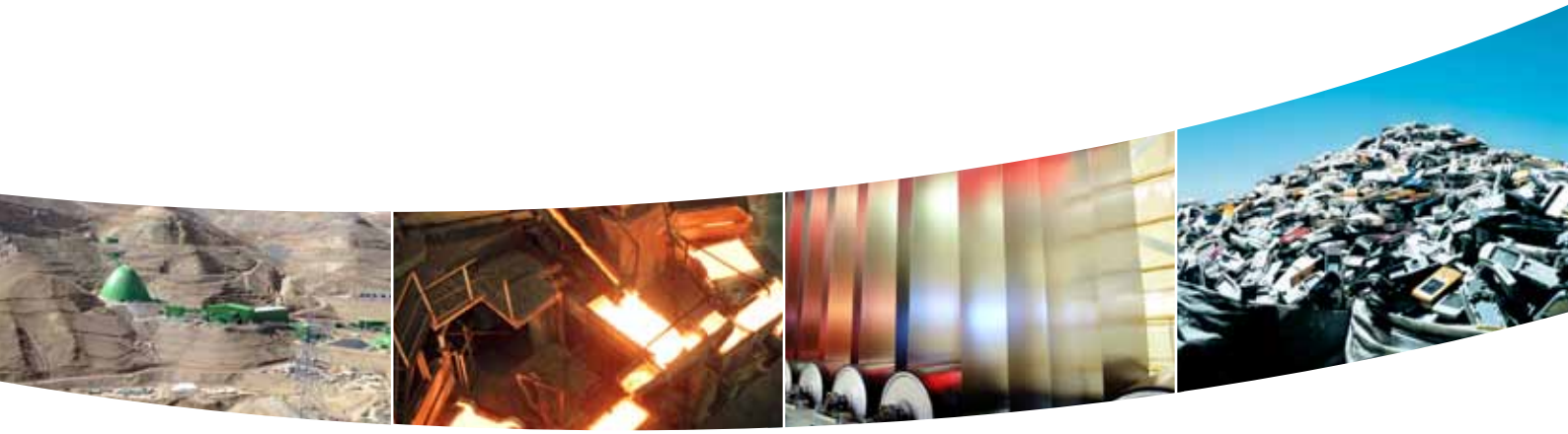


Sustainability Report 2015

JX Nippon Mining & Metals Corporation

We contribute to the development of a sustainable economy and society through innovation in the areas of resources and materials.

Editorial Policy

The JX Nippon Mining & Metals Group is committed to fulfilling its corporate social responsibility (CSR) in all its business endeavors toward the sustainable development of society.

We issue a sustainability report each year to disclose appropriate corporate information to a broad range of stakeholders, including customers, suppliers, shareholders and investors, employees, industry-government-academia groups, and local communities. As an important communication tool, this report is designed to enhance stakeholders' understanding of our CSR activities.

Sustainability Report 2015 has been prepared in accordance with the GRI G4 Guidelines* and the Mining and Metals Sector Disclosures document, as required by the 10 sustainable development principles of the International Council on Mining and Metals (ICMM), and by the ICMM's Assurance Procedures.

* International guidelines issued by the Global Reporting Initiative, incorporating standard items for CSR reporting.

☑ The indicators in this report that are assured by a third-party organization are marked with a check ☑.

Publication Date

November 2015 (publication date of previous report: November 2014)

Reporting Period

In principle, this report covers our business activities for the period from April 2014 to March 2015 (fiscal 2014). To ensure comprehensive disclosure, however, it also includes certain information regarding important events that occurred prior to or after this period.

Definitions of Terminology

"The Company" ("JX Metals"): The terms "the Company" or "JX Metals" refer to JX Nippon Mining & Metals Corporation.

"The JX Nippon Mining & Metals Group" ("the Group" or "the JX Metals Group"): The terms "the JX Nippon Mining & Metals Group," "the Group," or "the JX Metals Group" refer to JX Nippon Mining & Metals Corporation and all its subsidiaries, as well as Toho Titanium Co., Ltd., a JX Holdings subsidiary engaged in the metals business, and its subsidiaries. However, the boundary of reporting companies varies by section of the report (see "Boundary of the Report" for details).

"The JX Group": The term "the JX Group" refers to the corporate group formed by JX Holdings, Inc., the parent company of JX Nippon Mining & Metals Corporation. Along with the Company, the core operating companies of the JX Group are JX Nippon Oil & Energy Corporation and JX Nippon Oil & Gas Exploration Corporation.

Boundary of the Report

This report applies to JX Nippon Mining & Metals Corporation as well as our domestic and overseas affiliated companies.

The reporting boundaries of indicators in each section of the report are as follows.

Corresponding Section	Boundary of the Report
Business Overview	Consolidated subsidiaries of the Group.
Environment	The Company, its directly controlled operating sites that engage in production activities, and 15 companies that have a relatively substantial environmental impact (specifically companies that operate factories classified as a Type 2 Designated Energy Management Factory under the Act on the Rational Use of Energy or companies for which reporting is required under the laws and regulations pertaining to the Pollutant Release and Transfer Register [PRTR] system). Companies indicated by * below.
Employees, Society, Corporate Governance	The Company, and 68 companies in which the Company has 50% or greater voting rights directly or indirectly.

Group Companies Covered by This Report

JX Nippon Mining & Metals Corporation*

Metals Group

Pan Pacific Copper Co., Ltd.*
Japan Copper Casting Co., Ltd.*
Hibi Kyodo Smelting Co., Ltd.*
Pan Pacific Copper (Shanghai) Co., Ltd.
SCM Minera Lumina Copper Chile*
Compania Minera Quechua S.A.
Nippon Marine Co., Ltd.
Japan Korea Joint Smelting Co., Ltd.
Changzhou Jinyuan Copper Co., Ltd.*
Kasuga Mines Co., Ltd.
JX Nippon Exploration and Development Co., Ltd.

Recycling & Environmental Services Group

JX Nippon Environmental Services Co., Ltd.*
JX Nippon Tomakomai Chemical Co., Ltd.*
JX Nippon Mikkaichi Recycle Co., Ltd.*
JX Nippon Tsuruga Recycle Co., Ltd.*

Electronic Materials Group

JX Nippon Coil Center Co., Ltd.
JX Metals Precision Technology Co., Ltd.*
JX Nippon Mining & Metals Philippines, Inc.*
Gould Electronics GmbH*
High Performance Copper Foil, Inc.
Nippon Mining & Metals (Suzhou) Co., Ltd.*
Nikko Fuji Precision (Wuxi) Co., Ltd.
Materials Service Complex Malaysia Sdn. Bhd.
JX Nippon Mining & Metals Dongguan Co., Ltd.
JX Nippon Mining & Metals USA, Inc.
JX Nippon Mining & Metals Europe GmbH
JX Nippon Mining & Metals Korea Co., Ltd.

Other Businesses

JX Metals Trading Co., Ltd.*
Toho Titanium Co., Ltd.*
Nikko Metals Taiwan Co., Ltd.
JX Nippon Mining Ecomanagement, Inc.
Yoshino Mines Co., Ltd.
Oya Mines Co., Ltd.
Hokuriku Mines Co., Ltd.
Shin-Takatama Mining Co., Ltd.
Kaneuchi Mining Co., Ltd.
Hitachi Mines Co., Ltd.
Shakanai Mines Co., Ltd.
Hanawa Mines Co., Ltd.
Hokushin Mining Co., Ltd.
Namariyama Mining Co., Ltd.
Kamikita Mines Co., Ltd.
Toyoha Mine Co., Ltd.

Contents

Message from the President

Shigeru Oi
President and Chief Executive Officer
Chairman of the CSR Committee
JX Nippon Mining & Metals Corporation

JX Nippon Mining & Metals is a company in the field of nonferrous metals and a core company of the JX Group, which aims to become one of the world's leading energy, resources, and materials business groups. Our mission is to provide to society stable supplies of materials, including copper, precious metals, rare metals, and other nonferrous metal resources, as well as electronic materials. Based on this social mission, our business operations cover the full range, from upstream resources development to midstream smelting and refining and, as downstream operations, electronic materials fabrication, and recycling and environmental services.

Current State and Challenges of the Copper Business

Copper, the core of our business operations, is widely used in electrical wires and electrical circuits for electronic products, vehicles, and other applications because of its good conductivity, ease of processing, relatively low cost, and other advantages. As demand for copper continues to increase steadily, it will remain an indispensable metal resource for the future growth of society. From a supply standpoint, however, we face many challenges, as reserves in existing mines are becoming depleted and development of new mines is proving more difficult than ever before.

Solving the Problems of Society through Our Business Activities

Against this background, the JX Nippon Mining & Metals Group aims to fulfill its corporate social responsibility (CSR) of stably and efficiently supplying high-quality copper by achieving innovation in the productivity of resources and materials. We will achieve this by drawing on the technology and knowledge we have accumulated over our history that spans more than a century.

In our resources development business and smelting and refining business, we pursue the efficient mining, concentration, and refining of copper ores, a finite natural resource, with minimum loss. In our recycling and environmental services business, we seek to supplement natural resources by expanded use of end-of-life products discarded by society, from so-called urban mines. In our electronic materials business, our focus is on developing technologies and markets that will maximize the features of copper, a precious resource, in end products.

