions	Hitachi Metals Group employees 80 sessions in Japan and overseas	Employees at business offices connected to the Hitachi Metals Group network 1 session

(5) Self-audit

Each year, the Company conducts a self-audit of personal information protection/information security, confirming the status of the rules compliance, and improving any areas that need to be addressed. Our fiscal 2018 audit was performed between January and March 2019.

(6) Protection and Respect for Intellectual Property

Hitachi Metals practices the principle set forth in its code 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 and ideas devised 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 inventions and ideas 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 own 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 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 Code 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. The Hitachi Metals Group Human Rights Policy, which was formulated in December 2013, 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. This 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 5,892 employees, on a consolidated basis, receiving human rights-related training in fiscal 2018). 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.

V. Report on Social Aspects

1. Responsibility to Customers

(1) Basic Approach

Driven by our philosophy underpinning quality assurance activities that is grounded in the legendary Hitachi “Ochibo Hiroi concept” (The spirit of the Gleaning), the Hitachi Metals Group continues to improve our quality assurance technologies, offering products that delight both our customers and the ultimate product consumer. This is yet another way in which we contribute to the betterment of society.

July 1, 1988

President

Philosophy of Quality Assurance Activities

1. Objectives behind the Establishment of Our Philosophy of Quality Assurance Activities

The Corporate Philosophy of the Hitachi Metals is relentless pursuit of technology, contributing to the betterment of society through the manufacture and sales of high-quality, unique products.

Quality assurance activities are pillars of our “*monozukuri*.” We practice quality assurance activities as a fundamental part of our daily work. To further instill an awareness of quality assurance activities throughout our organization, we have established a Companywide standard, clearly defining our philosophy regarding quality assurance activities within Hitachi Metals.

2. Philosophy of Quality Assurance Activities

The Hitachi Metals’ philosophy concerning quality assurance activities is built on the legendary Hitachi “Ochibo Hiroi concept” (The spirit of the Gleaning). The philosophy of this activity is as described below.

(1) Quality first, customers first

Product quality is the highest priority among our many duties to our customers.

Our primary objective is to be a trusted company that satisfies customers and plays a role in the betterment of society.

(2) Build quality into our products, and conduct final inspections from the standpoint of the customer

Quality is the starting point for all of our corporate activities. Our development, production, sales and other departments maintain a focus on quality, aligning efforts as a team to consistently improve quality within the organization, to build quality into our products.

Manufacturing and final inspection are the twin pillars of quality assurance. Error-free technology and equipment, process control, and a continuous approach to final inspection from the standpoint of the customer is what ensures the quality of Hitachi Metals products.

(3) A sincere response to quality issues and prevention of recurrence

If we ever inconvenience our customers because of a quality defect, we believe it is our responsibility to resolve the issue in the best manner possible. We must fully investigate the underlying cause of the issue, learning the lessons that will ensure the issue never happens again.

(2) Quality Assurance Structure

The quality assurance departments of our business divisions and Group companies do quality assurance work for the products under their jurisdiction, and strive to enhance quality. In January 2016, we established the Corporate Quality Assurance Division to reinforce our quality assurance structure on a global basis. The division supports the departments of all companies with a broad perspective. It also promotes the quality assurance activities of all companies and provides quality-related education, so that quality-related activities in all departments can proceed smoothly.

The Group's core materials and components are supplied to a wide range of customers in the steel, automotive, and electronics industries. Quality assurance, appropriate to the needs of each customer, is carried out at every site. Domestic plants have received ISO 9001 or ISO/TS 16949 certification, and have put quality assurance structures in place. The Hitachi Metals Group has manufacturing plants in North America, Asia, and Europe, and is developing businesses appropriate to each area of operation. The plants in Japan function as "mother plants" to their counterparts outside Japan, and provide guidance regarding manufacturing technologies and quality control through close links. The major plants outside Japan have also received ISO 9001 or ISO/TS 16949 certification.

(3) Product Safety

(a) Safe Product Supply System

New products and those in development are subject to thorough product safety (PS) design reviews, thereby assuring the production of safe products. We have established product safety committees companywide, and in each business division and plant, and these committees work together as they advance PS activities. As a result, no PS-related incidents involving products occurred in fiscal 2018. The entire Hitachi Metals Group also has further strengthened its controls on chemical substances in products.

(b) Quality Incident Response Structure

In the event of an incident involving a product, we respond in good faith, on the principle of putting the customer first, and expedite information on all incidents to business divisions and to Corporate through the specified information route. In addressing incidents, both the direct causes and the background factors, including psychological factors, leading to those causes are investigated thoroughly. When investigating background factors, the Hitachi Metals Group places particular importance on uncovering motivational factors as part of efforts to eliminate incidents and prevent recurrences. The legendary Hitachi Group "Ochibo Hiroi" (gleanings) meeting is one activity that we undertake to ensure that we learn lessons from incidents and other mistakes. This meeting is held annually at manufacturing plants of each business division, Group companies, and elsewhere.

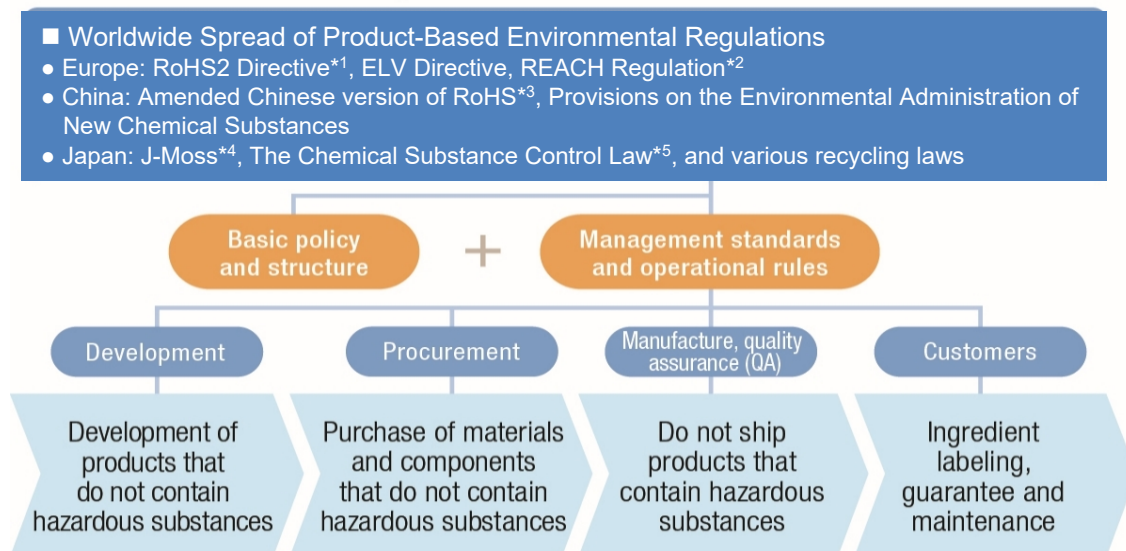
(4) Supervision of Substances Contained in Products

The Hitachi Metals Group embraces a global approach to "Environmental CSR-Compliant *Monozukuri*"* activities—methods of production that do not incorporate harmful substances. As shown in the chart, these activities involve applying mechanisms to eliminate harmful substances at each stage of production. Doing so allows us to promote the identification of chemical substances contained in our products, and register and file for approval of chemical substances and provide information on them to our customers with regard to REACH and other regulations. We will also cooperate with our customers

and business partners to ensure that we provide information in an efficient manner.

* The Japanese word *monozukuri* expresses the art and joy of making things as perfectly and efficiently as possible, while respecting nature in terms of the materials used and the environment.

Environmental CSR-Compliant Monozukuri Structure



*1 Directive, Restriction of Hazardous Substances: Starting January 2013, all electrical and electronic equipment is subject to mandatory restriction of the use of hazardous substances and is required to bear a CE marking. The number of restricted hazardous substances increased from six to 10 in July 2019.

*2 Registration, Evaluation, Authorization, and Restriction of Chemicals: Manufacturers and importers are required to register all chemical substances and notify the authorities of substances of very high concern (SVHC) present in their articles.

*3 Administrative Measure on the Control of Pollution Caused by Electronic Information Products, amended in June 2016.

*4 Refers to a new set of regulations issued in December 2005 to coincide with the revision of the Law for the Promotion of Effective Utilization of Resources. These regulations are stipulated as a JIS standard (JIS C 0950:2005) and are in line with the EU's RoHS Directive. J-Moss concerns the disclosure of the presence of specific chemical substances in electrical and electronic devices.

*5 The formal name is the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. Promote the identification of chemical substances included in products, register and file for approval of chemical substances, provide information regarding chemical substances to customers.

(5) Evaluations from a Third-Party Perspective

As part of its ongoing efforts to further improve quality, the Hitachi Metals Group takes seriously the evaluations it receives from customers and third-party institutions. These evaluations include quality excellence awards and outstanding supplier awards received from customers in Japan and overseas, in recognition of our improvement activities. In addition to our stable quality, a major factor in receiving these awards was our customers' high regard for our quality assurance structure.

2. 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 fostering 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, clean trading**

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 receive any personal gifts or offers 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.

- **Comply 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 consideration of human rights, occupational safety, and health**

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.

- **Keep 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 positively work on environmental preservation as well as to environmentally friendly materials and components.

(a) Issuance of the Hitachi Metals Group Supply Chain CSR Procurement Guideline

Hitachi Metals revised the Hitachi Metals Group Supply Chain CSR Procurement Guideline in May 2017 and published the revised version on its website. The Guideline encompasses a wide range of CSR 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. We distribute our CSR Procurement Guideline and checklist to major suppliers (excluding Hitachi Group companies), that is, those that account for 80% of the transaction amounts by business offices and affiliates in Japan, and confirm the compliance of each. The Guideline includes a rule that requires correction when a clear violation is discovered. When starting new business relationships, we request compliance with the Guideline, and at the same time conduct corporate surveys regarding bribery risks based on the Hitachi Metals Global Compliance Program (HMGCP) to promote the strengthening of supplier reviews.

Supply Chain CSR Procurement Guideline

[WEB](http://www.hitachi-metals.co.jp/e/corp/corp11_04.html) http://www.hitachi-metals.co.jp/e/corp/corp11_04.html

(b) Compliance

Believing that thorough compliance with laws, regulations, and social norms in our transactions with suppliers is essential, we bring our procurement specialists based at business offices together on a regular basis for education regarding laws and regulations. In fiscal 2018, we held a workshop for all procurers at all business offices and Group companies (27 sites) in Japan, where we shared findings from past internal audits. We also had auditors dispatched from the Head Office and other business offices audit each other to further improve the quality of our management through practical auditing, and confirmed the status of corrective actions. We are continuing these audits in fiscal 2019 and onward as well.

(c) Green Purchasing

In 1998, Hitachi Metals created its Green Procurement Guidelines in order to share our approach to environmental consciousness with our suppliers, including prevention of global warming, recycling of resources, and conservation of biodiversity and ecosystems. Since then, we have revised these Guidelines repeatedly in response to the latest laws and regulations including those related to chemicals. Version 9.0, which was issued in 2018, includes revisions regarding banned substances due to changes in EU regulations, and we notified our suppliers of these revisions. We work to comply with laws and regulations, respond to customer demands, and reduce environmental impacts (conserving resources, saving energy, recycling, and appropriate management of chemical substances contained in products) by regularly sharing the latest information.

(d) Procurement BCP Initiatives

Hitachi Metals seeks to enhance its risk preparedness in the face of earthquakes, wind and flood damage, and other natural disasters, as well as new strains of influenza, fires, electrical outages, and other factors that could halt its business. For this reason, we engage in procurement BCP activities. We are working to minimize procurement risks by promoting procurement protection measures, such as diversifying our sources of procurement while asking our key suppliers to establish their own BCP measures.

(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 and reinforcement of *monozukuri*, 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—tasked with seeking out excellent suppliers with a view to carrying out transparent procurement activities from optimal suppliers worldwide. In fiscal 2018, the Head Office held a discussion with the GPOs and established common procurement standards for overseas Group companies. Starting in fiscal 2019, we plan to have our GPOs audit the operations of each overseas Group company once every three years in accordance with these standards, and thereby strengthen governance.

Additionally, in order to make our supply chain transparent in addressing the issue of conflict minerals, the Hitachi Metals Group identifies mineral-producing countries and smelters using the Conflict Minerals Reporting Template (CMRT), which has become an industry standard. We strive to carry out responsible procurement activities, requiring our suppliers to procure from conflict-free smelters (CFSs)* that are certified as not using conflict minerals.

* CFS (conflict-free smelter): A smelter that is certified as having no involvement in regional conflicts by the Responsible Minerals Initiative (RMI), established by RBA/GeSI.

3. 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 for 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 2018

In fiscal 2018, the Hitachi Metals Group made social contributions including staging events such as sports competitions, environmental protection activities, welcoming tours of our plants and donation. The total expenditure was equivalent to ¥170 million*. The main content of our contribution activities is 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 office 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
	Cooperation in blood donation activities	Hitachi Metals and global Group companies
	Made donations, mainly of food, clothing, blankets, and toys, to low-income families through charitable organization. Made donations to charities* ¹	Hitachi Metals and global Group companies
	Donated to local support services facilities (hospitals, childcare center, and fire station)	Waupaca Foundry, Inc.
	Supported cancer foundations and participated in associated events	Waupaca Foundry, Inc. Hitachi Metals America, LLC. Hitachi Cable America, Inc. Metglas, Inc. Hitachi Metals North Carolina, Ltd.
	Awarded scholarships to high-school students seeking to enter college* ²	Waupaca Foundry, Inc.
	Sponsored activities of the local food bank (for providing free meals to low-income people and others)	Hitachi Metals America, LLC.