In carrying out these business operations, naturally we take all due care to minimize any negative impact on society. We endeavor to deepen communications with relevant stakeholders in order to ensure especially that we protect the environment, maintain occupational health and safety, enhance compliance, coexist and prosper along with local communities, and respect human rights.

We contribute to the development of a sustainable economy and society through innovation in the areas of resources and materials.

Carrying Out Operations Based on a Corporate Code of Conduct That Meets International Standards

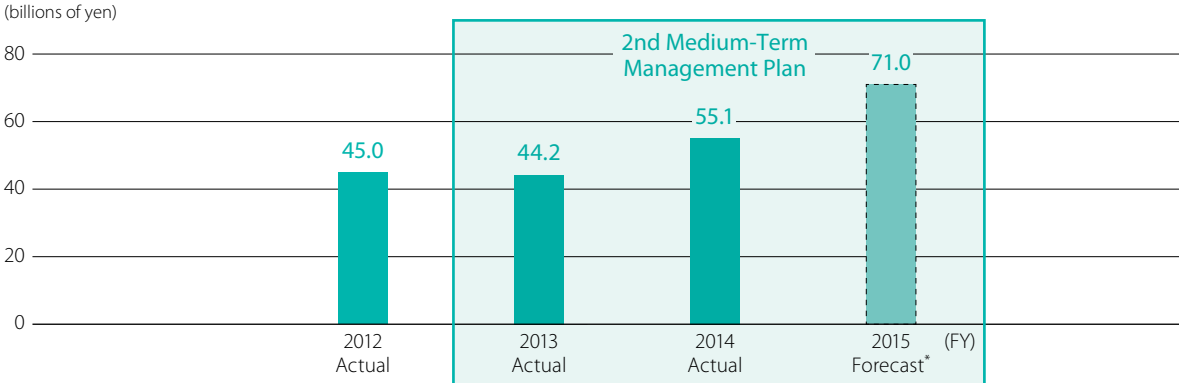
The business operations of the Group are carried out in accordance with the JX Nippon Mining & Metals Code of Conduct created in line with the JX Group Mission Statement. This Code of Conduct is compliant with international guidelines as well, including the principles of the International Council on Mining and Metals (ICMM), of which we are a member, and the Ten Principles of the United Nations Global Compact.

The Code of Conduct is shared by management and employees, along with the awareness that "CSR activities are nothing more or less than our business activities." On this basis, and in the belief that carrying out our daily operations with the same sense of purpose will lead to maximizing the success of the overall Group toward innovation in the productivity of resources and materials, we will strive to instill the Code of Conduct even more deeply, through such means as distributing this *Sustainability Report* to all employees and conducting training.

Review of Fiscal 2014 and Progress Made in Reaching the Goals of the 2nd Medium-Term Management Plan

The Group's ordinary income in fiscal 2014 (excluding inventory valuation factor) was ¥55.1 billion, a year-on-year increase of ¥10.9 billion. While the resources development business struggled due to the drop in copper prices, the main factors contributing to the increase were the benefits of yen depreciation, improvement in the smelting and refining margin, and sales growth in the electronic materials business. (See pages 29–36 for details.)

Ordinary income (excluding inventory valuation factor)



	2012 Actual	2013 Actual	2014 Actual	2015 Forecast*
LME copper price (US cent/pound)	356	322	297	270
Exchange rate (JPY/USD)	83	100	110	115

* Forecast for fiscal 2015 is as announced in May 2015.

I would like to review the progress made to date toward meeting each of the goals of the 2nd Medium-Term Management Plan (fiscal 2013 to 2015).

1 Prioritizing Compliance and Safety

In addition to existing initiatives for enhancing compliance, we put into effect rules to shut out relations with antisocial forces in July 2014 and rules for preventing bribery in October of that year. Then in July 2015, we established a Risk Management Council and Risk Management Office, which will identify a broader range of risks and draw up measures for handling them. In the area of occupational health and safety, we reflected soberly on our inability to eliminate fatal accidents again in 2014 and determined not to simply repeat the efforts up to now in 2015. Our aim is to build a true culture of safety, focusing on the three key policy measures of (1) identifying major risks and thoroughly enforcing safety measures, (2) preventing the recurrence of similar accidents, and (3) improving safety awareness and risk sensitivity.

2 Completion of the Caserones Copper and Molybdenum Deposit Development Project

Construction for this project commenced in 2010 and production of copper concentrate began in May 2014. Currently, we are devoting every effort to ramping up production on the way to stable operation.

To continue to meet global copper demand, which is expected to see further growth, ongoing expansion of existing mines and development of new ones will be essential. The Group plans to continue actively developing resources, while taking due account of risks, leveraging its experience in the Caserones Copper Mine, the biomining technology applied commercially starting in early 2015 at the Radomiro Tomic Copper Mine of the National Copper Corporation of Chile (Codelco), and such technologies as the Nikko Chloride (N-Chlo) Process currently under development.

3 Further Enhancing and Raising the Profitability of Midstream and Downstream Businesses

We are making favorable progress on the various measures in our 2nd Medium-Term Management Plan. As a result, we are steadily building up a well-balanced business structure that is not dependent on upstream business. For fiscal 2014, the reduction in income in the resources development business was made up for by income growth in midstream and downstream businesses, as noted above.

In the smelting and refining business, we continued to take measures aimed at the stable operation of smelters and at increasing competitive strength. In March 2015, we completed the switchover of the electrorefining process at the Tamano Smelter of Hibi Kyodo Smelting to the permanent cathode (PC) method, thereby boosting the smelter's refined copper production capacity from 260,000 tons to 290,000 tons. To further boost the competitiveness of the Group as a whole, we will be organically linking the management resources, including people and facilities, of three sites in Japan and one outside Japan.

In the electronic materials business, backed by strong smartphone and tablet markets, we have enjoyed sales growth of our main products, such as sputtering targets for semiconductors, treated rolled copper foil, and precision rolled materials. To maintain and expand the number of products that achieve top market shares, we are carrying on with leading-edge product development geared to market needs. As we work to strengthen our supply structure, we completed the transfer of plating equipment to the Kakegawa Works of JX Metals Precision Technology in February 2015, enabling fully consecutive fabrication, from stamping and plating to assembly. Outside Japan, we started a UBM plating service at Nikko Metals Taiwan in March 2015, and a coil center for precision rolled materials went into full-scale operation in Dongguan, China, in May.

In the recycling and environmental services business, our low-concentration PCB waste treatment service, which started up in March 2014, is operating smoothly. As we increase the collection of recycled materials from Southeast Asia, North America, and other parts of the world, we are looking for further profit base expansion.

While the restructuring of the domestic production bases of our titanium business is still under way, this business became profitable in the second half of fiscal 2014, as we increased the operating rate to meet recovering demand. For the sake of further growth in the future, we are devoting efforts to the promotion of a project in Saudi Arabia.

4 Developing Global Human Resources

The continuation of the overseas training program aimed mainly at younger employees, the active hiring of mid-career professionals, and the periodic rotation of personnel in Japan and overseas are among the efforts we make to obtain and develop human resources to prepare for the further globalization of our business.

Major Advances toward Becoming a Global Resources and Materials Company Centering on Copper

We expect to see further income growth in fiscal 2015 as in the previous fiscal year, with the outlook for ordinary income at ¥71.0 billion. While this falls short of the target in the 2nd Medium-Term Management Plan, the achievement of stable operation of the Caserones Copper Mine and profit expansion in midstream and downstream businesses will enable us to build a firm footing leading to the 3rd Medium-Term Management Plan now being drafted.

In the 3rd Medium-Term Management Plan, we would like to present a road map of plans to make major advances toward our aim of becoming a global resources and materials company centering on copper, including our growth strategy for the resources development business following on Caserones, and measures for further strengthening midstream and downstream businesses.

In this fiscal year, we have revised our list of material issues for CSR activities and selected the following six items.

1 Innovating the productivity of resources and materials
2 Insisting on full compliance
3 Protecting the environment
4 Using resources effectively
5 Ensuring occupational health and safety
6 Developing and utilizing human resources

As we go forward carrying out our business with these six themes as focal points, we will strive to solve the problems facing society, thereby increasing the presence of the JX Nippon Mining & Metals Group in the nonferrous metals industry and maximizing our corporate value.

President and Chief Executive Officer
Chairman of the CSR Committee
JX Nippon Mining & Metals Corporation

CSR Activities of the JX Nippon Mining & Metals Group

JX Group Mission Statement

JX Group Slogan

The Future of Energy, Resources and Materials

JX Group Slogan

JX Group Mission Statement

JX Group will contribute to the development
of a sustainable economy and society through innovation
in the areas of energy, resources, and materials.

JX Group Values

Our actions will respect the **EARTH**

Ethics

Advanced ideas

Relationship with society

Trustworthy products/services

Harmony with the environment

In accordance with our JX Group Mission Statement and our Code of Conduct, we engage in CSR activities on the understanding that they are nothing more or less than our business activities.

JX Nippon Mining & Metals Code of Conduct

Ensuring a stable supply of nonferrous resources and materials is our social mission. We are engaged in a wide range of operations from exploration, mining, smelting & refining to metal fabrication and electronic materials production. Based on "JX Group Mission Statement" and complying with Code of Conduct stipulated below, we will continue to pursue technical rationality and efficiency and make improvements in quality & product properties and other matters in all aspects of our operations from development, production and marketing. At the same time, we will continue to promote recycling of resources and materials to achieve zero emission. This is our way of achieving continuous innovation in the productivity of resources and materials.

In the conduct of our business, we are committed to maintaining and enhancing a harmonious relationship with a wide range of stakeholders, including our customers and the communities in which we operate. We are committed to contributing to the sustainable development of society on a global scale.

1. **Our social mission**
   Based on continuous technological development and full awareness of our responsibilities in designing products, we will develop and produce a variety of products efficiently while minimizing waste. At the same time, we will promote recycling and reduce the impact of our operations on the environment. By doing so, we hope to obtain the satisfaction and trust of our customers and of society as a whole.
2. **Compliance with laws and regulations and engagement in fair trade**
   We will comply with domestic and/or overseas laws and regulations and will engage in fair, transparent, and free competition and trade based on the fulfillment of our social responsibilities.
3. **Disclosure of corporate information and protection of personal information**
   We will communicate not only with our shareholders, but also with the public at large, and will disclose corporate information in an active and equitable manner while focusing on the protection of personal information.
4. **Creation of an optimum working environment**
   We will place top priority on health, safety, and disaster prevention and will ensure a comfortable working environment that respects employees' personality, human rights, and individuality.
5. **Environmental conservation**
   Based on the awareness that tackling environmental issues is an essential requirement for corporate existence, we will engage in activities aimed at conserving the global environment, including biodiversity, in a voluntary, active, and continuous manner.
6. **Enhancement and strengthening of risk management**
   We will establish a risk management system based on scientific data to enhance and strengthen risk management.
7. **Harmonious relationship with society**
   We will commit ourselves to social contribution activities and work as a good corporate citizen to achieve a harmonious relationship with the rest of the society of which we are part.
8. **International business operations**
   In international business operations, we aim to contribute to sustainable development by protecting the fundamental human rights of people in countries and areas where we operate, and by respecting their cultures and customs.
9. **Elimination of antisocial activities**
   We stand firm against all antisocial forces and groups that threaten social order and safety.
10. **Management responsibilities**
    Management executives will take the lead in implementing this code of conduct and ensure it is thoroughly implemented across the Group. In the event of any non-compliance with the code of conduct, the management executives will investigate the causes, work to prevent a reoccurrence, disclose information to the public promptly and accurately, and be held accountable for the event.

Our Six Material Issues

For *Sustainability Report 2015* we have selected, in line with the GRI G4 Guidelines (G4 Sustainability Reporting Guidelines of the Global Reporting Initiative), CSR issues that we consider highly material to the business activities of the JX Nippon Mining & Metals Group, and we have made these material issues a focus of our reporting to stakeholders.

Review of Material Issues

JX Nippon Mining & Metals periodically reviews the material issues to reflect changes in both the Group's business activities and the needs of society. In conducting this review for fiscal 2015, we drew on the methods given in the GRI G4 Guidelines, performing a quantitative assessment of various CSR issues involving the business activities of the Group as to their materiality from both internal (Company) and external (stakeholder) standpoints. See the chart below for details.

Procedure for Selecting Material Issues

1. Identifying CSR issues relevant to the Group's business activities

Based on the aspects indicated in the GRI G4 Guidelines and the CSR issues given in ISO 26000,* we identified 14 matters that are CSR issues relevant to the Group's business activities.

① Establishing a global organizational governance system
② Promoting communication
③ Creating sustained economic value and providing stakeholders with fair returns
④ Respecting human rights
⑤ Developing and utilizing human resources
⑥ Ensuring occupational health and safety
⑦ Providing fair and equitable conditions of work
⑧ Using resources effectively
⑨ Protecting the environment
⑩ Insisting on full compliance
⑪ Promoting social responsibility in the entire supply chain
⑫ Promoting innovation in technology and productivity
⑬ Raising customer satisfaction
⑭ Promoting community involvement and development

* An international standard of the ISO (International Organization for Standardization) providing guidelines relating to corporate social responsibility.

2. Quantitatively assessing the materiality of CSR issues from internal and external standpoints

The materiality of the 14 CSR issues listed in 1. above was assessed from the following two standpoints.

① Materiality from an internal (Company) standpoint, for the long-term existence of the Company
② Materiality from an external (stakeholder) standpoint, for the long-term existence of stakeholders themselves and society as a whole

The quantitative assessments from each standpoint were conducted using the following tools, assigning materiality points to the 14 CSR issues.

❶ Internal (Company) standpoint:
- Items laid down in the JX Group Mission Statement and the JX Nippon Mining & Metals Code of Conduct
- Items set out in management policy statements (commitment statements of top management, Medium-Term Management Plan, etc.)
- Status of CSR initiatives (items disclosed in the annual sustainability report)
- Employee surveys
- Interviews with CSR promotion managers

❷ External (stakeholder) standpoint:
- From the standpoint of customers: Items on supply chain surveys issued by an electronics industry association
- From the standpoint of investors: Items on surveys issued by a socially responsible investment organization
- From the standpoint of industry experts: Results of mining industry risk analyses
- From the standpoint of competing companies: Items set forth in each company's behavior guidelines, commitment statements of top management, management plans, CSR reports, etc.
- From the standpoint of employees: Employee surveys

3. Creating a matrix of the assessment results and selecting material issues

Deviation scores were assigned to the assessment results in 2. above, and these were plotted on a matrix chart (page 10, top), with the assessment points from the internal (Company) standpoint on the x axis and those from the external (stakeholder) standpoint on the y axis. We then selected five items as material issues based on their high materiality for both the Company and stakeholders (those on the upper right of the chart). We also selected as a material issue "Innovating the productivity of resources and materials," seeing this as an issue that we need to pursue over the long term regardless of changes in the situation of the Company or stakeholders.

As a result of this procedure, we selected the following six items as material issues:

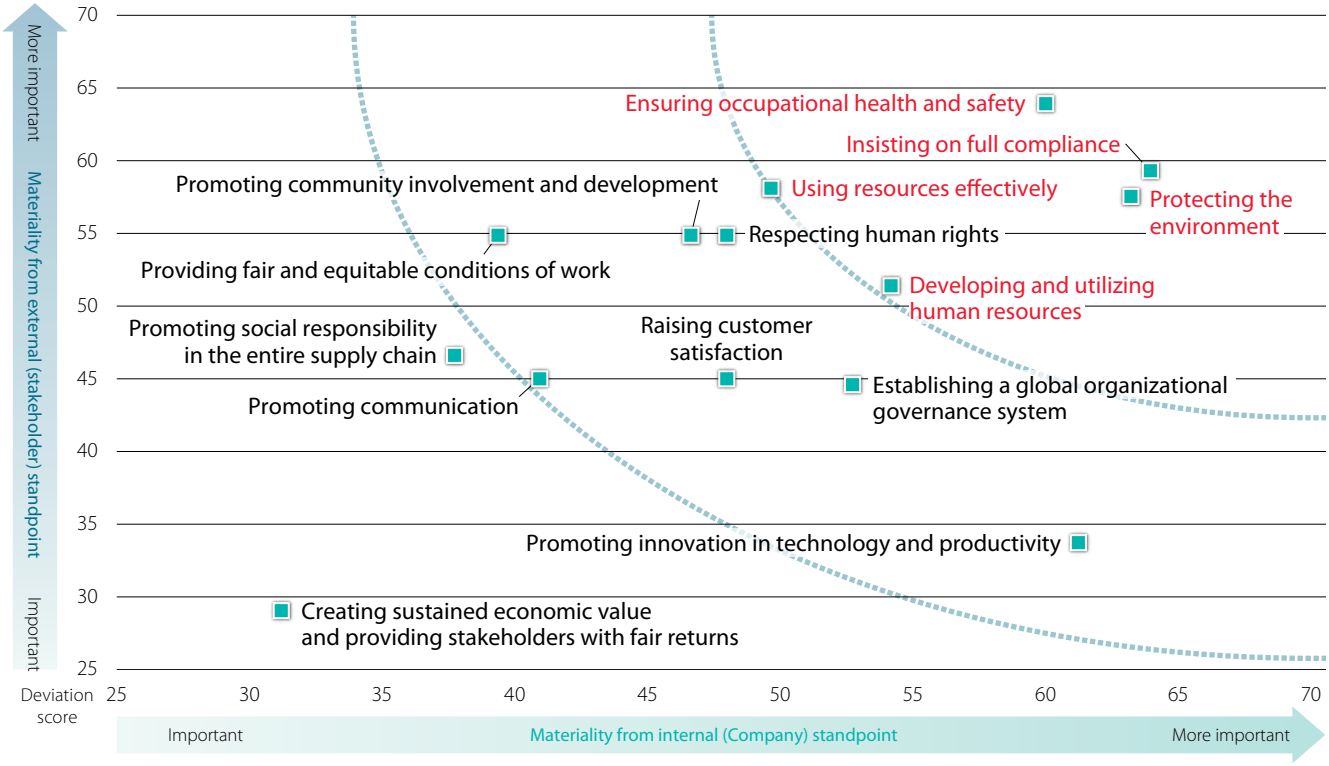
① Innovating the productivity of resources and materials; ② Insisting on full compliance; ③ Protecting the environment; ④ Using resources effectively; ⑤ Ensuring occupational health and safety; and ⑥ Developing and utilizing human resources.