V. Report on Social Aspects

Category and description of activity		Company name and business office name
Social welfare	Sponsored dining events for senior citizens	Hitachi Metals Hong Kong Ltd.
	Sponsored organizations offering moral and ethical education to children	Hitachi Metals North Carolina, Ltd.
	Gave food and gifts to children with disabilities	Hitachi Cable Vietnam Co., Ltd.
	Provided elementary and other schools with school supplies and medicines	San Technology, Inc.
	Donated to guide dog associations	Hitachi Metals America, LLC
	Supported low-income students	Pacific Metals Co., Ltd. Namyang Metals Co., Ltd.
	Supported activities to provide free medicines	PT. HITACHI METALS INDONESIA
	Provided food and learning materials to flood victims	Hitachi Metals (India) Private Limited
	Supported welfare facilities for the elderly, people with disabilities, and children	Pacific Metals Co., Ltd.
Health, medicine, sports	Organized the Wakamatsu Junior High School Rubber Baseball Tournament ³	Hitachi Metals Wakamatsu, Ltd.
	Organized the Junior High School Goodwill Sporting Event ⁴	Yasugi Works, Hitachi Metals, Ltd.
	Sponsored the Kumagaya Sakura Marathon ⁵	Kumagaya Works, Hitachi Metals, Ltd., and Group companies
	Organized the Wakyo-Hai Volleyball Tournament ⁶	Moka Works, Hitachi Metals, Ltd.
	Sponsored the Japan Rubber Baseball Association Kuwana Branch Junior High School Baseball Pennant Tournaments	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
	Organized sports classes given by in-house sports clubs (basketball, tennis, baseball, kendo, etc.) for elementary, junior high, and senior high school students	Various Hitachi Metals works and global Group companies
	Sponsored the Hitachi Metals Cup Tottori Prefecture Junior High Volleyball Tournament ⁷	Hitachi Ferrite Electronics, Ltd.
	Became a sponsor of the Tokyo 2020 Olympic and Paralympic Games	Hitachi Metals, Ltd.
	Supported Showa no Mori charity golf competition in Gunma Prefecture	Hitachi Metals Solutions, Ltd.
	Supported Nakaumi Marathon, a national event	Yasugi Works, Hitachi Metals, Ltd.
	Supported Kanda Citizens' community-friendly marathon ⁸	Kyushu Works, Hitachi Metals, Ltd.
	Sponsored Kasumigaura Marathon	Hitachi Metals Neomaterial, Ltd.
	Sponsored a marathon organized by Ishioka City	Tonichi Kyosan Cable, Ltd.
Support for regional sports events	Various Hitachi Metals works and global Group companies	

Category and description of activity	Company name and business office name	
Academic and research education	Support through Hitachi Metals' Materials Science Foundation	Hitachi Metals, Ltd.
	Visiting lecture program and internships for local schools	Hitachi Metals, Ltd., and global Group companies
	Participated in the execution of Hitachi Science Seminars (held by the Science Museum)* ⁹	Hitachi Metals, Ltd.
	Hosted factory tours by schools and other groups* ¹⁰	Various Hitachi Metals works and global Group companies
	Dispatched employees to Wakamatsu Labor Standards Association to serve as practical skills teachers	Hitachi Metals Wakamatsu, Ltd.
	Sponsored a high school robotics competition in the U.S.	Metglas, Inc.
Culture and art	Performance by our brass band at a local concert	Yasugi Works, Hitachi Metals, Ltd.
	Donated to local museums	Waupaca Foundry, Inc.
Environment	Participated in the Tottori Sand Dunes Cleanup organized by Tottori City* ¹¹	Hitachi Ferrite Electronics, Ltd.
	Participated in forest conservation activities (Shimane CO ₂ absorption certification system)	Yasugi Works, Hitachi Metals, Ltd.
	Cleaning activities in areas near business offices	Head Office and various works of Hitachi Metals and global Group companies
	Participated in the Miyagino-Tagajo Eco Forum	Tohoku Rubber Co., Ltd.
	Participated in cleanup activities organized by the Rikyuno-Mizu Protection Society	Yamazaki Manufacturing Dept., Hitachi Metals, Ltd.
Community activities, preservation of historical sites and traditional culture	Sponsored the Yasugi Knife Festival and dispatched employees to a cutting steel symposium	Yasugi Works, Hitachi Metals, Ltd.
	Supported <i>Nittoho Tatara</i> operations, guided operations of mini- <i>tatara</i>	Yasugi Works, Hitachi Metals, Ltd. HMY, Ltd.
	Organized the Hitachi Metals C.C. Festa* ¹²	Ibaraki Works, Hitachi Metals, Ltd.
	Sponsored regional festivals and sporting events	Various Hitachi Metals works and global Group companies
	Operated casting museum (at Kyushu Works)	Kyushu Works, Hitachi Metals, Ltd.
Disaster area support	Support for victims of the heavy rain event of July 2018 and the 2018 Hokkaido Eastern Iburi Earthquake	Hitachi Metals, Ltd.
	Support for tornado victims	Waupaca Foundry, Inc.
	Support for tsunami and flood victims	PT. HITACHI METALS INDONESIA
Urban development and disaster prevention	"Children's 110 House" registration	Hitachi Alloy Co., Ltd.
	Participated in traffic safety and disaster prevention events	Various Hitachi Metals works and global Group companies
Facility open days	Opened sports grounds, gymnasias, tennis courts, welfare facilities, parking lots, etc. to local communities	Various Hitachi Metals works and domestic Group companies
Other donations, etc.	Sponsored the Orchard Road Christmas Light-up	Hitachi Metals Singapore Pte. Ltd.
	Assisted in the running of "Japan Day" (Dusseldorf)	Hitachi Metals Europe GmbH
	Offered management support to local professional soccer teams	Hitachi Metals Europe GmbH
	Sponsored various organizations, including the Hitachi Global Foundation	Hitachi Metals, Ltd. and global Group companies

V. Report on Social Aspects

		
<p>*1 Providing food and other support to low-income people (Hitachi Metals America, LLC.)</p>	<p>*2 Awarded scholarships to high-school students seeking to enter college (Waupaca Foundry, Inc.)</p>	<p>*3 Organized the Wakamatsu Junior High School Rubber Baseball Tournament (Hitachi Metals Wakamatsu, Ltd.)</p>
		
<p>*4 Organized the Junior High School Goodwill Sporting Event (Yasugi Works, Hitachi Metals, Ltd.)</p>	<p>*5 Sponsored the Kumagaya Sakura Marathon (Kumagaya Works, Hitachi Metals, Ltd.)</p>	<p>*6 Organized the Wakyo-Hai Volleyball Tournament (Moka Works, Hitachi Metals, Ltd.)</p>
		
<p>*7 Sponsored the Hitachi Metals Cup Tottori Prefecture Junior High Volleyball Tournament (Hitachi Ferrite Electronics, Ltd.)</p>	<p>*8 Supported Kanda Citizens' community-friendly marathon (Kyushu Works, Hitachi Metals, Ltd.)</p>	<p>*9 Participated in the execution of Hitachi Science Seminars (Hitachi Metals, Ltd.)</p>
		
<p>*10 Hosted factory tours by schoolchildren (Yasugi Works, Hitachi Metals, Ltd.)</p>	<p>*11 Tottori Sand Dunes Cleanup (Hitachi Ferrite Electronics, Ltd.)</p>	<p>*12 Organized the Hitachi Metals C.C. Festa (Ibaraki Works, Hitachi Metals, Ltd., and Ibaraki Technos, Ltd.)</p>

4. 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%) *Achieved in fiscal 2018
- 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: 1.5% in fiscal 2018)

In recognition of these efforts, in March 2018, Hitachi Metals was selected as a fiscal 2017 “Nadeshiko Brand,” as a company that is outstanding in terms of encouraging the success of women in the workplace. We will continue working to promote diversity, and to create an environment in which all employees can participate fully.

(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 2018, the employment ratio of people with disabilities for Hitachi Metals (non-consolidated) in Japan was 2.21%, exceeding the legally required ratio of 2.2%. We plan to continue working to further expand employment throughout the Hitachi Metals Group.

(b) The Act on Measures to Support Raising Next-Generation Children, and the Act on Promotion of Women's Participation and 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 a supportive environment that enables employees to address various family responsibilities without worrying about job security. For example, as of fiscal 2016, child care leave has been extended to the end of the month in which a child turns three years old, and for employees taking nursing care leave, we now provide an amount equivalent to 50% of their salary as family care leave benefits during this 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 (or in-laws) or spouse. Furthermore, following the introduction of the Act on Promotion of Women's Participation and Advancement in the Workplace, effective from April 1, 2016, we prepared an integrated action plan covering the Act on Measures to Support Raising Next-Generation Children, and the Act on Promotion of Women's Participation and Advancement in the Workplace. We have disclosed the content of this action plan, namely, initiatives over the next 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

	FY2014	FY2015	FY2016	FY2017	FY2018
Number of employees taking child care leave	23	24	25	32	27
Number of employees using shorter working hours for child care	28	35	35	40	45
Number of employees taking nursing care leave	0	0	1	1	2
Number of employees using shorter working hours for nursing care	0	0	0	1	1

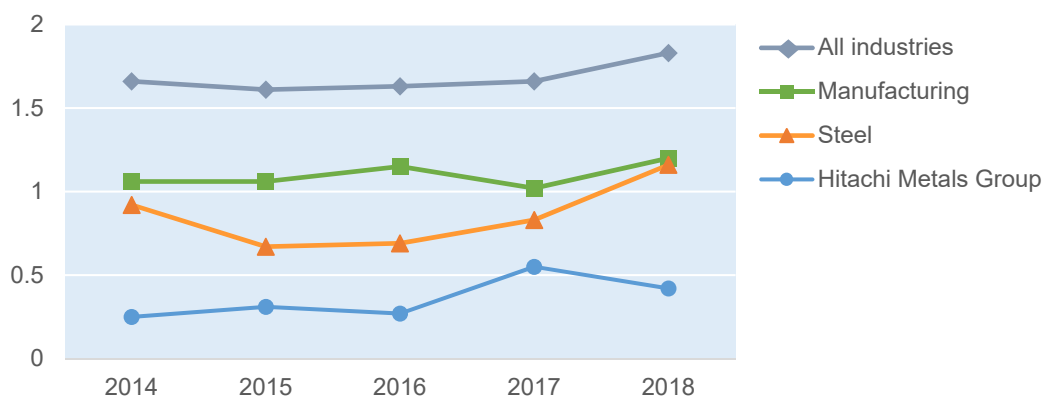
(3) Occupational Health and Safety

(a) Action to Eliminate Work Accidents

The safety results for the Hitachi Metals Group in 2018 revealed five accidents involving lost working time at Hitachi Metals and nine such accidents at the Hitachi Metals Group in Japan. Although the number of cases decreased by two from 2017, it remained high. In analyzing the details of accidents that occurred in 2018, we found that human error was the cause in more than 90% of the accidents, as it had been for the preceding year, and accidents involving inexperienced workers (with less than three years' experience) were still dominant, accounting for 40% of the total. In addition, we saw accidents that could have turned into major disasters with one wrong step. Given this situation, in 2019, we promoted 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." Key strategies in this effort include: 1) instilling the concept of 'Safety always comes first' into every employee; 2) pursuing safety basics for equipment and work involving risks that may lead to major accidents or serious injuries; 3) OHSMS initiatives; 4) reinforcement of our foundations for health and safety by 2S3tei* activities and the point-and-confirm method; and 5) strengthening our management of chemical substances by implementing planned risk assessment of such substances.

* 2S3tei: 2S is for two Japanese words beginning with "s"—*seiri* (orderly) and *seiton* (tidy)—and 3tei represents three Japanese words beginning with "tei"—*teichi* (designated place), *teihin* (designated tool), and *teiryō* (designated amount).

Frequency of Occupational Injuries (by calendar year)



* Frequency of Occupational Injuries = No. of occupational deaths or injuries ÷ total labor hours × 1,000,000

Frequency of Occupational Injuries

	2014	2015	2016	2017	2018
All industries	1.66	1.61	1.63	1.66	1.83
Manufacturing	1.06	1.06	1.15	1.02	1.20
Steel	0.92	0.67	0.69	0.83	1.16
Hitachi Metals Group	0.25	0.31	0.27	0.55	0.42

(b) Promoting Everyone's Mental and Physical Health

We actively support health management that promotes good mental and physical aspects of 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

With the Corporate Creed of “contributing to society by being the best enterprise” and the management policy of pursuing high-quality products, we aim to achieve global growth, setting forth “Building People, Building Innovation, Building the Future” as the vision of the Medium-term Management Plan. 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 “strength through harmony,” our fundamental spirit since the inception of our company. Based on this philosophy, we continue to develop “People of action with global perceptions at Hitachi Metals” who are able to demonstrate their own personality and values through good teamwork.

Under the determination for each and every employee within the organization to be a key 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) Nurturing 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, tough assignments, and OFF-JT training programs. We also support employees who study abroad to earn MBAs.

- **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). This system offers options to meet the different lifestyles and needs of individual employees such as “ability and skill development,” “child rearing,” “nursing,” and “health building,” in addition to such conventional benefits as dormitories for single employees and company-run houses and provision of medical services for employees. Within a range of points that each employee has earned (“Cafeteria Points”), he or she can choose the type of support wanted, when necessary.

(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

	FY2014	FY2015	FY2016	FY2017	FY2018
Number of employees	6,306	5,966	5,858	6,315	7,067
Male	5,660	5,339	5,241	5,654	6,227
Female	646	627	617	661	790
Ratio of female employees	10.2	10.5	10.5	10.5	11.2
Average age (years)	43.0	43.5	43.9	43.6	43.1
Average service (years)	20.0	20.6	21.0	21.0	18.4
Number of female managers	10	11	12	16	19
Employment rate of people with disabilities	2.24	2.34	2.40	2.31	2.21

5. Responsibility to Shareholders and Investors

(1) Shares and Shareholders

The total number of outstanding shares in the Company as of March 31, 2019 was 428,904,352, and there were 28,053 shareholders (including shareholders who only hold odd lots). The distribution of shares between owners is as follows:

Segment	Number of shareholders	Number of shares held (hundreds of shares)	Percentage of shares held
Financial institutions	60	626,601	14.63
Financial instruments business operators	39	22,245	0.52
Other domestic corporations	531	2,343,836	54.72
Foreign nationals	503	943,579	22.03
Individuals and others	23,981	347,230	8.10

Notes: 1. Shares representing less than one unit are not included.

2. Treasury shares (13,344 share units) are included in "Individuals and others."

(2) Basic Policy on Profit Allocation

As customer needs and technologies evolve and globalize, we regard it as our responsibility as a company to return appropriate profits to our shareholders in the long term, by strengthening our international competitiveness and expanding corporate value. With that responsibility in mind, our basic policy is to determine profit allocations to shareholders and internal reserves with the emphasis on medium- and long-term growth, giving overall consideration to the management environment, future business expansion, and business performance.

Internal reserve funds are used to invest in the development and commercialization of new materials, the creation of new business, the increased production and streamlining of competitive products, and other applications, with a view to future business expansion. We will also acquire our own shares, where appropriate, for purposes such as enabling dynamic capital policy, taking into account the necessity of such acquisition, the financial situation, the share price level, and other factors.

(3) 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.

Divisions work together, centered on the Hitachi Metals Corporate Communications Department, to disclose quarterly operating and financial results information, and hold presentations including operating results briefings for institutional investors and analysts. This effort extends beyond information on operating results, and we also actively disclose information on topics by separate business and our medium-term management plans via briefings and the corporate website, etc. The Hitachi Metals Group also communicates our management policies via integrated reports, corporate websites, and numerous other communications channels.