Among items that were not selected as material issues, we recognize "Respecting human rights" and "Promoting community involvement and development" as two areas whose materiality is increasing from the standpoint of stakeholders, and therefore we consider them to be areas for focus in the future.

4. Obtaining the approval of management

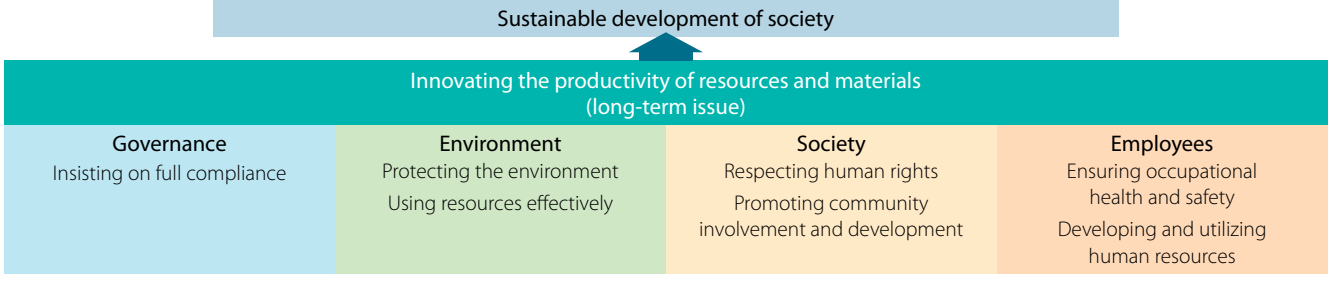
The above selection procedure of material issues and results were referred to the CSR Committee for discussion at its April 2015 meeting and received the approval of management, including the president.

Results of a quantitative assessment of the CSR issues of the JX Nippon Mining & Metals Group (red: material issues)



JX Nippon Mining & Metals Approach and Initiatives for Each Material Issue

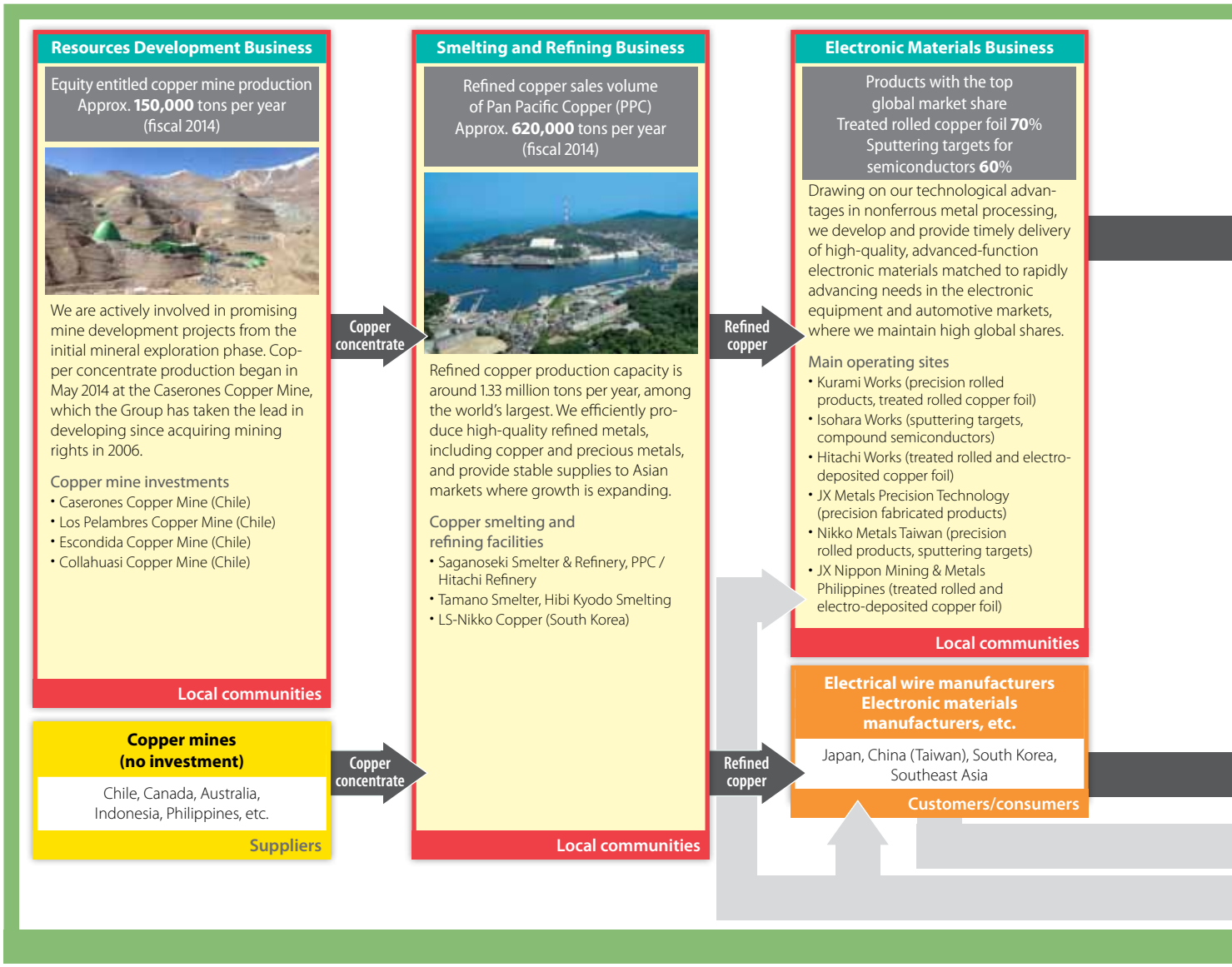
Material Issue	Our Approach and Initiatives
Innovating the productivity of resources and materials (long-term issue)	We regard the mission of the Group as providing stable supplies of nonferrous metal resources and materials to society and also as promoting zero-emission recycling. To fulfill this mission, seeing CSR activities as "nothing more or less than our business activities," we are pursuing innovation in the productivity of resources and materials in each of our business areas, namely, resources development, smelting and refining, electronic materials, and recycling and environmental services. "Innovating the productivity of resources and materials" can be viewed as a premise for the other five material issues. (See the conceptual diagram below.)
Insisting on full compliance	Obtaining the trust of stakeholders is essential for carrying out the business of the Group. To earn that trust, we endeavor to achieve full compliance and to ensure the integrity and transparency of management. To make sure those efforts are effective, we have established and implement an internal control system, carry out periodic checks, and take appropriate measures as needed. (See pages 76–80 for details.)
Protecting the environment	Preservation of the earth's environment is a common challenge for all human beings, not just corporations. The Group seeks to reduce the environmental burden of its business pursuits to the greatest extent possible. Our Basic Environmental Policy goes beyond compliance with environmental protection regulations, calling for technology development in such areas as energy and resource conservation and environmental protection toward prevention of global warming and reduction of waste. Our efforts in these areas are managed by setting numerical goals in our Medium-Term Action Plan. (See pages 49–63 for details.)
Using resources effectively	Copper, used in electrical wires and electronic materials, and other nonferrous metals are essential resources on which the affluent lifestyles enjoyed by today's society depend. Their reserves are finite, however, thus making effective use of them is an important issue for preserving the earth's environment and achieving the sustainable development of society. Drawing on the technologies and knowledge in nonferrous metals that the Company has accumulated over more than a century, we are working on many fronts toward achieving effective use of resources. These include efficient mining, concentration, and refining in the resources development business and smelting and refining business, efficient recovery and reuse of resources from end-of-life products discarded by society in our recycling and environmental services business, and drawing out potential properties in our electronic materials business. In carrying out business in each of these areas, we are attempting to effectively use energy and water resources and reduce waste by promoting recycling. (See pages 31–36 and 52–56 for details.)
Ensuring occupational health and safety	From its inception, the Group has always considered worker health and safety to be an essential condition for the continuation of its business, and it has endeavored to provide an environment where employees can work with peace of mind. Aimed at the elimination of accidents and illnesses, a Basic Policy on Health and Safety was drawn up, and efforts are made to foster a culture of safety. (See pages 23–26 and 39–42 for details.)
Developing and utilizing human resources	The development and utilization of the employees engaged in daily operations are necessary for raising the level of CSR accomplishments through the process of carrying out the business of the Group. By creating personnel systems that value the diversity of employees working in various domestic and overseas locations and by enhancing education programs, we are providing a foundation empowering employees to make the most of their abilities. (See pages 43–46 and 48 for details.)



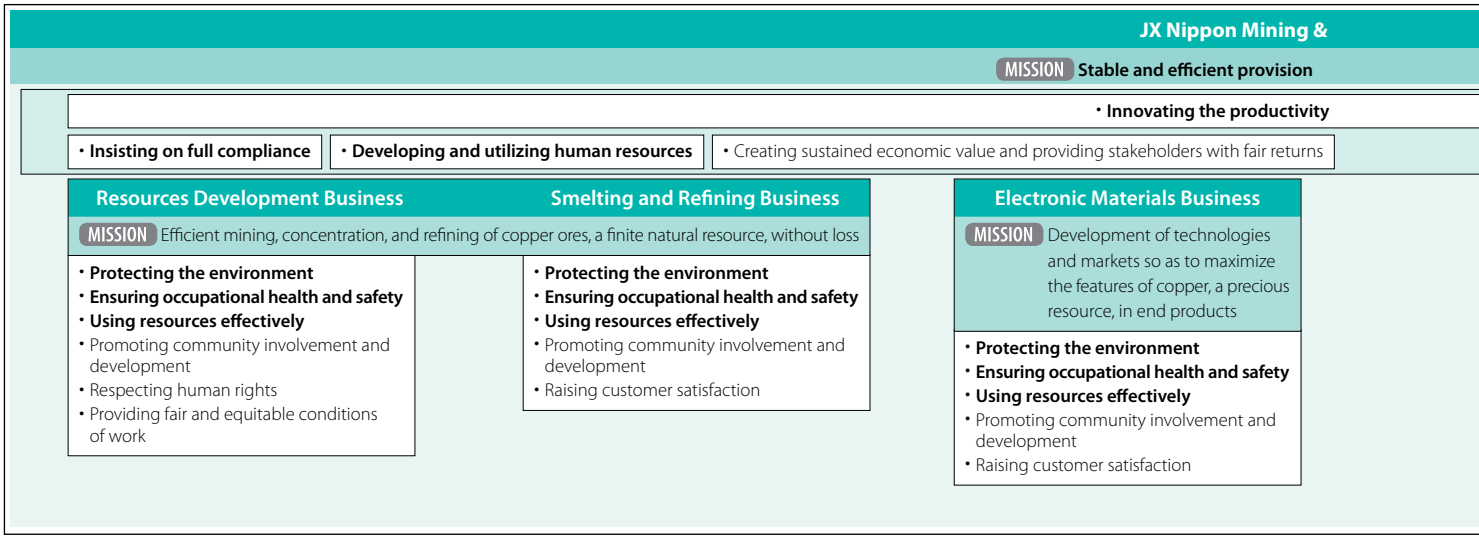
Supply Chain and Stakeholders

The business activities of the JX Nippon Mining & Metals Group are supported by various stakeholders throughout the supply chain. As we go forward, we are intent on contributing to the sustainable growth of society by working to solve CSR issues in close communication with these stakeholders and through the continuation of our business.

Relationships with Stakeholders throughout the Supply Chain of the JX Nippon Mining & Metals Group



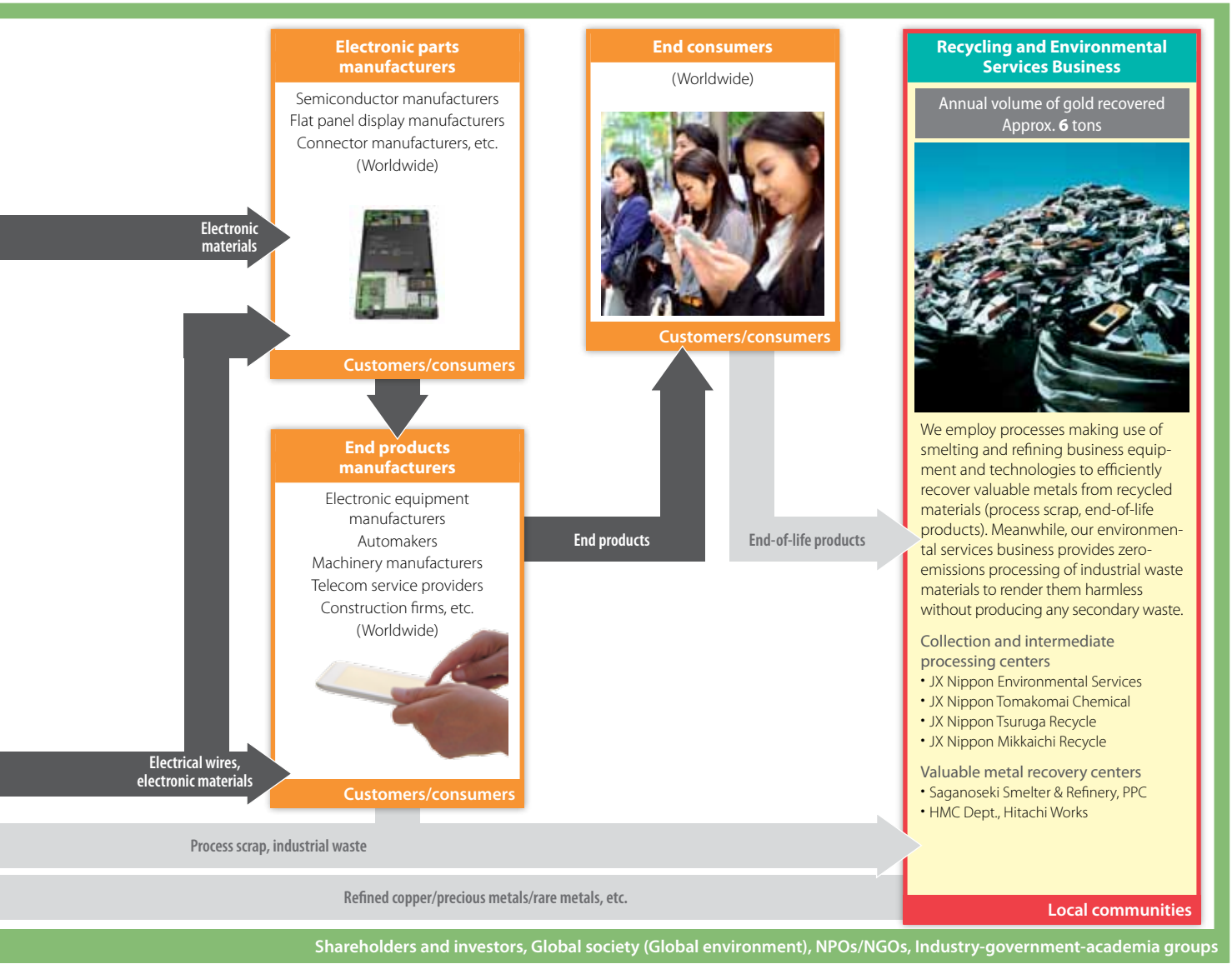
Missions of the JX Nippon Mining & Metals Group and CSR Issues for Consideration in Conducting Its Business
(Bold issues are material issues for fiscal 2015)



Our Relationships with Stakeholders (The table below uses color coding to show our relationship to various stakeholders.)

Stakeholders	The Group's stance toward each stakeholder category
Shareholders and investors	As a core business company of the JX Group, we strive for proper and timely disclosure of information through JX Holdings, a publicly listed company.
Global society (Global environment)	We go beyond simply observing laws to respond proactively, paying close attention to issues affecting the world as a whole, such as global warming.
Nonprofit organizations (NPOs) and nongovernmental organizations (NGOs)	We reflect the approaches of NPOs and NGOs, undertaking distinctive programs in the Group's CSR activities as necessary.
Industry-government-academia groups	We recognize these groups as important partners in creating new technologies and nurturing the next generation of human resources. We cooperate with such groups in developing technologies and human resources in fields related to the Group's business.
Local communities*	We promote mutually beneficial coexistence with the community at all our locations, taking advantage of various opportunities for exchange to deepen understanding and build cooperative relations.
Customers/consumers*	We recognize that enhancing customer satisfaction by providing products and services reliably and improving their quality is a key issue in carrying out our business as well as in realizing an abundant society.
Employees*	We endeavor to provide a working environment and education programs that will empower employees to make the most of their abilities as the main participants in CSR activities.
Suppliers*	We seek to build relationships of trust with suppliers as partners in carrying out our business, and to realize fair and equitable trading throughout the supply chain.

* See pages 65–75 regarding the methods and results of communication with each stakeholder.



Metals Group

of high-quality copper products to society

of resources and materials

• Establishing a global organizational governance system • Promoting communication • Promoting social responsibility in the entire supply chain

Recycling and Environmental Services Business

MISSION Supplementation of natural resources by expanded use of end-of-life products discarded by society (from so-called urban mines)

- **Protecting the environment**
- **Ensuring occupational health and safety**
- **Using resources effectively**
- Promoting community involvement and development
- Raising customer satisfaction

CSR Promotion System and Activity Results

The JX Nippon Mining & Metals Group's CSR activities revolve around the CSR Committee, an advisory body to the president. Each of the Group's officers and employees plays a constant and active role in advancing these activities.

CSR Committee and Subcommittees

The Group's CSR activities revolve around the CSR Committee, an advisory body to the president. The committee is chaired by the president and consists of the members of the Company's Executive Meeting. The committee meets twice a year in principle and is responsible for establishing basic policies, promotion systems, and action plans for CSR activities. In addition, the committee reviews progress of activities, and the findings of these reviews are used when formulating new policies, systems, and plans. In fiscal 2014, the committee met twice, on April 16 and October 14, 2014.

Under the CSR Committee are the Compliance Committee, the Safety and Environment Committee, the Citizenship Committee, and the Energy Conservation Subcommittee. These committees meet twice a year in principle, promoting and managing activities in a meticulous manner to address the material CSR issues in their areas of responsibility. They report the results of their deliberations to the CSR Committee, which issues instructions as necessary.

CSR Promotion System

President

CSR Committee (Secretariat: Public Relations & CSR Dept.)