VI. Report on Environmental Aspects

1. Environmental Management


(1) The Hitachi Group's Environmental Vision

The Hitachi Metals Group promotes a “Low-Carbon Society,” “Resource Efficient Society,” and “Harmonized Society with Nature” as the three key pillars of the Hitachi Group’s Environmental Vision. We aim to realize both higher quality lifestyles and a sustainable society by resolving environmental issues through the social innovation business in collaboration with our stakeholders. In addition, we will fulfill our required role to achieve Hitachi’s long-term environmental targets called Hitachi Environmental Innovation 2050.


Environmental Vision

Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in collaborative creation with its stakeholders.


The aim of Hitachi’s environmental management



Low-Carbon Society
Climate Change Mitigation/Adaptation



Resource Efficient Society
Saving and Recycling Resources



Harmonized Society with Nature
Preservation of Ecosystems

Long-term Environmental Targets

Hitachi’s resolution looking toward 2050 and 2030


Hitachi Environmental Innovation 2050

For a low-carbon society

through the value chain CO₂ emissions

FY 2050
80% reduction


FY 2030
50% reduction (compared to FY 2010)



For a resource efficient society

Build a society that uses water and other resources efficiently with customers and society


Efficiency in use of water/resources
FY 2050
50% improvement (compared to FY 2010 in the Hitachi Group)



For a harmonized society with nature

Impact on natural capital

Minimized



Environmental Action Plan

Set environmental action items and targets every 3 years in order to achieve the long-term targets

(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 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 happened, 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 environmental-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 at entire life cycle, including R&D, product design, manufacture, distribution, sale, use, and disposal. Promote the following as global manufacturing priorities: environmentally conscious products in society, prevention of global warming, conservation and recycling of resources, chemical management, as well as conservation of biodiversity.

4. Environmental consideration at the 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 importance of compliance with environmental laws and regulations to raise employees' awareness of environment with a broad perspective.

6. Information disclosure

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

Formulated April 1, 2010

Revised December 1, 2016

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

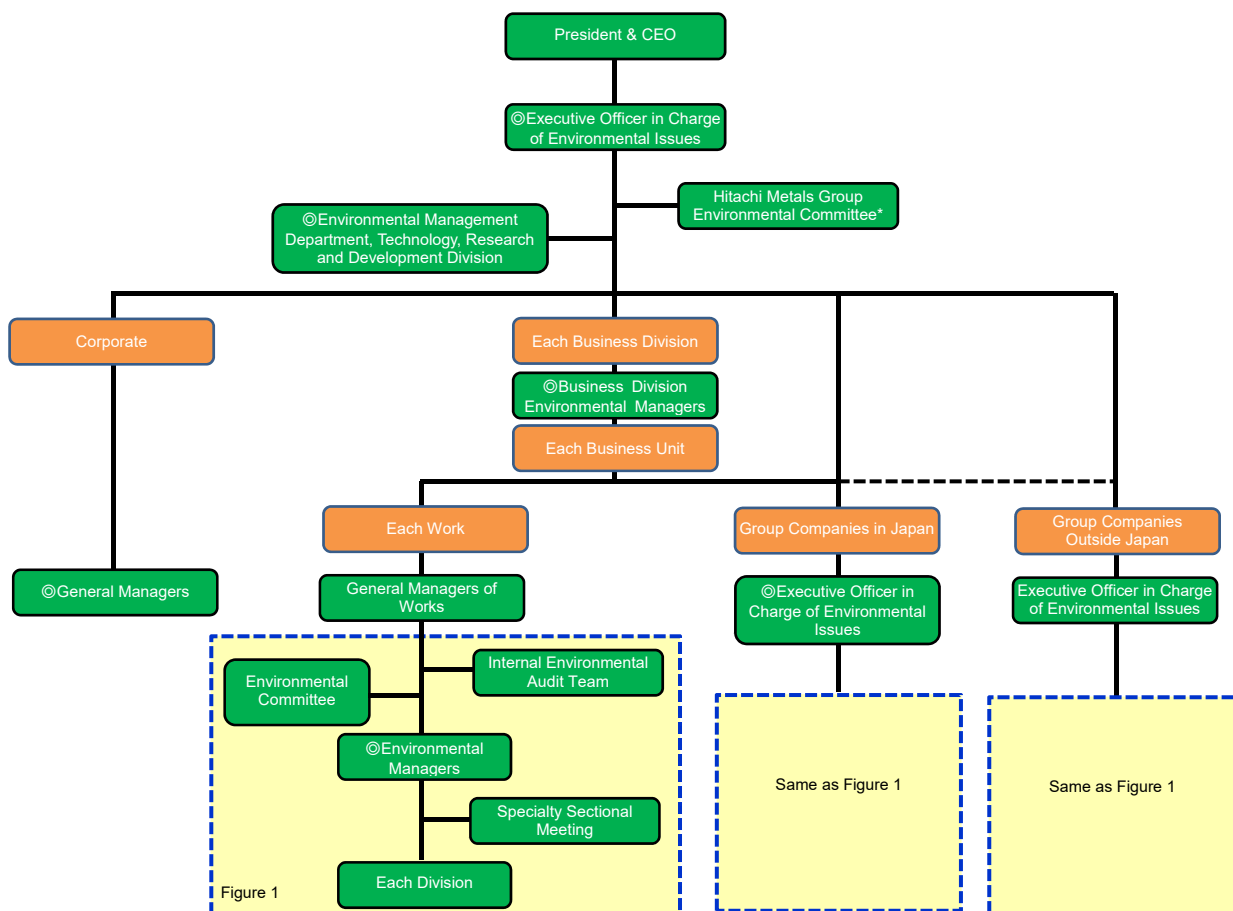
Environmental management within the Hitachi Metals Group hinges on the Environmental Management Department, Technology, Research and Development Division, which promotes environmental management activities in cooperation with business division environmental managers appointed in the business divisions. The executive officer in charge of environmental issues at Hitachi Metals heads up the Environmental Committee.

In April 2010, we formulated the Hitachi Metals Group Basic Environmental Protection Policies, which clarify our companywide commitment to environmental management.

Especially, to advance environmental management suited to a corporation that does business globally, we strive to ensure that the basic environmental protection policies are thoroughly shared within the Hitachi Metals Group, taking into account national and regional differences. Our efforts to reduce environmental burden and our response to environmental risk are based on these shared policies.

Policies and targets related to environmental activities are reviewed and revised annually at the Hitachi Metals Group Environmental Committee.

The Hitachi Metals Group Environmental Management Promotion Structure



* The Hitachi Metals Group Environmental Committee is attended by the following members, marked with (©) in the above chart: the executive officer in charge of environmental issues, environmental managers at the business divisions, environmental managers at the Works, the general managers of corporate divisions, the executive offices in charge of environmental issues of Group companies, and the staffs of the Environmental Management Department, Technology, Research and Development Division.

(4) Fiscal 2016–Fiscal 2018 Medium-Term Environmental Action Plan and Fiscal 2018 Results

The Hitachi Metals Group's Medium-Term Environmental Action Plan for fiscal 2016 to fiscal 2018, along with results and assessments for fiscal 2018, are summarized in the table below.

	Items	Action Target	FY2016			FY2017			FY2018		
			Target	Result	Rating	Target	Result	Rating	Target	Result	Rating
Management	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	1	✓	1	3	✓	1	1	✓
		e-learning attendance rate	100%	100%	✓	100%	100%	✓	100%	100%	✓
	Improve environmental activity level	GREEN21-2018	220GP	252GP	✓	320GP	354GP	✓	420GP	476GP	✓
	Contribute to protection of ecosystems	Number of ecosystem protection initiatives	1,530	1,532	✓	1,560	1,565	✓	1,600	1,601	✓
Products	Improve environmental performance	Sales ratio of key environmentally conscious products	17%	20.8%	✓	19%	20.7%	✓	21%	21%	✓
		Rate of reduction in resource consumption	10%	56%	✓	15%	66%	✓	20%	66%	✓
	Conduct assessments	Environmentally conscious design assessment and LCA implementation rate	0%	0%	✓	50%	33%	✗	100%	200%	✓
Factories and offices	Reduce energy consumption	Reduction in energy consumption ratio per production unit (Base year: FY2005)	10%	6.1%	✗	11.5%	6.6%	✗	13%	6.6%	✗
		Year-on-year reduction in transportation energy (in Japan) (Year on year)	1%	0.1%	✗	1%	8.7%	✓	1%	-12%	✗
	Limit output of waste	Improve rate of waste and valuables generated per production unit (Base year: FY2005)	7%	8.3%	✓	7.5%	11.0%	✓	8%	12%	✓
	Promote waste recycling	Rate of reused resources	70%	76%	✓	72%	79%	✓	74%	78%	✓
	Promote more efficient use of water	Improvement ratio of water use per production unit (Base year: FY2005)	10%	15%	✓	12%	24%	✓	14%	28%	✓
	Reduce output of chemical substances	Improve per unit rate of chemical substances released into the atmosphere (Base year: FY2006)	30%	17.4%	✗	32%	19.2%	✗	34%	18.2%	✗
Collaboration with stakeholders	Social contribution	Number of projects undertaken, including environmental education and Light-Down Campaign (accumulated total)	100	148	✓	200	300	✓	300	446	✓
	Enhance information disclosure content and practices	Enhance information disclosure to stakeholders and opportunities for reciprocal communication, and improve environment brand value	CSR Report, response to questionnaires, such as one from CDP		✓	CSR Report, response to questionnaires such as those from CDP and the Nikkei Environmental Management Survey		✓	CSR Report, response to questionnaires, such as those from CDP and the Ministry of the Environment		✓

Fiscal 2019–Fiscal 2021 Medium-Term Environmental Action Plan

The Hitachi Metals Group's Medium-Term Environmental Action Plan for fiscal 2019 to fiscal 2021 is implemented as follows.

		Items	Action Target	Numerical Target (FY)		
				2019	2020	2021
Governance		Adhere to environmental compliance practices and reduce risks	Internal audit implementation rate	100%	100%	100%
		Cultivate environmental literacy	Implement environmental auditor development training	1 or more	1 or more	1 or more
			e-learning attendance rate	100%	100%	100%
		Improve environmental activity level	GREEN21-2021	140GP	210GP	280GP
Low-carbon society	Products	Sales ratio of key environmentally conscious products		23%	24%	25%
		Conduct environmentally conscious design assessments		20		
	Factories	Reduce CO ₂ emissions from Works	Improvement ratio of CO ₂ emissions per production unit (vs. FY2010)	5%	6%	7%
		Reduce CO ₂ emissions during transportation	Improvement ratio of energy consumption per transportation unit (vs. FY2010)	4%	5%	6%
Resource efficient society	Resource circulation	Reduce and recycle waste	Improvement in the rate of waste and valuables generated per production unit (vs. FY2010)	12%	13%	14%
			Waste landfill rate	14%	13%	12%
	Water resources	Improve water-use efficiency	Improvement ratio of water use per production unit (vs. FY2010)	22%	24%	26%
Society in harmony with nature	Chemical substances	Reduce output of chemical substances	Improvement ratio of per unit rate of chemical substances released into the atmosphere	26%	27%	25%
	Protection of ecosystems	Impact on natural capital	Forest conservation activities (number of initiatives)	4	4	4
		Protect ecosystems	Number of ecosystem protection initiatives (accumulated total)	4	8	12
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		

(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 2018 is as follows:

(a) Environmental Costs

Our environmental costs in fiscal 2018 were ¥8.23 billion in expenses and ¥3.48 billion in investment, for a total of ¥11.71 billion.

(b) Environmental Effects

The economic effects amounted to a total of ¥6.28 billion, primarily due to waste elimination, recycling, and energy conservation.

(c) Results of Environmental Accounting

■ Environmental Costs

(100 million yen)

Cost Classification			FY2017		FY2018	
			Expense	Investment	Expense	Investment
Business area costs	Pollution prevention	14.4	10.5	16.1	1.7	
	Global environmental preservation	7.0	20.5	13.8	32.3	
	Resource recycling	26.7	0.5	25.1	0.6	
Subtotal		48.2	31.6	55.0	34.6	
Upstream and downstream costs		2.8	0.1	3.3	0.1	
Management activity costs		7.2	0.0	7.0	0.0	
Research and development costs		16.7	0.0	15.5	0.1	
Community activity costs		0.1	0.0	0.1	0.0	
Others		0.7	0.0	1.4	0.0	
Total		75.6	31.8	82.3	34.8	

■ Environmental Effects

(100 million yen)

Economic Effects	Item	FY2017	FY2018
	Waste processing and recycling	82.4	57.8
Energy conservation	2.4	1.9	
Others	2.9	3.1	
Total		87.6	62.8

- Scope of disclosure: The Hitachi Metals Group in Japan
- Calculation period: April 1, 2018 to March 31, 2019

(6) Integrated Environmental Management System (Integrated EMS)

The Hitachi Metals Group has introduced ISO 14001 as its environmental management system.

We began acquiring certification for individual factories in 1997, and built integrated Environmental Management Systems (integrated EMS) at each of four internal companies (Specialty Steel Company, Magnetic Materials Company, Functional Components Company, and Cable Materials Company). This action was prompted by the increasing necessity of close linkage 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 business and integrated with business processes. We strove to transition to the 2015 requirements as we worked toward an integrated EMS at our internal companies, and completed the transition during fiscal 2017.

Since April 2019, when we shifted to a two-divisional organization consisting of the Advanced Metals Division and the Advanced Components and Materials Division, the EMS of the former four internal companies has been implemented within these new business divisions.