- **Compliance Committee**
  - Promotes compliance education and draws up action plans
  - Assesses and manages compliance status
  - (Secretariat: Administration Dept.)
- **Safety and Environment Committee**
  - Draws up action plans on safety and health and on environmental protection
  - Reviews the status of activities in the areas of safety and health and environmental protection
  - (Secretariat: Environment & Safety Dept.)
- **Citizenship Committee**
  - Draws up action plans on social contributions
  - Reviews the status of activities in the area of social contribution
  - (Secretariat: Public Relations & CSR Dept.)
- **Energy Conservation Subcommittee**
  - Draws up action plans on energy conservation, CO_2 emissions reduction, etc.
  - Reviews the status of activities in the areas of energy conservation, CO_2 emissions reduction, etc.
  - (Secretariat: Facilities Engineering Dept.)

Initiatives for Increasing CSR Awareness

Appointment of CSR Promotion Managers and Creation of CSR Action Plans

When the CSR Committee meets in April of each year, members deliberate and approve the CSR action plans for that fiscal year. To ensure that these plans are carried out in the Group as a whole, CSR promotion managers are assigned to each operating site and at major Group companies. They assemble twice a year (in June and November in fiscal 2014) at CSR training sessions to share their CSR action plans, devise concrete initiatives for individual sites, and report on the results. These sessions also function as valuable opportunities to exchange information among participants, further enhancing CSR activities.

CSR promotion manager meeting

CSR Activity Results

We are implementing the initiatives listed below to disseminate our views on CSR throughout the Group and to facilitate more effective CSR activities.

CSR Workshops

We offer ample opportunities for face-to-face CSR training targeting Group officers and employees. Notable workshops in fiscal 2014 included the following:

- Workshop on CSR trends and practical management (June 4, 2014)
  Kenji Sawami, representative director of Ernst & Young Sustainability Co., Ltd., was invited to hold a workshop for CSR promotion managers on the latest CSR trends.
- CSR training for employees at each operating site
  Interactive workshops were provided with the main focus on making the JX Nippon Mining & Metals Code of Conduct an integral part of daily operations. These were held at 11 sites in Japan, for approximately 570 persons. We plan to continue with these workshops in fiscal 2015.

Publication of *Sustainability Report 2014*

Once a year, the Group publishes a sustainability report that compiles the policies and results of its CSR activities. This report is distributed to all Group officers and employees and to stakeholders. In fiscal 2014, 10,000 copies of the full report were printed in Japanese and 200 were printed in English. In addition, a total of 2,000 copies of the condensed digest version were printed in several languages, including English, Chinese (simplified and traditional), Korean, and Spanish.

CSR Survey

An employee survey was conducted as outlined below to determine the extent of employee awareness of CSR and involvement in its practice.

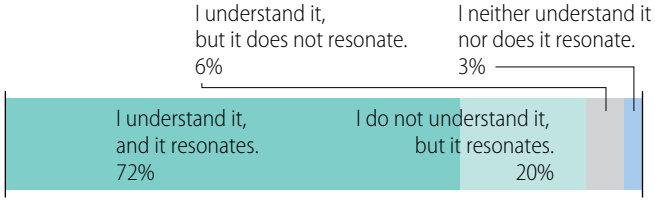
Outline of the Survey

Survey period	December 2014 to January 2015
Survey scope	JX Nippon Mining & Metals Group officers and employees in Japan and officers and local employees at overseas operating sites (conducted anonymously)
Survey results	Valid responses to Japanese-language survey: 5,013 (response rate 97.5%) Valid responses to surveys in other languages (English, Chinese [simplified and traditional], Korean, and Spanish): 254

Survey Results, Assessment, and Response

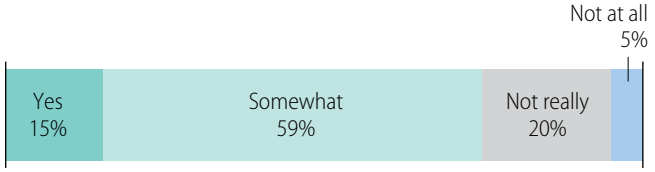
Question 1

Do you understand the JX Nippon Mining & Metals Code of Conduct and does it resonate with you?



Question 2

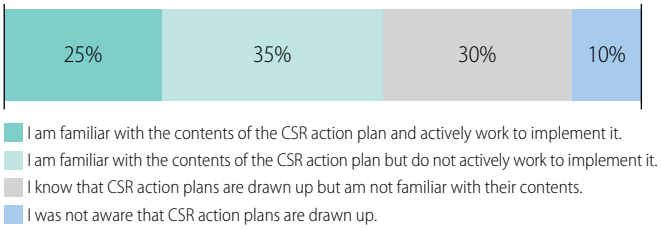
Do you feel the JX Nippon Mining & Metals Code of Conduct is well disseminated in your own organization and workplace?



Question 3

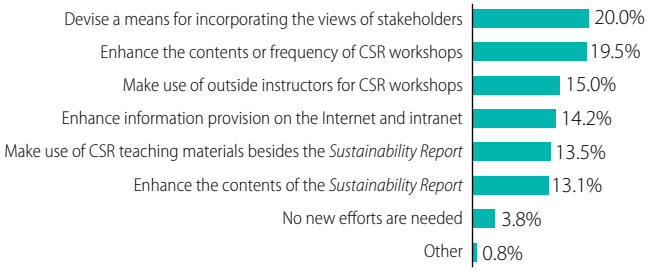
Are you aware that CSR action plans are drawn up every fiscal year in each operating site and Group company?

To what extent are you yourself involved in putting these plans into practice?



Question 4

What do you feel is needed for CSR to become further disseminated and to take hold? (multiple answers possible)



Response to the Survey Results

The results indicate that, while understanding and dissemination of the Code of Conduct has progressed to a certain extent (Questions 1 and 2), proactive involvement of individual employees in CSR activities is still inadequate (Question 3). The Company has always strived to make the Code of Conduct an everyday part of the work of each employee, so that the Group as a whole can fulfill its social responsibility as a result of individual employees being aware of CSR as they engage in their daily work.

We plan to continue with existing initiatives, such as holding CSR workshops, distributing the *Sustainability Report*, and having CSR promotion managers educate employees at their operating sites on CSR. Based on the responses to Question 4, moreover, we will study new measures for disseminating CSR more fully and enabling it to take hold, as we work to further our understanding of how the daily operations of each employee relate to the fulfillment of our corporate social responsibility.

CSR Activities and Self-Evaluation for Fiscal 2014

Code of Conduct	Specific measures
1 Our social mission	Encourage the development of innovative products, including quality and features Conduct activities to improve innovation in productivity
	Obtain certifications Obtain the satisfaction and trust of our customers
	Obtain the trust of society Create sustained economic value and provide stakeholders with fair returns
2 Compliance with laws and regulations and engagement in fair trade	Comply with laws and regulations
	Eradicate misconduct
	Engage in fair, transparent, and free competition and trade Establish an effective internal control system (including global implementation)
3 Disclosure of corporate information and protection of personal information	Disclose corporate information in an active and equitable manner
	Protect personal information
4 Creation of an optimum working environment	Create a culture of safety
	Develop and utilize human resources
5 Environmental conservation	Prevent global warming Reduce waste
	Prevent pollution and manage chemical substances
	Maintain biodiversity and protect nature
6 Enhancement and strengthening of risk management	Establish a risk management system based on substantial data
7 Harmonious relationship with society	Actively undertake social contribution activities Encourage communication with local communities
8 International business operations	Protect the fundamental human rights of people in the countries and areas in which we operate
	Respect cultures and customs of people in the countries and areas in which we operate
9 Elimination of antisocial activities	Stand firm against all antisocial forces and groups
10 Management responsibilities	Disseminate the JX Group Mission Statement and the JX Nippon Mining & Metals Code of Conduct among employees Familiarize employees with CSR action plans

○: Achieved ×: Not achieved

Examples of activities in fiscal 2014	Relevant pages	Self-evaluation
Completed switching over the Tamano Smelter of Hibi Kyodo Smelting to the permanent cathode method	P33	○
Began construction of a new plant in Saudi Arabia for production of titanium sponge	P36, 48	
Provided support to the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering (JX Metals Endowed Research Unit)	P19–22	
Started an electroless UBM plating service in Taiwan	P67	○
Established a business site in North America for collecting recycled materials	P68	
Received certification from the Minister of the Environment for low-concentration PCB waste treatment service and achieved stable operation	P35	
Advanced quality management systems and implemented quality management education	P65–66	
Implemented permanent protective measures at the tailings dams of closed mines	P62–63	○
Pursued an environmentally viable resource recycling business designed for zero emissions	P19–22, 35	
Carried out the Medium-Term Management Plan (fiscal 2013 to 2015)	P31–36	
Complied with health and safety laws, and appropriately implemented our environmental management system and internal control system	P39, 52, 77	○
Took a multifaceted approach to ensuring stringent compliance	P78–79	○
Responded to the conflict minerals issue	P70	○
Strengthened the approach to bribery prevention and compliance with competition laws	P79	
Published *Sustainability Report 2014*	P13–14	○
Held plant tours, participated in exhibitions, etc.	P71–72	
Disclosed financial results via JX Holdings, Inc.	P29–36	
Properly enforced the Personal Information Protection Rules	P78	○
Implemented activities at each operating site based on the Management Policy on Health and Safety, and made use of the JX Safety Education Center Fatal accidents: 1 (Goal: 0) Accident occurrences: 26 (Goal: 26 or less, that is, a reduction of 10% or more relative to the smallest number in the past three years) Explosions and fires: 4 (Goal: 0) Occupational diseases: 0 (Goal: 0)	P39–42	×
Enhanced educational content geared to different job types and levels	P43–44	○
Educated trainees from Saudi Arabia to prepare for the opening of a new plant in the country	P48	
Advanced the 3rd Medium-Term Action Plan (fiscal 2013 to 2015) based on the Basic Environmental Policy Energy consumption intensity (1% year-on-year reduction at each operating site): Achieved by 14 of 23 applicable operating sites (Goal: Achievement by majority of sites) Domestic CO_2 emissions: 1,671 thousand tons (Goal: Below 2,145 thousand tons) Ratio of non-value-bearing waste volume: 0.6% (Goal: Below 0.7%)	P51–56	○
Complied with environmental laws and regulations	P52	○
Transplanted protected flora in the area around the Caserones Copper Mine, and planted trees on the sites of closed mines	P61	○
Applied operations management systems in compliance with ISO, OHSAS, and other international standards	P41, 52, 59	○
Implemented permanent protective measures at the impoundments of closed mines	P63	
Provided assistance to residents near the Caserones Copper Mine affected by torrential rains in Chile	P71	○
Conducted factory tours and participated in social events and cleanup programs	P71–72	
Participated in the United Nations Global Compact	P75	○
Strictly prohibited unjust discrimination, child labor, forced labor, and other abuses	P73	
Conducted education program for global readiness	P44	○
Formulated and implemented a program for dealing with antisocial forces	P78	○
Confirmed CSR activity policies and achievements in meetings of the CSR Committee and other committees	P13	○
Provided CSR workshops for CSR promotion managers and for employees	P13	
Conducted a survey to confirm the extent of CSR awareness	P14	