(7) Environmental Auditing

The Environmental Management Department, Technology, Research and Development Division conducts companywide environmental auditing 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 2018, environmental affairs auditing was conducted at 12 sites (seven in Japan and five outside Japan) in conjunction with internal auditing. We confirmed that there were no major non-conformities requiring immediate administrative guidance. Although 57 minor non-conformities were revealed, actions to correct them have been 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

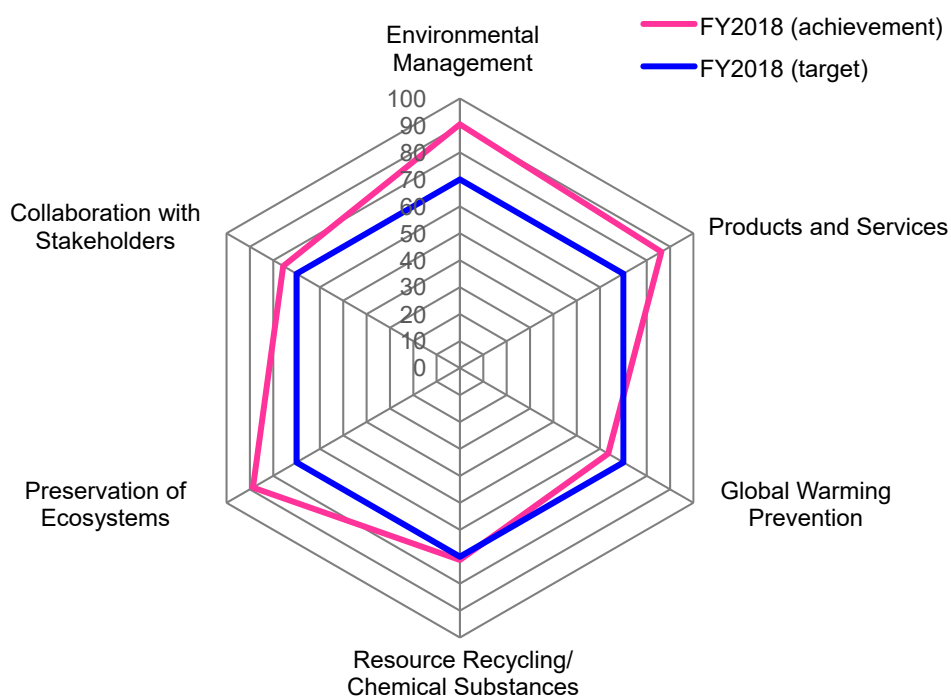
	Target	Description	
General education	All employees	e-learning	Eco-Mind training (Hitachi Group)
	On-site employees	On-site environmental education	General education on ISO 14001 and routine environmental management for general employees
Specialized education	New forepersons	New foreperson education	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 “GREEN21-2018” 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. It revised GREEN21 for the fourth time in fiscal 2016, and pursues activities under GREEN21-2018 during the three years from fiscal 2016 to fiscal 2018.

In GREEN21-2018, activities are categorized under the six 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 2017, the Hitachi Metals Group scored 476 Green Points (GPs) in six categories, surpassing our target of 420 GPs. We will continue our efforts to achieve the targets of the Environmental Action Plan and make further progress under GREEN21.



No.	Category (Rating Form)	Main Rating Contents
1	Environmental management	Implementation of environmental audits, regulatory compliance, environmental education (e-learning)
2	Products and services	Improvement of environmental performance, implementation status of eco-design assessment, use of recycled materials, product recycling
3	Global warming prevention	Improvement in energy consumption per production unit, improvement in transportation energy consumption, adoption of renewable energy
4	Resource recycling/ chemical substances	Reduction of waste generation per production unit, increased recycling rate, reduction of water usage, reduction of chemical substance emissions
5	Preservation of ecosystems	Surveying, planning, and implementation of measures for preservation of ecosystems
6	Collaboration with stakeholders	Environmental education outside the Company, greening and cleanup activities, Light-Down Campaigns, external awards and certifications

GREEN21-2018 Targets and FY2018 Achievement

	FY2016	FY2017	FY2018
Target	220	320	420
Achievement	252	354	476

(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 Participated In (Fiscal 2018)

Event date	Exhibition name (location)	Major items on display
April 18–20, 2018	TECHNO-FRONTIER 2018 (Chiba)	Advanced materials and technologies contributing to the evolution and electrification of motors
May 23–25, 2018	JECA FAIR 2018—The 66th Japan Electrical Construction Association Fair (Tokyo)	Products that contribute to energy conservation and reduction of CO ₂ emissions (amorphous alloy ribbons/cores) under the concept of “Save the earth with Amorphous—What we can do for a low-carbon society”
May 23–25, 2018	The Automotive Engineering Exposition 2018 (Yokohama)	Advanced technologies and products (lightweight technology, etc.) that accelerate the evolution of electric vehicles
September 5–6, 2018	2018 Shimane Monozukuri Fair	Products and technologies that help reduce CO ₂ emissions (aircraft components and materials, amorphous transformer cores, etc.)
September 18–21, 2018	InnoTrans 2018 (Berlin, Germany)	Products for rolling stock and railway systems (wires for rolling stock, etc.)
November 8–10, 2018	2018 Japan Die Casting Congress & Exposition (Yokohama)	Next-generation steels for diecast molds (DAC-i™ and other steels for longer-life molds)

(b) External Awards

The Hitachi Metals Group's products and environmental activities won the following external awards in fiscal 2018 for their contribution to energy conservation and to reductions in size and weight.

Major External Environmental Awards (Fiscal 2018)

Company name	Product/technology awarded	Title of award	Awarding body	Description
Yasugi Works, Hitachi Metals, Ltd.	Fe-Ni alloy sheets that enable fine etching	Japan Patent Office Commissioner Award of the FY2018 Chugoku Block Local Commendation for Invention	Japan Institute of Invention and Innovation	Contribution to the improved quality, energy efficiency, and downsizing of displays by adjusting the surface roughness of thin cold rolled strips to enable fine etching
Ibaraki Works, Hitachi Metals, Ltd.	Anti-lock brake system integrated electric parking brake harness	Ibaraki Prefecture Institute of Invention and Innovation Chairman Award of FY2018 Kanto Block Local Commendation for Invention	Japan Institute of Invention and Innovation	Contribution to increasing the energy efficiency of automobiles by developing an integrated composite cable that can make the harnesses thinner and more resistant to winding (repeated bending)
Power Electronics Materials Business Promotion Office, Advanced Metals Division, Hitachi Metals, Ltd.	Amorphous block cores (AMBC) of high-frequency power converters for handling over 100 kW	Nippon Brand Award of the 15th/2018 Super Monozukuri Parts Award	MONODZUKURI Nihon Conference The Nikkan Kogyo Shimbun	Contribution to the development of smaller and lighter coil sections by providing a lower iron loss than magnetic steel sheets and suppressing heat generation in devices
Hitachi Metals Wakamatsu, Ltd.	Studied the relationship between the likelihood of seizing and cast iron material and incorporated the findings into work rolls	Highest award for accomplishments in FY2018	American Institute of Mining, Metallurgical, and Petroleum Engineers	Contribution to the effective use of resources by extending the life of hot rolling work rolls used for steel sheet manufacturing based on research into phenomena affecting their life span
Waupaca Foundry, Inc.	Reduction in energy and water use, etc.	2018 Metalcaster of the Year	Modern Casting	Contribution to increasing energy efficiency and reducing water use by water-cooled systems

(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.

(a) Examples of Major Ecosystem Preservation, Tree Planting, Forest Conservation, and Social Contribution Activities



"Harmony Forest" tree planting activities (sawtooth oak trees planted) (HMY, Ltd.)



Cleanup activities at Shiroyama Park
(Moka Works, Hitachi Metals, Ltd.)



Clean campaign (community cleanup activities)
(Okegawa Works, Hitachi Metals, Ltd.)



Kanzakigawa riverside
cleanup campaign



Lake Kasumigaura and Lake Kitaura region cleanup grand operation



(Suita and Tsuchiura Works, Hitachi Metals Neomaterial, Ltd.)



Community beautification and cleanup activities
(Santoku Corporation)



Cleanup Yasugi
(HMY, Ltd.)

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 address such needs, as well as through the provision of advanced environmentally conscious products.

(1) Environmentally Conscious Vision in Products and Services

The Hitachi Metals Group is focusing attention on the environmental and energy sectors as we promote the development of new products with our next-generation flagship products. Moreover, for the development and design of new products, we promote environmentally friendly product development based on the “Hitachi Group Eco-Design Management Guidelines” (revised version), which consider product life cycles.

R&D Case Studies

Sector	Environmental keywords	Examples of products and applications
Energy	Renewable energy	Materials for solar cells (amorphous cut cores, dust choke coils, target materials, plated wires) Materials for wind power generation (rare earth magnets, amorphous metal materials, FINEMET cores, magnet wires)
	Highly efficient power generation	Ultra heat-resistant metal materials, precision casting blades for turbine wheels, SOFC*1 components (interconnector materials, heat-resistant components)
	Energy-saving/electricity storing/electricity transforming/smart grids	Amorphous metal materials for low-loss transformers, electrode components for secondary batteries, high-efficiency amorphous motor components
Automobiles	Exhaust gas	Components that help clean exhaust gas
	Reduced weight and low fuel consumption	Heat-resistant cast steel materials, lightweight components for chassis, lightweight aluminum wheels, CVT*2 belt materials, magnets for EPS*3, brake hoses, various sensors
	Hybrid/electric vehicles	Rare earth magnets for motors, amorphous metal materials, FINEMET cores, clad metals for secondary battery electrodes, high-efficiency motor magnet wires, battery harnesses, quick charger components, aluminum inverter cases, silicon nitride substrates
Rolling stock	More efficient and lighter weight	Cables for rolling stock
Electronics	More efficient, compact, lighter weight	Communication modules, multilayer ceramics components, silicon nitride substrates
	Electromagnetic field	Magnetic components for EMC*4
	Energy-saving (household appliances, semiconductors, LCD panels)	Air-conditioning/refrigerator compressor magnets, mass flow controllers, linear stages
	Reducing substances for environmental effect	Components free from environmental concerns
Industries/Infrastructure	Long-life products	Long-life die steel, carbide rolls, corrosion/heat-resistant fittings, Eco-Green cables
	Aircraft components	Highly heat-resistant and corrosion-resistant alloys
Medical	Energy-saving, high-precision	Cables for medical applications

*1 Solid Oxide Fuel Cell

*2 Continuously Variable Transmission

*3 Electronic Power Steering

*4 Electro-Magnetic Compatibility

(2) Expansion of Key Environmentally Conscious Products

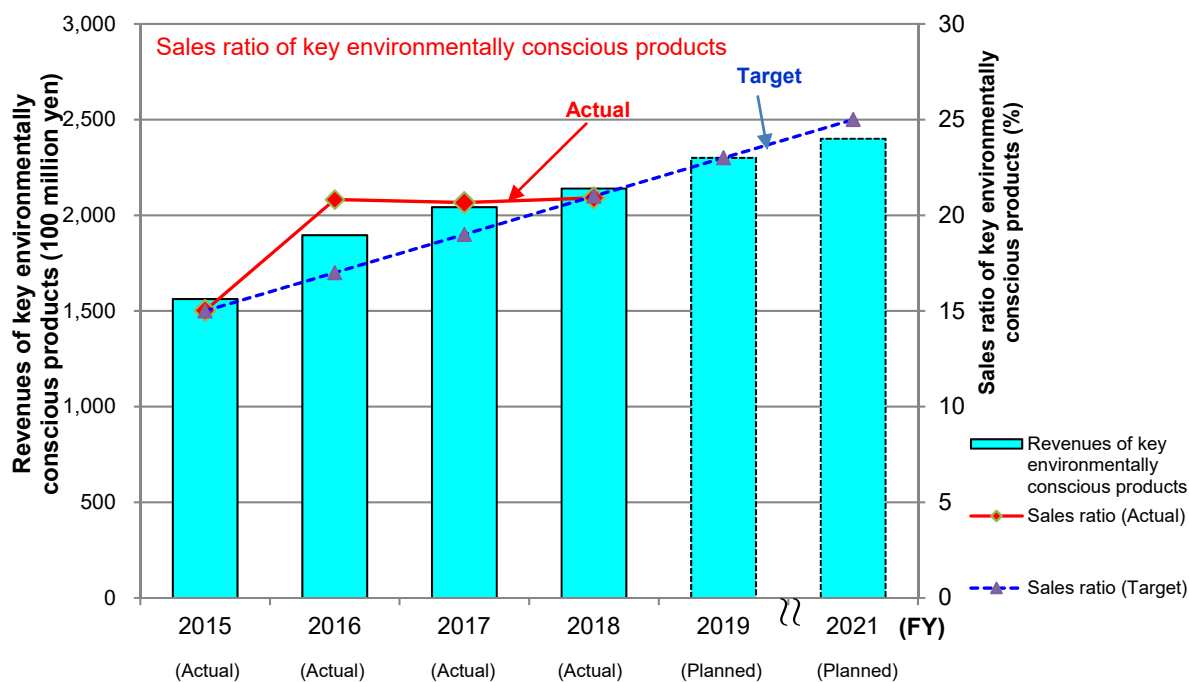
In consideration of our management priorities with regard to products, since fiscal 2016, we have set targets for an increase in revenues of “Key environmentally conscious products,” and worked to increase the sales ratio of them.

These are products targeted for growth based on the management strategy. They also contribute significantly to resolving environmental issues such as climate change and the efficient use of resources.

In fiscal 2018, we succeeded in raising the actual sales ratio of key environmentally conscious products to 21%, achieving the 21% target ratio exactly. While sales of applicable products have expanded, sales of others have decreased due to factors including discontinuation of the business. Accordingly, the sales ratio increased slightly compared with the previous fiscal year.

We will continue to expand revenues of these products while contributing to the resolution of environmental issues facing society.

Revenues and Sales Ratio of Key Environmentally Conscious Products



(3) Revision of Eco-Design Assessment

Eco-design that takes product life cycles into account is now required as a result of the revision of ISO 14001:2015, the establishment of IEC 62430*, and national regulations for energy-saving products. The Hitachi Metals Group revised its “Eco-design assessment” and “Life Cycle Assessment” (LCA) in fiscal 2016. Under the revised versions, assessments are conducted from a life cycle perspective in accordance with IEC 62430. Using these assessment tools, we carry out product development and design that consider the environment throughout the entire life cycle of the product, from procurement and manufacturing to use and disposal by the customer.

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

Evaluation Points of the Eco-Design Assessment (Revised Version)

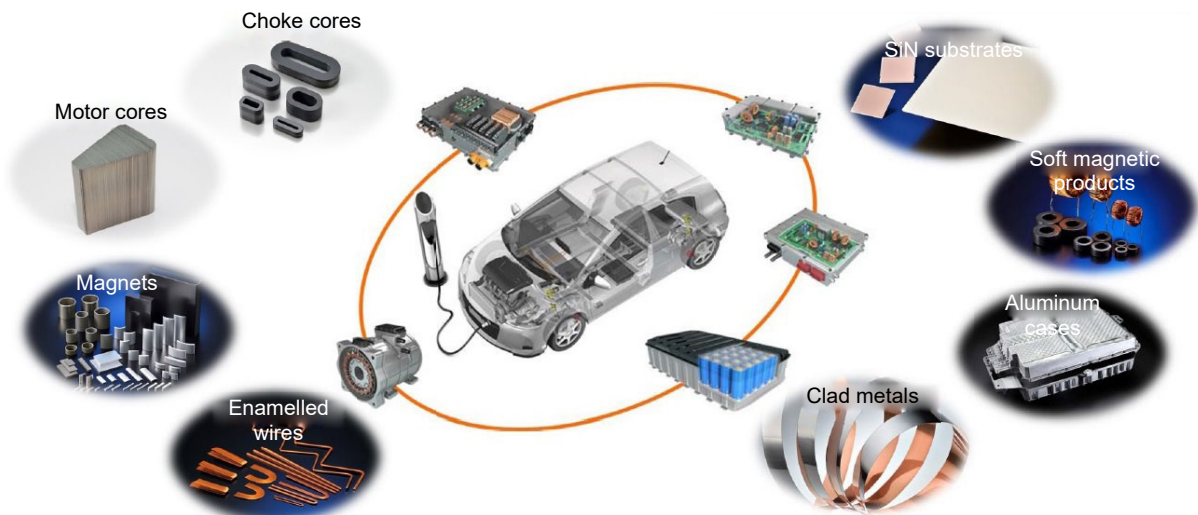
Evaluation Items		Design for Environment (DfE) Evaluation Points
DfE on procurement		Reduced use of rare metals, expanded use of recycled materials, increased energy efficiency by suppliers
DfE on manufacturing	Climate change	Reduced electricity and gas use during manufacture, improvement in energy-use processes, productivity improvements
	Resource recycling	Improvement in yield rate, recycling promoted in processes, reduced waste, reduced water use
	Prevention of environmental pollution	Reduced emissions of toxic chemical substances, lowered air emissions of NOx, SOx, and dust
DfE on transportation		Improvement in loading efficiency, modal shift, reduced transportation distance and number of trips, reduced packing materials
DfE on use	Climate change	Energy saving and low fuel consumption during product use, higher environmental functions, improved product utilization rate
	Resource recycling	Product compacting and weight reduction, improvements in durability, abrasion resistance, and life spans, improvements in heat resistance, rigidity, and strength
	Prevention of environmental pollution	No use of toxic chemical substances, reduction in exhaust gas, lower noise and vibration
DfE on disposal and recycling		Improvement in recyclability rate, improvement in ease of disassembly, improvement in degradability, provision of product environmental information

(4) 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*-related products



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

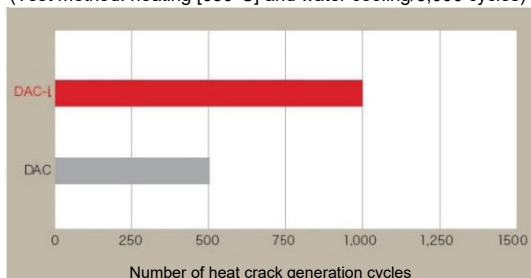
■ DAC-i™: Innovative standard die steel for die casting

Tool Steel & Roll Business Unit, Advanced Metals Division

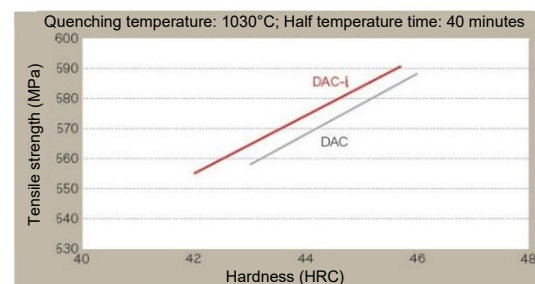
As die-cast products are increasingly produced in larger sizes, with higher quality, and in shorter cycles, the load on die steel also tends to grow during casting. As a result, excellent toughness and heat crack resistance are required for die steel. Our innovative DAC-i™ standard die steel for die casting has higher strength at elevated temperatures, higher toughness, and better heat crack resistance than conventional DAC® standard steel through innovations in component design and structure control processes using a 10,000-ton forging press. DAC-i™ is an innovative standard die steel that can be used effectively in products of all sizes. It also contributes to the effective use of resources through longer life of die steel for die-cast products used in various areas, including the automotive business.



■ Heat crack resistance
(Test method: heating [650°C] and water cooling/3,000 cycles)



■ Strength at elevated temperature



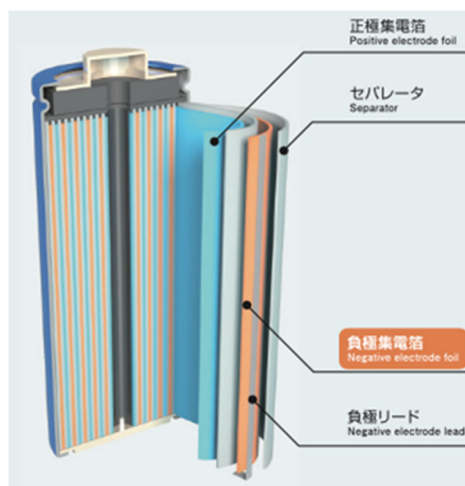
■ **Clad foils for next-generation batteries (e.g., xEV batteries)**

Electronic Materials Business Unit, Advanced Metals Division

In line with the electrification of vehicles (e.g., xEVs) as well as with secondary battery trends toward larger capacity, smaller sizes, and higher integration, research has been conducted on liquid-state and all-solid-state batteries, particularly those using silicon-based active materials for the negative electrode. Our clad materials are developed to meet these demands for such next-generation batteries. High-capacity current-collecting clad foils for LiBs offer both high strength and low electrical resistance by covering a core material—a Ni alloy—with surface layers of pure Cu, exhibiting outstanding charge-discharge cycle performance. Al/Cu clad foils for bipolar solid-state batteries allow choices for suitable active materials for both positive and negative electrodes, and they reduce contact resistance by using soft metals. Aluminum clad nickel (Al/Ni), which can be directly welded to lithium-ion battery aluminum casings and terminals, has excellent conductivity and processability. Our clad materials contribute to better productivity of battery modules, including streamlining and better reliability, as well as to a low-carbon society as components and materials for the electrification of vehicles such as xEVs.



Clad foils for next-generation batteries



Use of negative electrode current-collecting foils for lithium-ion batteries: An example

■ **Aluminum inverter cases for xEV batteries**

Automotive Casting Business Unit, Advanced Metals Division

—Thinner and lighter aluminum casting, achieving high stiffness and high airtightness through integral molding—

With the electrification of vehicles (e.g., xEVs), there is a growing demand for larger and lighter battery cases for them.

Our aluminum inverter cases offer high stiffness and high airtightness through integral molding. Aluminum casting also allows for more flexibility, a lighter weight, a smaller size, and a multifunctional design (radiation of heat, safety mechanism).

We contribute to a low-carbon society through components and materials related to the electrification of vehicles such as xEVs.



Aluminum inverter case

■ **NEOMAX® rare earth magnets for xEV drive motors and power generators**

Magnetic Materials Business Unit, Advanced Components & Materials Division

Hitachi Metals led the world in developing and launching the mass production of NEOMAX® neodymium magnets. With the world’s best magnetic properties, NEOMAX® magnets are used in drive motors of xEVs and contribute to better fuel efficiency.



NEOMAX® Nd rare earth magnet

We have also developed a diffusion technology for heavy rare earth metals, the DDMagic® series, which increases heat resistance and magnetic force while reducing the amount of heavy rare earth elements (dysprosium [Dy], etc.) added to improve heat resistance in NEOMAX® magnets, and the F series, which uses technology to limit the use of heavy rare earth elements.

As energy conservation and the need for fuel efficiency lead to greater demand for rare earth magnets, rare metals (heavy rare earth elements in particular) are in limited supply. Hitachi Metals will support the shift to compact and higher performance motors, and thus contribute to the creation of a low-carbon, recycling-based society by manufacturing high-performance magnets while reducing the use of rare metals.

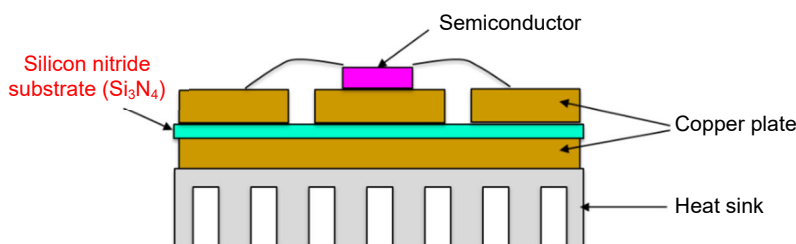
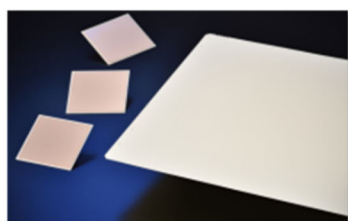
■ **Silicon nitride (Si₃N₄) insulating substrates for power semiconductor modules**

Power Electronics Materials Business Unit, Advanced Components & Materials Division

In power modules used for the control of xEV drive motors, insulating substrates need not only insulation but also resistance against the stress created by the temperature cycle. This has resulted in more silicon nitride (Si₃N₄) substrates being introduced for their excellent mechanical properties.

Our silicon nitride substrates are very environmentally conscious products, contributing to the miniaturization and cost reduction of power modules. We currently mass-produce silicon nitride substrates with a thermal conductivity of 90 W/m-K, and have also completed the development of even better silicon nitride substrates with a thermal conductivity of 130 W/m-K.

Higher temperature operation of power modules is expected due to the growing use of silicon carbide (SiC) semiconductor devices. Hence, we anticipate further demand for our silicon nitride substrates in the future.



■ **Enamelled wires for xEV inverter-driven motors**

Electric Wire & Cable Business Unit, Advanced Components & Materials Division

—Significant improvement in life span and reliability of inverter-driven motors—

Our enamelled wires, used for xEV inverter-driven motors, aim to enhance the performance (improvement in partial discharge associated with inverter surge) of motors based on two concepts. They significantly improve the life span and reliability of inverter-driven motors.

- (1) Surge-resistant enamelled wires (KMKED)
Increasing the life span of insulation by preventing erosion of coatings through partial discharge.
- (2) High PDIV enamelled wires (KMKDF)
Increasing the life span by improving partial discharge inception voltage (PDIV) and preventing partial discharge.



Enamelled wires for xEV inverter-driven motors

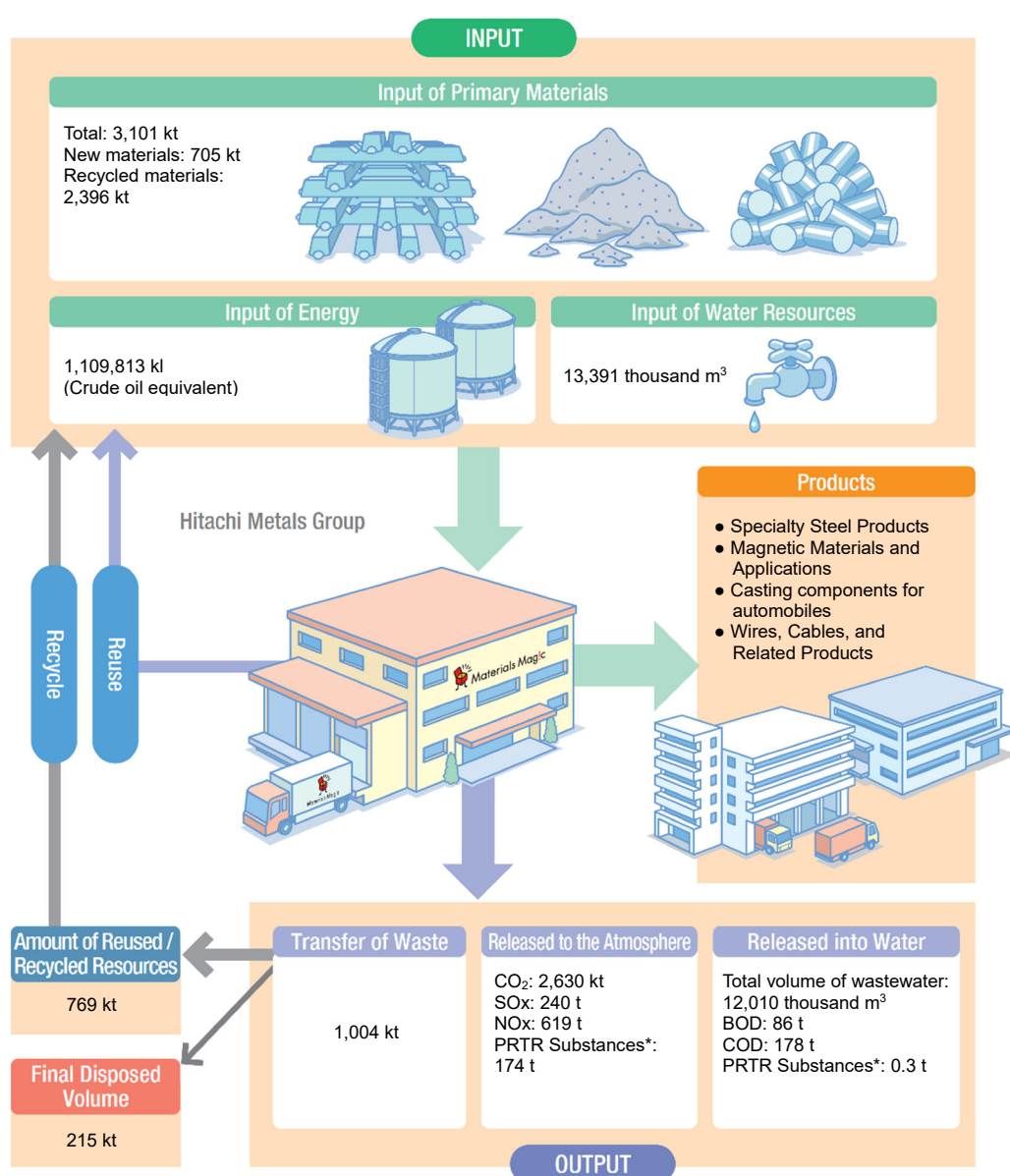
3. Environmental Consideration in Manufacturing

This is a graphical representation of the balance of materials in manufacturing processes at the Hitachi Metals Group for fiscal 2018.

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 2018 (Global)



* PRTR Substances: Substances targeted by the PRTR Law in Japan

(2) Global Warming 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 global warming 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 CO₂ emissions.

(a) Vision for Preventing Global Warming

The following presents the targets and results of the Hitachi Metals Group for fiscal 2018, the final year of our three-year plan covering fiscal 2016 to fiscal 2018.