The Roots of CSR in the JX Nippon Mining & Metals Group: Exhibits at the Nippon Mining Museum

The history of JX Nippon Mining & Metals can be traced back to 1905, when founder Fusanosuke Kuhara set out to develop the Hitachi Mine. Although the mine itself was closed in 1982, the Nippon Mining Museum built on the site, which has been designated as a Heritage of Industrial Modernization site by the Ministry of Economy, Trade and Industry, exhibits records of the development of Hitachi as an industrial city up to the present day, as well as a history of the Group since its founding period. Here we outline some of the roots of the Group's CSR activities by looking at a selection of the exhibits from the museum.




The Culture of "the Mine as One Big Family"

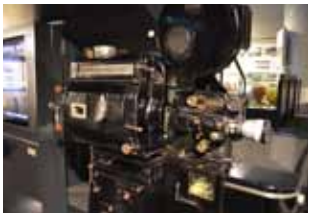
"Life in the Mining Town," an exhibit on the first floor of the Main Exhibition Hall, depicts what it was like to live in the Hitachi Mine area at that time.

When Kuhara set about developing the Akasawa Copper Mine, he had a big dream. In the mine he would open, and in the surrounding area, he wanted to build a kind of Shangri-la, long forgotten in the trials and tribulations of the world. It was the dream to create a paradise where everyone lived in perfect harmony, with no hint of problems such as rivalry between capital and labor or local opposition to business. To some, it may have seemed like a charming dream. Others likely viewed it as mere folly. There may even be those who sigh in admiration at the lofty plan. But to what extent was this dream realized?

From *History of the Hitachi Mine*

This dream of founder Fusanosuke Kuhara eventually became a unique policy realized in the Hitachi Mine, as the culture of "the Mine as One Big Family" was born, whereby employees felt themselves having close ties with the mine. Kuhara set out to create an environment where employees could live with their families, providing not just housing but a whole town, with schooling for children, a hospital, a railroad, and even recreational facilities including a movie theater. Sharing their joys and sorrows in this integrated work and living environment, the employees formed bonds that led to the development within the Company of an atmosphere of respect for workers.

Recreational facilities and events for employees



Talkie projector used in the Motoyama movie theater

Costume procession in the Sanjinsai Festival during the Taisho era (1912–1926)

The Spirit of the Giant Stack

The story of the Hitachi Giant Stack, once a symbol of the city, is told in an exhibit on the second floor of the Main Exhibition Hall. When the Hitachi Mine went into operation in 1905, smoke pollution from the sulfur dioxide emitted from copper smelting became a serious problem, reaching crisis proportions that shook the mine's management to the core. Kuhara, however, was not one to give up easily. After engaging in persistent dialogue with the local residents, he ended up building what at the time was the world's tallest smokestack at 155.7 meters. Finding a way to solve the smoke pollution problem was a major factor in the Hitachi Mine becoming one of Japan's leading copper mines. His attitude, when faced with problems, of not running away from them but dealing with them sincerely and honestly, lives on in the Group today.

Late in his life, Kuhara recorded the following thoughts about the pollution problem:

"Pollution problems are ever-new. They are like an eternal cross that the human race must bear. As science advances, pollution becomes more diverse.

How many people have devoted strenuous efforts and pains to stop this problem from growing? Yet when we consider that these efforts have been a driving force for human progress, we might even say that pollution is what taught us the concept of 'overcoming ourselves.'

The same can be said for the Hitachi Mine. Without the pollution problem, the history of the mine could not be told. In December 1914, the Hitachi Mine finished building its own smokestack, said to be the world's largest at the time, marking an end to the problem. This was a valuable experience, through which, over a period of around 10 years, together with the local citizens the Company suffered, anguished, and then came up with a solution on its own. Just as Mt. Fuji is more than a tall mountain, the Hitachi Giant Stack is more than simply tall."

From a preface by Fusanosuke Kuhara to *Hitachi Mine: Memories of the Air Pollution Problem*, Umanojo Seki, 1963.

Highlights of Exhibits

Mineshaft replica
A mineshaft was re-created using actual equipment and human figures, so that visitors can see what it was like inside the mine.

No. 1 and No. 11 shafts
A vertical shaft is one dug vertically into the earth to transport workers and haul ore to the surface.

Compressor
This unit delivered compressed air inside the mine to power equipment used there.

Smoke cabin
This was used in studying what kinds of plants are strongly resistant to smoke damage.

"Place of trials and tribulations": calligraphy by Kuhara reminiscing about the early days of the mine

VOICE

Toshie Nakayama
Superintendent,
Hitachi Municipal Board
of Education

A place cultivating in children a zest for life

The Nippon Mining Museum is highly significant as a place of learning for the children of Hitachi City. It has a big influence on their character-building, by letting them come into contact with the past lives of those who refused to be bowed by difficulties, but worked to overcome the pollution problem in a united effort of the Company and local citizens. Its significance goes beyond history, enabling visitors to gain scientific knowledge in areas such as earth science, chemistry, and the environment, and to see actual problems of society that cannot be learned from looking at textbooks alone.

One achievement target of the current courses of study of the Ministry of Education, Culture, Sports, Science and Technology is to cultivate in children a zest for life. I continue to look to the Nippon Mining Museum as a place for developing children's zest for life by providing a new window on the past and the present. I would also like to see even closer collaboration between the museum and our city.

VOICE

Masayuki Kimura
Deputy Curator,
Nippon Mining Museum
(second from right)

Make constant improvements, never being satisfied with the status quo

In April 2016, the Nippon Mining Museum will mark 30 years of existence. That we have come this far is thanks, I feel, not only to the efforts of related divisions, the curators who have served over the years, and the staff, but also to those many people who have visited the museum and supported it over the three decades. At the same time, I believe this longevity is evidence that the public sees the museum as more than a collection of historical materials of one company, appreciating it as a place that introduces how the Company achieved harmonious coexistence with the local community, and how it was able to overcome numerous difficulties.

Recently, we changed part of the pedestrian walkways outside the museum to rubber chip pavement, improving access for visitors in wheelchairs. We intend to continue periodically carrying out such improvements, maintaining the environment and keeping the equipment in good condition, so that many more people will come to visit the museum. I would like to set clear goals as to what we can and should do toward the next milestone of our 50th anniversary. Moreover, looking farther ahead, I believe we need to make constant improvements, never being satisfied with the status quo.

Helping Bolster Nonferrous Metals Recycling Worldwide

We have to effectively use limited nonferrous metal resources to realize the sustainable development of society.

One approach is recycling nonferrous metals contained in end-of-life products. In recent years, the social significance of such treatment has been growing, from the standpoints of protecting the environment and conserving natural resources.

Since recognizing the importance of nonferrous metals recycling as early as the 1970s, the JX Nippon Mining & Metals Group has developed its recycling and environmental services business. How will we be able to take advantage of knowledge and technological capabilities accumulated up to now to bolster nonferrous metals recycling, not only in Japan but globally? To identify challenges to be overcome, we heard from Professor Takashi Nakamura of Tohoku University. Professor Nakamura also serves as visiting professor at the University of Tokyo's Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering (JX Metals Endowed Research Unit).

Date:
Wednesday, June 10, 2015

Place:
JX Group Roppongi Club

Note: Positions are as of the date of the discussion.

Strengths of the JX Nippon Mining & Metals Group's Recycling and Environmental Services Business

Miura In recent years, increasing attention has been paid to recycling as a way of effectively using nonferrous metal resources. Back in the 1970s, the JX Metals Group began recovering copper and precious metals from nonferrous metal scrap (secondary raw materials), mainly at its Saganoseki Smelter & Refinery. Thereafter, the Group moved the business forward, undertaking full-scale implementation in the 1980s when office automation equipment became more widely used among Japanese corporations. Thus, the Group has long experience and a solid record as a pioneer in nonferrous metals recycling in Japan.