● Targets for Fiscal 2018 in Medium-Term Environmental Action Plan

Improvement of energy consumption ratio per production unit*1 by 13% from the base year of fiscal 2005 (global)

*1 $(\text{Energy consumption converted into crude oil units}) \div (\text{amount of activity}^{*2})$

*2 A figure representing the scale of business activities such as sales or production weight

● Fiscal 2018 Results

Improvement of energy consumption ratio per production unit: 6.6%

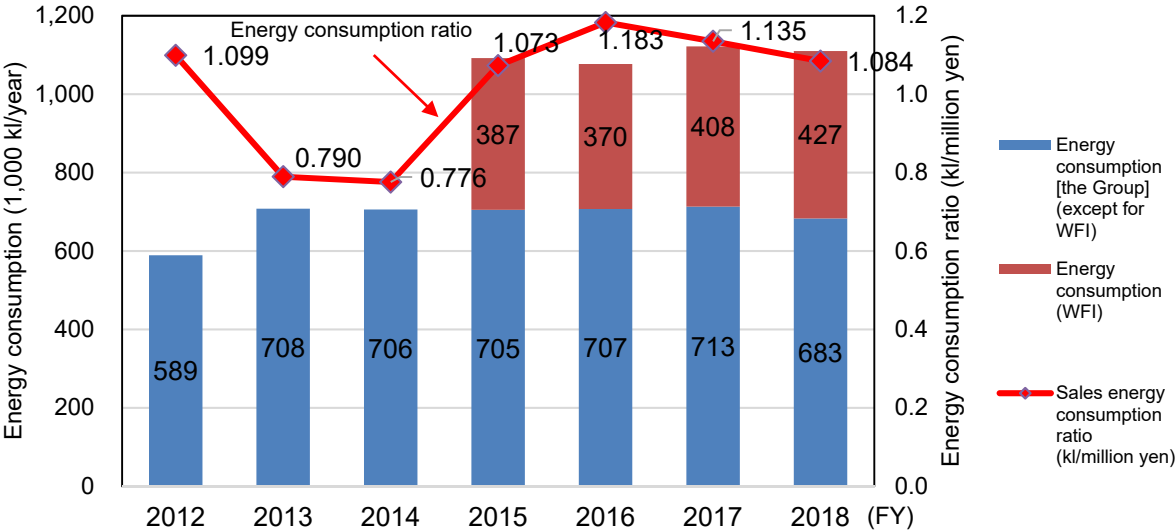
(b) Trends in Energy Consumption and Sales Energy Consumption Ratio per Production Unit

The Hitachi Metals Group's global energy consumption in fiscal 2018 was equivalent to 1,110 thousand kl of crude oil, down 12 thousand kl from fiscal 2017. Also, the energy consumption ratio per production unit compared to revenues improved by approximately 4.5%, from 1.135 to 1.084, due to factors including the impact of a 3.6% increase in revenues compared to the previous fiscal year. Factors behind the improvement of the energy consumption ratio per production unit include the effects of energy-saving activities, increased revenues, and fuel conversion. (Revenues include an increase of 3.4% due to rising raw material prices.)

Nevertheless, results fell short of our Environmental Action Plan targets regarding the improvement rate of the energy consumption ratio per production unit due to an increase in the use of coke fuel because of its lower quality, an increase in energy consumption for winter heating, etc. owing to a harsh winter in North America, and a decline in production operating rates owing to a drop in orders, as well as the launch of new factories and facilities.

To reduce energy consumption even further, we will continue to pursue energy-saving activities linked to *monozukuri*. The emphasis is on omitting excess processes, improving efficiency, boosting yield rate, installing energy-saving equipment, and fuel conversion.

Trends in Energy Consumption and Sales Energy Consumption Ratio



Note: On the graph, "WFI" indicates values for the U.S.-based Waupaca Foundry, Inc.

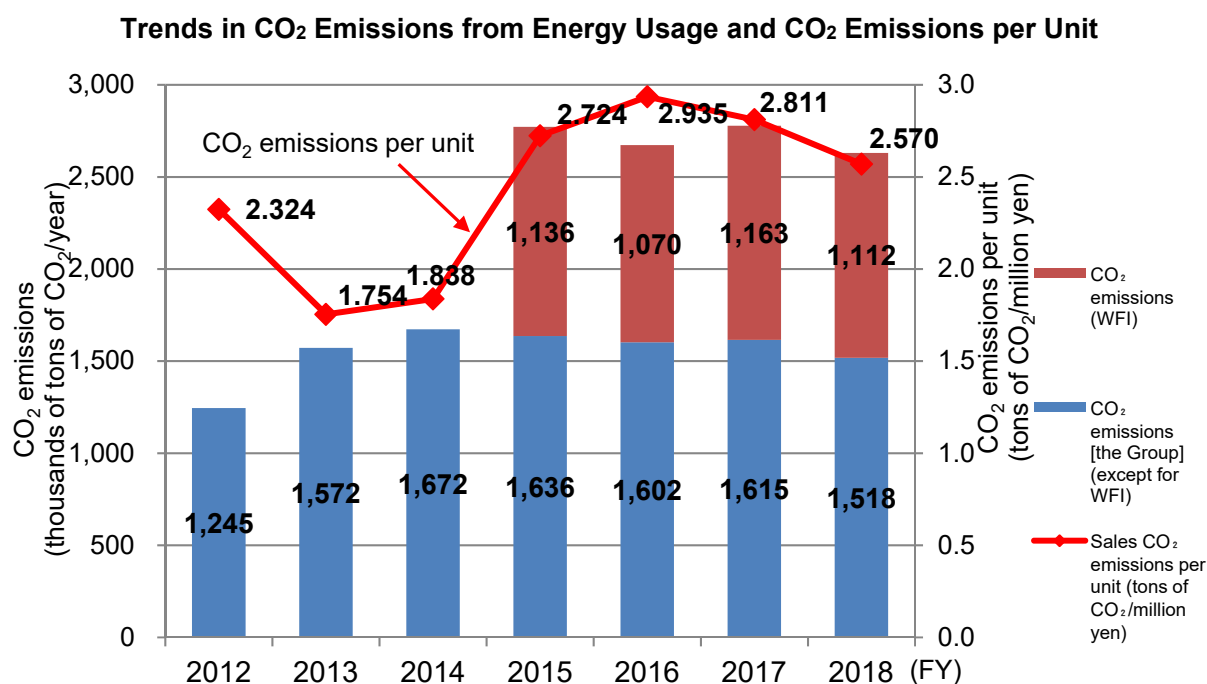
(c) Trends in CO₂ Emissions from Energy Usage and CO₂ Emissions per Unit

In fiscal 2018, CO₂ emissions from the Hitachi Metals Group’s business activities decreased by 148 thousand tons (5.3%) year on year, to 2,630 thousand tons. Also, CO₂ emissions per unit compared to revenues improved by approximately 8.6%, from 2.811 to 2.570, due to factors including the impact of a 3.6% increase in revenues compared to the previous fiscal year. (Revenues include an increase of 3.4% due to rising raw material prices.)

Factors behind the reduction of CO₂ emissions and improvement in the per unit rate include the effects of energy-saving activities, increased revenues, and fuel conversion. In particular, the improvement rate of CO₂ emissions is larger than that of energy per unit due to the effects of activities such as fuel conversion from A-type heavy oil to natural gas and LPG.

The Hitachi Metals Group carries out energy-saving activities coordinated with its *monozukuri* to reduce CO₂ emissions. Specifically, these activities include omitting excess processes, improving efficiency, obtaining higher yield rates, introducing energy-saving equipment, and fuel conversion.

We will promote the initiatives aimed at reducing CO₂ emissions as set forth in our Medium-Term Environmental Action Plan for fiscal 2019 to fiscal 2021.



Notes: 1. On the graph, “WFI” indicates values for the U.S.-based Waupaca Foundry, Inc.

2. At 62%, electricity accounts for the majority of the Hitachi Metals Group’s CO₂ emissions, followed by coke and town gas, in that order. In Japan, the power company CO₂ emissions coefficient is based on the “power supplier emissions coefficient” announced by the Ministry of the Environment; outside Japan, it is based on the 2017 IEA “country-specific conversion coefficient.”

(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 2018 in Medium-Term Environmental Action Plan

- Reduction of waste generation per production unit*¹ by at least 8% compared to fiscal 2005 (global basis)
- Recycling rate: 74% or higher (global basis)

*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 2018 Results

Rate of reduction of waste generation per production unit: 12%

Recycling rate: 78%

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, given the increasing scarcity of final disposal sites and the need to respond to social demands related to the effective use of resources, we have set targets for improving the recycling rate, starting from fiscal 2016, and are working to increase recycling and reduce final disposal volume.

(b) Results of Waste Management

Total waste generated by the Hitachi Metals Group in fiscal 2018 reached about 1,004 thousand tons, up 19 thousand tons from 985 thousand tons in the previous fiscal year.

We achieved a 12% 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 additional launch of a sand recycling system at the U.S.-based Waupaca Foundry, Inc., among other factors.

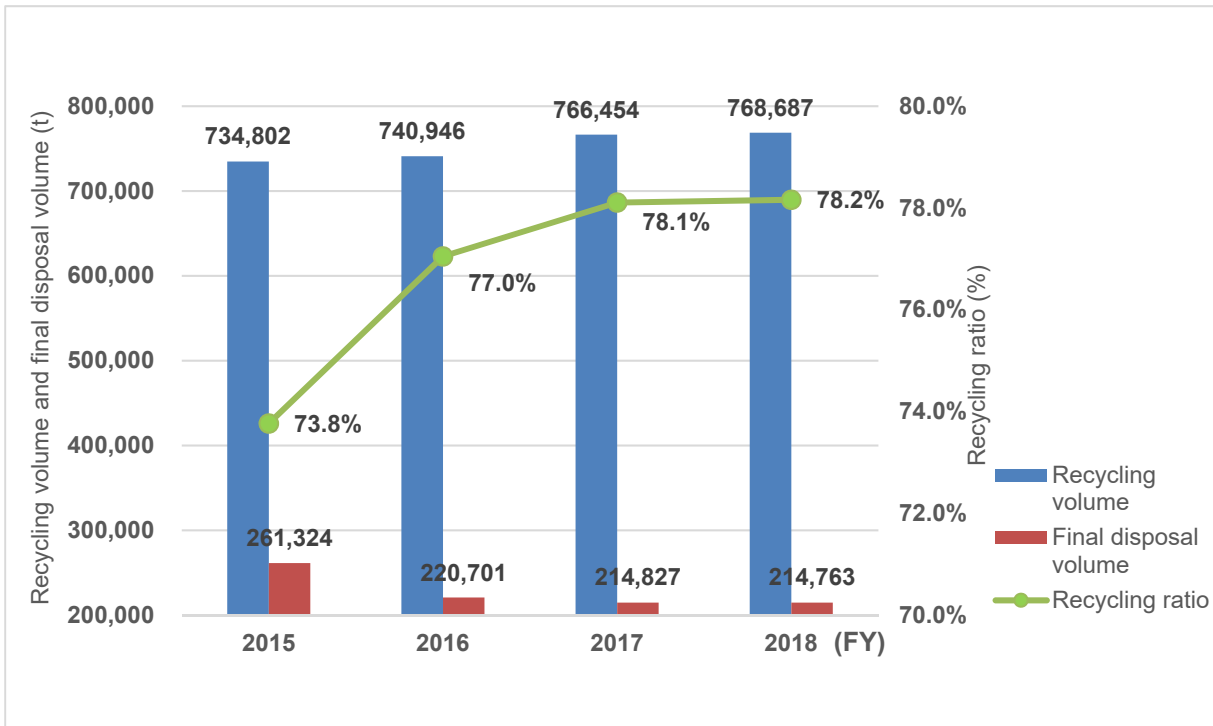
We recycled 178 thousand tons of waste in Japan, and 591 thousand tons outside Japan (769 thousand tons in total). As for final disposal, we sent to landfill 19 thousand tons in Japan and 196 thousand tons outside Japan (215 thousand tons in total).

In fiscal 2018, the resource recycling rate rose slightly from the previous fiscal year to 78.2%, in part because more materials are difficult to recycle into resources in Japan. Going forward, we plan to raise the bar overall through initiatives at overseas offices, where we believe that many recyclable items remain.

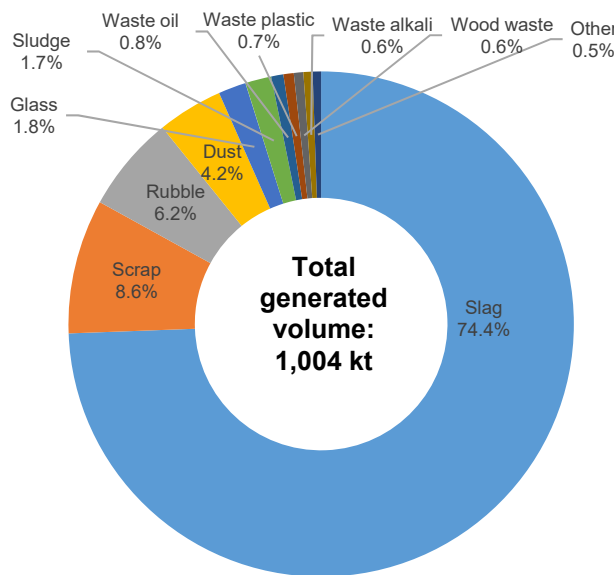
Also of note, we achieved zero emission status* at 14 business offices.

* Deemed to be a final disposal volume of less than 0.5% of total emissions since fiscal 2011.

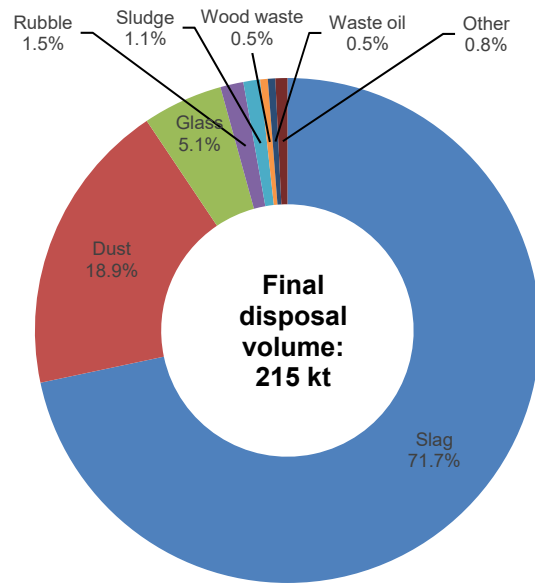
Trends in Recycling Volume, Final Disposal Volume, and Recycling



Breakdown of Waste Volume
(Hitachi Metals Group)



Breakdown of Final Disposal Volume
(Hitachi Metals Group)



(c) Reduction of Water Usage

● Targets for Fiscal 2018 in Medium-Term Environmental Action Plan

- Reduction of water usage per production unit*1 by at least 14% compared to fiscal 2005 (global basis)

*1 (Water usage) ÷ (amount of activity*2)

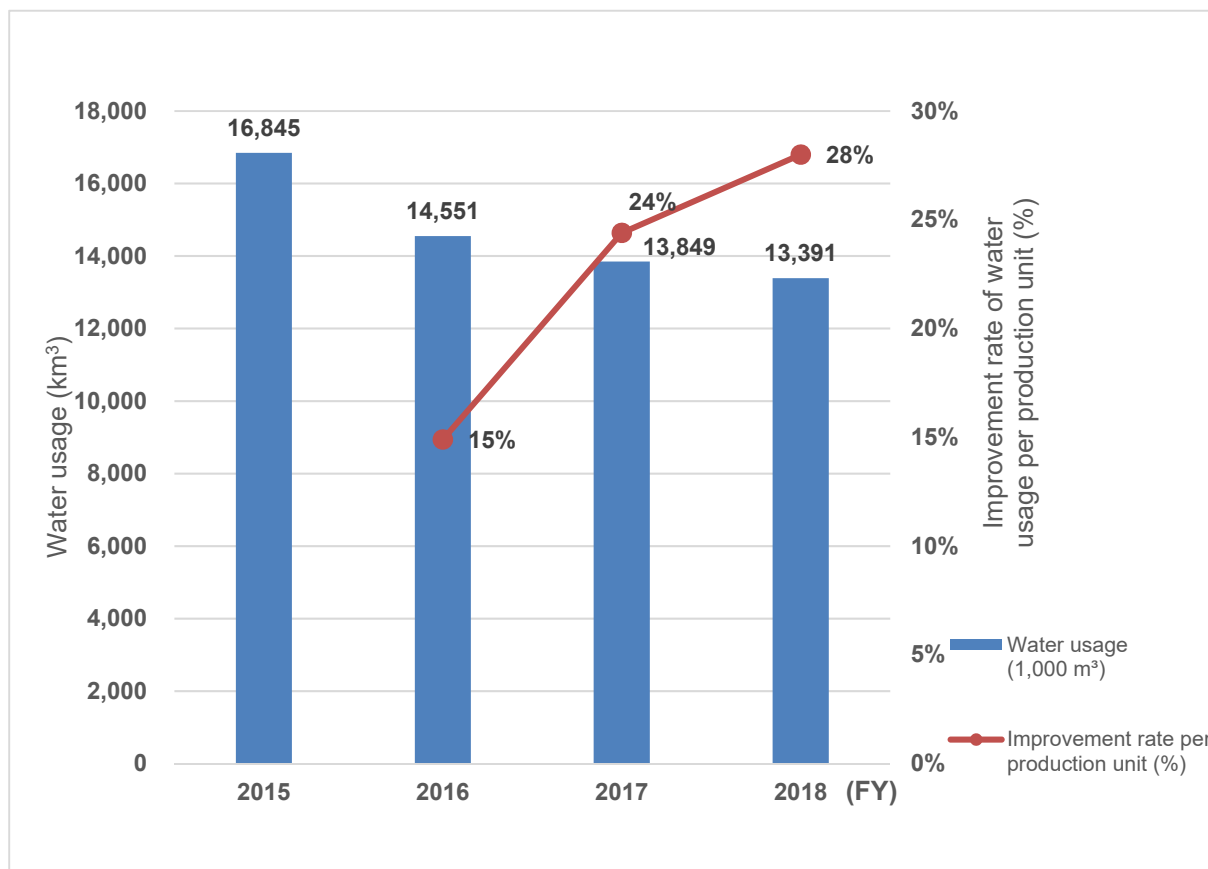
*2 A figure representing the scale of business activities such as sales or production weight

● Fiscal 2018 Results

Rate of reduction of water usage per production unit: 28%

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 13,391 thousand m³, a decrease of 458 thousand m³ from fiscal 2017. We reduced water usage per production unit by 28% compared to the base year, achieving our target.

Trends in Water Usage per Production Unit



(4) Chemical Substance Management

(a) Reduction of Substances of Environmental Concern

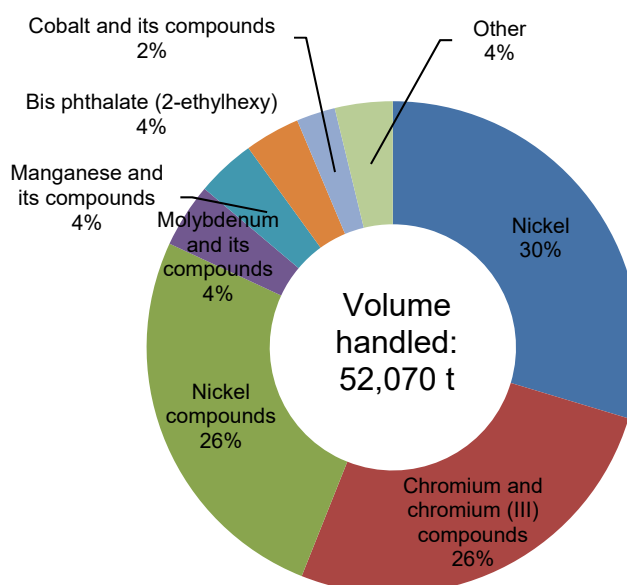
Of substances handled by domestic companies in the Hitachi Metals Group that are subject to the PRTR Law*, nickel, chromium, nickel compounds, molybdenum, manganese, phthalic acid (2-ethylhexyl), and cobalt are essential raw materials used in Hitachi Metals products. These seven substances constitute 96% of regulated materials and 78% of the total amount transferred.

Of this total amount released, 99% or more was released into the atmosphere and 83% of atmospheric release consisted of three volatile organic compounds (VOCs), namely toluene, xylene, and ethylbenzene.

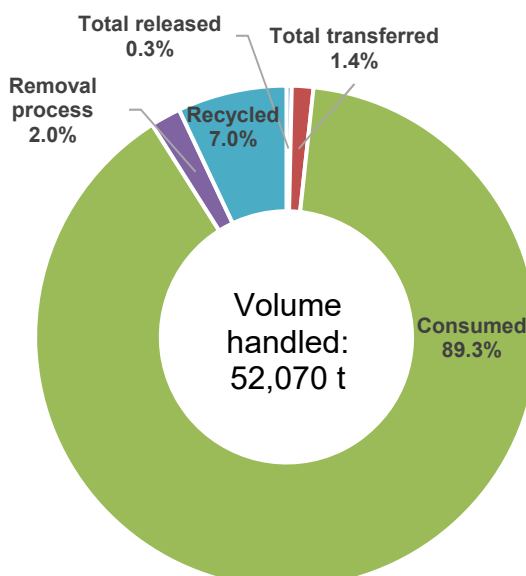
* Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

The State of PRTR Substance Handling in Fiscal 2018 (Domestic Group)

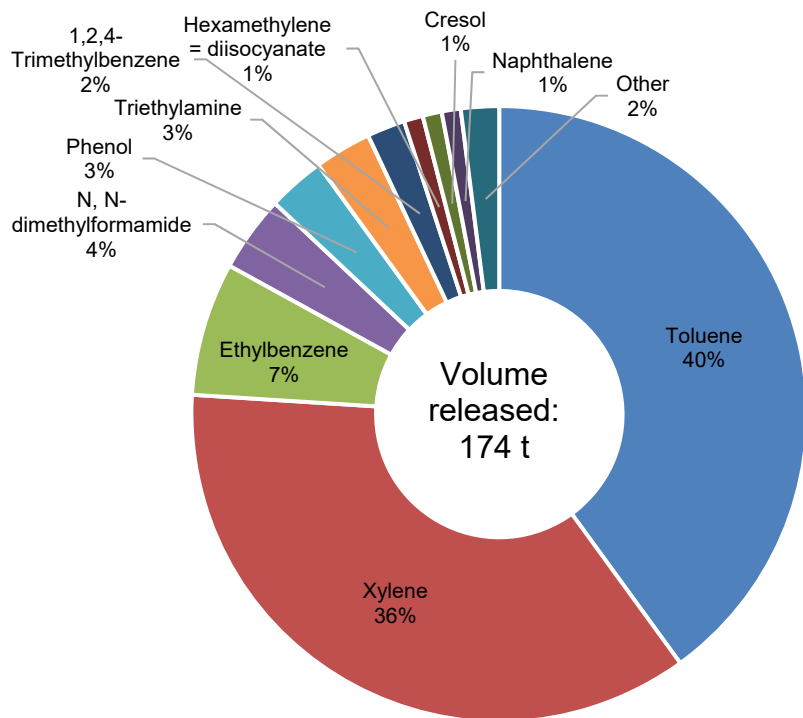
Breakdown of Volume Handled



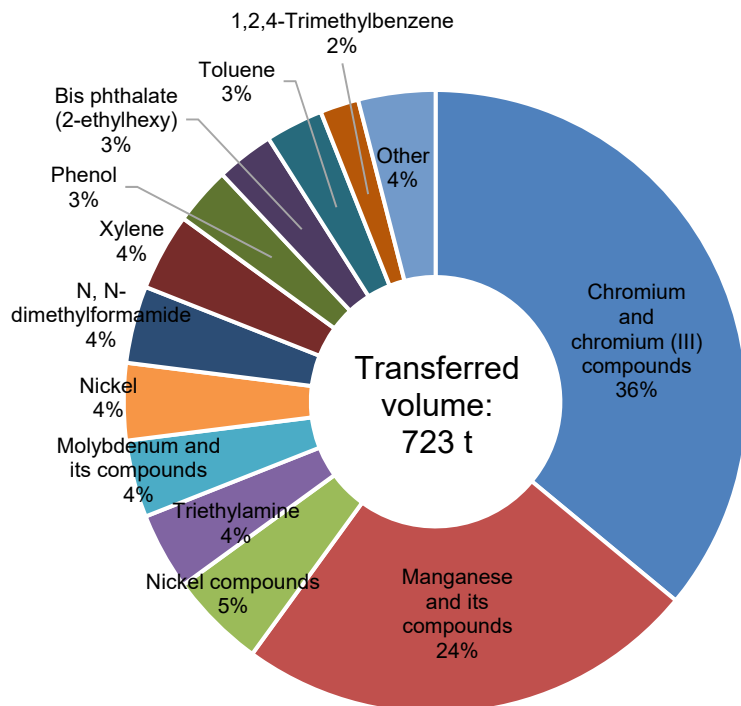
Volume Consumed, Released, and Transferred, and Other Breakdown



Breakdown of Volume Released



Breakdown of Transferred Volume



VI. Report on Environmental Aspects

Fiscal 2018: PRTR Data (in Japan) (Unit: Tons/year)

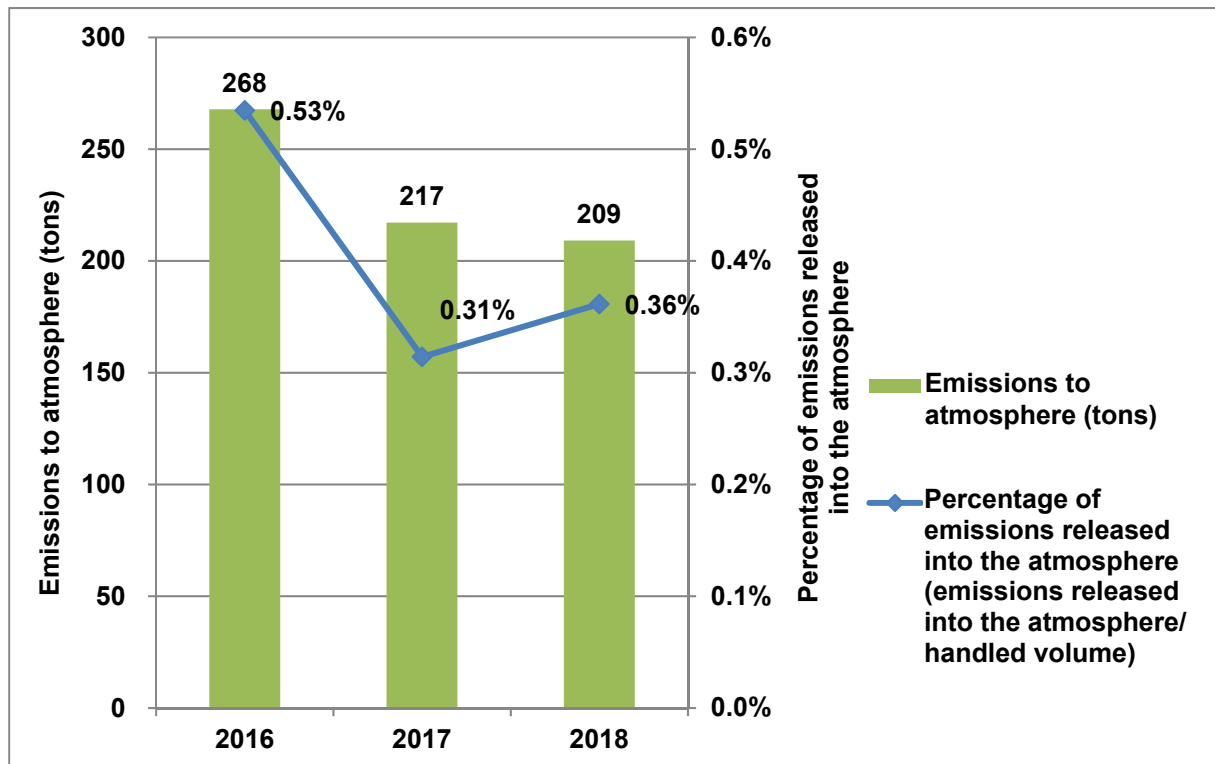
Ordinance number	Substance	CAS No.	Volume handled	Volume released					Volume transferred		
				Atmosphere	Public water system	Soil	Landfill	Total released	Sewage system	Waste	Total transferred
87	Chromium and chromium (III) compounds	—	13,735	0.0	0.1	0.0	0.0	0.1	0.0	265.0	265.0
412	Manganese and its compounds	—	2,019	0.0	0.0	0.0	0.0	0.0	0.0	173.6	173.6
309	Nickel compounds	—	13,476	0.0	0.2	0.0	0.0	0.2	0.0	40.7	40.8
277	Triethylamine	121-44-8	78	4.6	0.0	0.0	0.0	4.6	0.0	32.0	32.0
453	Molybdenum and its compounds	—	2,198	0.0	0.0	0.0	0.0	0.0	0.1	31.5	31.7
308	Nickel	7440-02-0	15,443	0.0	0.0	0.0	0.0	0.0	0.1	26.8	26.9
232	N,N-dimethylformamide	68-12-2	261	6.6	0.0	0.0	0.0	6.6	0.0	26.8	26.8
80	Xylene	1330-20-7	190	62.1	0.0	0.0	0.0	62.1	0.0	26.7	26.7
349	Phenol	108-95-2	298	5.4	0.0	0.0	0.0	5.4	0.0	19.5	19.5
355	Bis phthalate(2-ethylhexyl) phthalate	117-81-7	1,894	0.0	0.0	0.0	0.0	0.0	0.0	19.3	19.3
300	Toluene	108-88-3	90	69.2	0.0	0.0	0.0	69.2	0.0	19.3	19.3
296	1,2,4-Trimethylbenzene	95-63-6	87	3.8	0.0	0.0	0.0	3.8	0.0	13.1	13.1
53	Ethylbenzene	100-41-4	27	13.0	0.0	0.0	0.0	13.0	0.0	6.9	6.9
86	Cresol	1319-77-3	277	1.7	0.0	0.0	0.0	1.7	0.0	6.8	6.8
132	Cobalt and its compounds	—	1,328	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3
297	1,3,5-Trimethylbenzene	108-67-8	8	0.4	0.0	0.0	0.0	0.4	0.0	2.8	2.8
31	Antimony and its compounds	—	115	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
188	N,N-dicyclohexylamine	101-83-7	2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7
411	Formaldehyde	50-00-0	4	1.2	0.0	0.0	0.0	1.2	0.0	1.3	1.3
230	N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine	793-24-8	4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8
302	Naphthalene	91-20-3	2	1.6	0.0	0.0	0.0	1.6	0.0	0.6	0.6
405	Boron compounds	—	7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
42	2-imidazolidinethione	96-45-7	2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
213	N,N-dimethylacetamide	127-19-5	6	0.3	0.0	0.0	0.0	0.3	0.0	0.2	0.2
155	N-(cyclohexylthio)phthalimide	17796-82-6	1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
374	Hydrofluoric acid and its water-soluble salts	—	2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
268	Tetramethylthiuram disulfide (Synonym: thiuram or thiram)	137-26-8	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330	Bis(1-methyl-1-phenylethyl) = peroxide	80-43-3	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
305	Lead compounds	—	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	4,4'-Isopropylidenediphenol (Synonym: bisphenol A)	80-05-7	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82	Silver and its water-soluble compounds	—	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
304	Lead	7439-92-1	127	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
391	Hexamethylene = diisocyanate	822-06-0	21	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0
438	Methylnaphthalene	1321-94-4	11	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
71	Ferric chloride	7705-08-0	309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Total of 33 substances with handled volumes of less than one ton)			7	1.3	0.0	0.0	0.0	1.3	0.0	1.3	1.3

(b) Reduction of Chemical Substance Emissions

Since fiscal 2016, we have revised our management of chemical substances, 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 to 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 percentage of emissions released into the atmosphere was 0.36% in fiscal 2018, almost the same as fiscal 2017.

Trends in Percentage of Chemical Substance Emissions Released into the Atmosphere



(5) Eco-Factory Case Study

Reducing Water Usage through Introduction of Closed-Loop Cooling Water Systems

Waupaca Foundry, Inc.

Waupaca Plant 1 produces a wide range of castings, totaling more than 3,000 different kinds of products including automotive parts.

Foundries use large amounts of water to cool operating machinery and cupolas used in melting processes. Waupaca Plant 1 introduced closed-loop cooling water systems, which resulted in a reduction in water usage in fiscal 2018 of approximately 120 million gallons compared to fiscal 2015. While the company formerly used cooling water one time before discharging it as wastewater, the closed-loop cooling water systems use non-contact cooling water repeatedly, greatly improving water usage efficiency. Dramatic effects are expected from the closed-loop cooling water systems, which might be able to reduce water withdrawal by 80% or more, and under certain conditions can reduce wastewater from non-contact cooling water to nearly zero.



Closed-loop cooling water systems introduced at Plant 1

Waupaca is advancing activities aimed at reducing companywide water withdrawal by 80% from fiscal 2010 levels. In fiscal 2018, it reduced water withdrawal by 65.5% from fiscal 2010 levels.

Energy-Saving Initiatives by Waupaca Foundry, Inc.

Waupaca Foundry, Inc. (“Waupaca,” located in Wisconsin, USA) spends about 19.8 billion yen per year on energy, and it is essential to reduce its energy usage through efforts to continually improve its environmental sustainability. Waupaca thus worked on initiatives that included conversion to energy-efficient LED lighting and compressors in its factories, offices, and other work spaces, use of waste heat for indoor heating in winter, installation of a system enabling real-time monitoring of energy use, and reduction of coke usage through the use of alternative carbon materials. Through these measures, Waupaca reduced its costs by about 63 million yen in fiscal 2017. Waupaca is currently advancing measures that include a 25% reduction in energy usage (baseline fiscal 2009, compared to BAU*1) and introducing the best available pollution prevention technologies, in order to reduce its environmental impact by 2020.

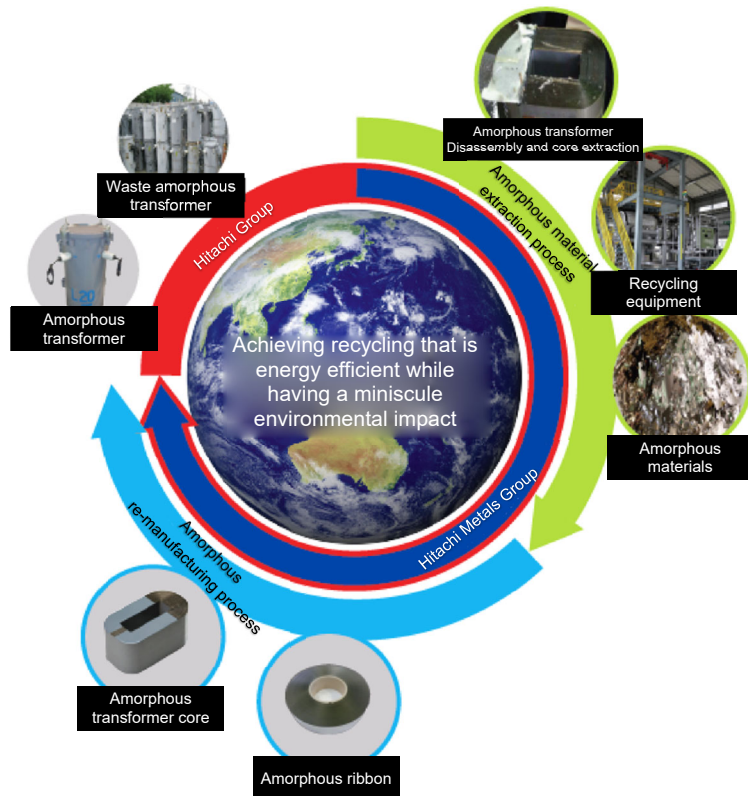


Energy Management System Certification (Energy management under ISO 14001)

*1. Comparison against “business as usual” case where no measures are taken

Initiatives to Recycle Amorphous Metal Materials

The amorphous metal manufactured by the Company contributes significantly to energy saving, delivering excellent soft magnetic properties with high permeability and low loss, while having high saturation magnetic flux density, and having as little as roughly one-fifth the no-load loss (iron loss) of conventional soft magnetic materials like silicon steel sheets. Our Metglas Yasugi Works is working to use resources efficiently by recovering and recycling the amorphous metal scraps generated by the Hitachi Group's transformer manufacturing process and amorphous cores extracted from used transformers. As a result of this initiative, approximately 120 tons of waste amorphous was used to manufacture amorphous metal materials in fiscal 2018.



(6) Site Data**Materials Flow at Major Domestic Manufacturing Sites in the Hitachi Metals Group in Fiscal 2018**

Classification	INPUT				OUTPUT									
	Raw Materials (t/year)	Energy Use (Crude oil kl/year)	Water Use (Thousand m ³ /year)	PRTR Chemical Substances (t/year)	Waste (t/year)	CO ₂ * ¹ (t/year)	SOx* ² (t/year)	NOx* ² (t/year)	BOD* ² (t/year)	COD* ² (t/year)	PRTR Emission* ³ (t/year)	PRTR Transfers* ³ (t/year)	Waste Water (Thousand m ³ /year)	Main Discharge Destinations
Kyushu Works	8,203	35,746	209	4,310	37,422	68,015	0.0	4.6	0.0	0.7	11.2	83.9	54	Seto Inland Sea
Moka Works	37,031	26,745	450	52	22,618	52,318	0.4	2.6	0.5	0.6	0.1	51.5	330	Kinugawa River
Kuwana Works	12,932	17,501	398	22	15,346	41,260	1.0	4.8	0.0	0.0	0.3	6.1	395	Inabegawa River
Yasugi Works	151,610	176,170	5,340	20,622	74,989	466,027	30.6	165.3	1.1	13.7	0.3	370.5	5,202	Nakaumi Lake
Okegawa Works	1,680	22,053	271	1,054	1,063	42,988	0.4	8.3	2.5	4.0	0.0	7.2	271	Arakawa River
Kumagaya Light Alloy Plant	24,078	25,000	280	144	19,777	47,972	1.0	23.2	8.2	7.4	108.4	35.5	872	Arakawa River
Kumagaya Works	11,170	32,260	607	199	6,147	62,185	1.1	0.0	0.0	0.0	0.2	2.8		
Yamazaki Manufacturing Dept.	21	2,328	50	0	305	4,401	0.0	0.3	0.0	0.1	0.0	0.0	35	Sewerage
Metglas Yasugi Works	22,036	8,574	0	6	307	23,174	0.0	0.0	0.0	0.0	0.0	0.0	0	Nakaumi Lake
Saga Works	994	7,568	44	22	505	14,109	0.0	0.0	0.0	0.0	0.0	0.0	44	Rokkakugawa River
Ibaraki Works	138,560	40,504	1,208	2,199	7,604	77,615	0.4	8.5	20.3	17.3	27.3	68.8	1,104	Pacific Ocean, Kazusawagawa River, Juogawa River
HMY, Ltd.	290	10,602	10	13,587	1,532	28,618	0.6	0.7	0.0	0.0	0.0	0.0	4	Nakaumi Lake
Hitachi Metals Precision, Ltd.	3,891	9,933	13	4,714	5,364	25,910	0.0	3.0	0.0	0.0	0.0	1.3	3	Nakaumi Lake
Hitachi Metals Neomaterial, Ltd.	12,938	13,117	208	3,078	7,709	23,698	0.2	0.5	4.9	0.0	0.7	0.2	195	Sewerage, Yoneshirogawa River
Hitachi Metals Wakamatsu, Ltd.	32,554	28,877	135	1,037	45,799	56,870	0.0	11.5	0.0	0.0	1.3	57.4	75	Sewerage
Hitachi Metals Tool Steel, Ltd.	0	6,566	20	0	1,605	12,425	0.0	0.0	0.0	0.0	0.0	0.0	16	Sewerage
Hitachi Ferrite Electronics, Ltd.	606	4,852	47	44	487	10,098	0.0	0.0	0.4	0.0	0.0	12.8	47	Sewerage
NEOMAX KINKI Co., Ltd.	3,709	18,888	200	0	3,083	31,757	0.1	1.2	0.3	0.4	0.0	0.0	200	Maruyamagawa River
NEOMAX KYUSHU Co., Ltd.	8,031	9,944	60	83	1,331	19,098	0.0	17.0	0.0	0.0	2.8	2.5	42	Rokkakugawa River
Hitachi Alloy, Ltd.	6,844	3,081	146	106	820	5,884	0.0	0.0	0.7	0.9	0.0	0.0	142	Arakawa River
Tonichi Kyosan Cable, Ltd.	45,362	5,681	77	746	2,657	10,685	0.1	0.2	0.0	0.0	0.3	17.9	77	Kasumigaura
Tohoku Rubber Co., Ltd.	2,080	1,800	79	45	561	3,935	0.6	0.6	0.1	0.5	20.8	4.4	72	Pacific Ocean

*1 Calculations of CO₂ 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.

VII. Third-Party Opinion

Professor Naoya Hasegawa, Faculty of Sustainability Studies, Hosei University

The virtue of the Hitachi Metals Group's CSR Detailed Activity Report is its clear and easy-to-understand summary of the activities undertaken in the areas of environment (E), society (S), and governance (G). I could see the Company's strong determination to minimize impacts on natural capital and to change the business model throughout the value chain, envisioning the realization of a low-carbon society, a resource-efficient society, and a society in harmony with nature.

Regarding the overall CSR activities, the report clearly describes KPIs being set and evaluated in accordance with the CSR management guidelines and core ISO 26000 issues. I give the Company high marks for disclosing such information in a way that is easy for investors and other stakeholders to understand.

The purpose of corporate governance reform is to increase corporate value in a sustainable manner. To this end, companies are expected to enhance their transparency and fairness as well as to build resilient management systems that leverage external knowledge. The Company ensures the transparency and fairness of management through Nominating, Audit, and Compensation committees, of which outside directors constitute the majority of members. Moreover, the Company has built a governance structure that focuses on prompt decision-making as well as separation of management oversight and business operations. Hence, I was able to confirm that we can expect from it autonomous and rational decision-making that takes account of society's needs.

In the area of society, I support the Company's efforts to integrate its traditional value system, which places the highest priority on quality, and CSR-compliant *monozukuri*. Partnership with the supply chain is essential for the Company since it has global procurement networks. I would like to see its continued efforts to actively address issues such as conflict minerals and the global environment. Moreover, this report discloses detailed activities for local communities, employees, and investors. I was able to confirm that initiatives for various stakeholders are progressing steadily.

In terms of the environment, I was able to confirm that the Company has mostly achieved the targets in the Medium-Term Environmental Action Plan (for fiscal 2016 to fiscal 2018), formulated based on the long-term environmental goals of the Hitachi Group. In the Medium-Term Environmental Action Plan that starts in fiscal 2019, action targets are set for each of the key issues of: "a low-carbon society," "a resource-efficient society," and "a society in harmony with nature." I give the Company full marks for deepening the intention of its environmental strategies in a way that is easy for investors and stakeholders to understand. Also, expansion of key environmentally conscious products is an essential initiative to demonstrate that the Company will resolve its key environmental issues through business, and I look forward to seeing further development in this area.

Meanwhile, ESG investors are becoming increasingly critical of carbon-dependent companies. Considering the nature of the Company's business, I understand the difficulty in reducing total CO₂ emissions. Nevertheless, I would urge it to consider the development of an ambitious long-term vision to achieve the reduction of total emissions in scopes 1 and 2.

I would like to see the members of the Hitachi Metals Group develop proactive efforts to realize a sustainable society, while enhancing their partnerships with a range of actors.