Today, in addition to the Saganoseki Smelter & Refinery of Pan Pacific Copper and the HMC Department of the Hitachi Works, the Group conducts its environmental services business at four companies—JX Nippon Environmental Services, JX Nippon Tomakomai Chemical, JX Nippon Tsuruga Recycle, and JX Nippon Mikkaichi Recycle. Altogether, around 130,000 tons of secondary raw materials are processed annually. The Group's advantages include: (1) having spent years building up a network inside and outside Japan for collecting secondary raw materials; (2) winning customers' trust by creating standards to ensure fair sampling and analysis of recycled secondary raw materials they supply; (3) establishing technological capability to efficiently and stably process large volumes of recycled secondary raw materials by making use of one of the world's largest copper smelting processes; and (4) the biggest advantage of all, our policy to pursue zero emissions, generating no waste materials whatsoever that require landfill burial. Professor Nakamura, what do you think of our approach to the recycling and environmental services business?

Takashi Nakamura
Professor, Tohoku University
Visiting Professor, Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering, Institute of Industrial Science, The University of Tokyo

Akira Miura
Senior Executive Officer
General Manager, Recycling & Environmental Services Group
JX Nippon Mining & Metals Corporation

Nakamura Other metals companies are devoting efforts to this area, but the JX Metals Group has established a solid position as No. 1 in Japan in terms of volume of secondary raw materials treated, taking advantage of the nation's largest copper smelting capacity. To focus on the four environmental services companies, all of them are burning off combustibles before putting secondary raw materials through the copper smelting process, but the processes at each company are quite diverse. They also detoxify industrial waste: the JX Metals Group has the necessary facilities in place nationwide, and I think the presence of the four companies enables the Group to excel in comparison with others, especially in collecting secondary raw materials.

Miura Thank you very much for your comments. We intend to further strengthen these services to contribute even more to the effective use of resources and environmental protection.

Current Status of Small Appliance Recycling in Japan and Challenges to Be Overcome

Miura Next, I would like to turn our attention to challenges to be overcome so that we can help bolster nonferrous metals recycling worldwide. The main issue in Japan relates to the Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment, which took effect in 2013. This law covers personal computers, mobile phones, digital cameras, video game machines, and other small appliances. The previously established Act on Recycling of Specified Kinds of Home Appliances, which is aimed at TVs, refrigerators, air conditioners, and washers, does not cover these electronic gadgets. Some of the newly covered products contain large amounts of copper, precious metals, and other value-bearing nonferrous metals. Last year, JX Nippon Tsuruga Recycle, JX Nippon Tomakomai Chemical, and JX Metals Trading obtained certifications to process these small appliances; the problem, however, is that the volume of end-of-life products collected has not been increasing. In addition to that, the law covers a broad variety of electrical and electronic appliances, each containing widely differing amounts of value-bearing nonferrous metals. The current inefficient transporting and processing systems for small appliance recycling present considerable problems, too.

Nakamura The Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment, unlike the Act on Recycling of Specified Kinds of Home Appliances, does not compel consumers to put end-of-life products into the recycling circle. Besides, many of the products covered are small-sized, so they can easily be stashed away in households. Given this situation, local governments are currently collecting them with the cooperation of retail stores and others. The results for fiscal 2014 will soon be made known. I am afraid it will be difficult to achieve the target originally set in 2013 of collecting one kilogram per person annually by fiscal 2015. I expect the Ministry of the Environment, which is responsible for this area, will study some remedial measures. To draw up such measures, I believe learning from a few success stories will be of help.

Toyama Prefecture, for example, is utilizing a private company to collect small appliances, as well as other kinds of household waste including noncombustible waste and recyclables altogether. At the same time, this company is performing intermediate treatment processes of dismantling, crushing, and separating waste. It has reduced the total cost by offering a total solution. Meanwhile, another collection trader that utilizes package-delivery services has made its mark.

Yasuda In Europe, too, I have heard about major private companies providing an integrated service from collection to intermediate treatment. I understand they have achieved greater efficiency.

Nakamura Increasing the volume of raw materials collected determines the success of nonferrous metals recycling. It is true that each household has small appliances stashed away, but their volume is not that great. In mines, rich lodes of concentrated metals have naturally been formed over hundreds of millions of years. Thus, we will need to find ways to efficiently collect small appliances from each household and transform them into such "lodes." I believe the JX Metals Group is required to cooperate with collection traders to make the total recycling circle more efficient.

Yutaka Yasuda
General Manager, Technology Department,
Recycling & Environmental Services Group
JX Nippon Mining & Metals Corporation

Building a Worldwide Resources Recycling System

Nakamura Meanwhile, outside Japan I am paying attention to Southeast Asian countries where large amounts of end-of-life electrical and electronic equipment will be discharged in the coming years. While some may think that such equipment can be recycled at low cost within those countries, environmental conservation systems have not yet been well organized there.

We are seeing an overall trend around the world in which operators with solid expertise are required to properly handle secondary raw materials. At the same time, environmental regulations in each country are becoming stricter. The JX Metals Group has the capabilities to satisfy such demands, so the Group is strongly encouraged to expand its recycling and environmental services business to improve recycling efficiency in Southeast Asia. However, local policies and social systems may hamper the Group's efforts to provide total services on its own.

Miura Currently, the JX Metals Group is importing recycled secondary raw materials from Southeast Asian countries, primarily via trading companies. When actually visiting those countries, we found that secondhand electrical and electronic appliances are widely used and exported across borders to places such as Myanmar and Cambodia.

These appliances will eventually reach the end of their lives and be discarded by local people. I have come to the conclusion that the JX Metals Group has to rely to a certain extent on people who have local networks for collection of such discarded appliances. It is almost impossible for the Group to independently create a recycling business model in those countries, even with its advanced treatment technologies.

Yasuda In the United States, recycling laws have been enacted mainly in coastal states and states with large populations. Manufacturers are generally required to attain their targets relating to collection of end-of-life appliances and to bear costs. Raising the environmental awareness of consumers will help to increase the number of end-of-life electrical and electronic appliances discharged into the recycling circles. In line with this trend, the Group set up a business site in the United States last year, exporting more end-of-life appliances to Japan.

Nakamura In Europe, each country has enacted recycling laws based on the European Union Directive on Waste Electrical and Electronic Equipment (WEEE). Its basic concept is to raise the efficiency of resource use from the standpoints of both arteries (manufacturing) and veins (recycling). Under the directive, manufacturers are required to design products that are easily recycled, and recycling providers and their facilities need to obtain certification. I believe the concept may work well to bolster Japan's nonferrous metals recycling.

Miura Today, effective resource use through combination of the arteries and veins is being considered in Japan. If the concept prevails, I believe a worldwide resource recycling system can be built up more smoothly.

Further Advancement of Recycling Technologies

Miura The percentage of value-bearing metals contained in secondary raw materials has been decreasing, although impurities contained that may damage processing facilities have been increasing. In addition to that, we are faced with the need to increase the amount of metal to be recycled.

Nakamura Earlier, I commended the four environmental services companies for operating in unique ways using their own technological advantages. I think the JX Metals Group could tackle problems by developing these technological advantages. In other words, each environmental services company should enhance its own special technology to deal with particular impurities.

I also feel that it would be increasingly difficult for a single

company to recycle all types of metals. In Japan, for example, I think a compartmentalization strategy could be an effective approach. Under this strategy, the JX Metals Group would handle copper and precious metals recycling, which it excels at, while other companies specialize particularly in nickel, or lead and zinc. In addition to the combination of arteries and veins we talked about earlier, cooperation across the veins will play an important role to raise the efficiency of resource use.

Human Resource Development Is the Overriding Concern

Miura In the long run, we need to foster human resources who can boost nonferrous metals recycling. Currently, the JX Metals Group, through the JX Metals Endowed Research Unit, is engaged in developing technologies, promoting exchanges among personnel in the supply chain, and fostering the next generation of young researchers. In particular, I believe it is highly important to create opportunities so that students, who tend to remain inside the shell of theory, can come into contact with companies that are involved in actual operations. Under the current framework, though, students who can enjoy such opportunities are limited to undergraduates and postgraduates majoring in nonferrous metals recycling. To increase the number of students majoring in this field, there is a need to stimulate the interest of the younger generation in nonferrous metals and metals recycling.

Nakamura Quite apart from recycling, it has been increasingly difficult to include nonferrous metals in a course at a university, and in fact we see almost no lectures relating to nonferrous metals. Accordingly, nonferrous metals do not have sufficient attraction for students in schools.

The groundwork needs to be laid for raising public awareness of these issues. In the United States, courses endowed by corporations have a very high status. Dedicated professors are assigned to them, events are held promoting them to the general public, and various other means are used to raise their stature. Perhaps there is something to be learned from this approach.

Miura The Group has also begun studying ways to publicize the importance of nonferrous metals to the general public and students up to high school as an initiative of the nonferrous metals industry as a whole. We are looking forward to the results. Thanks to all of you for a highly useful discussion.

Status of JX Metals Endowed Research Unit Initiatives in Fiscal 2014

In January 2012, we established the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering (JX Metals Endowed Research Unit) jointly with the University of Tokyo's Institute of Industrial Science. Its objectives are to conduct investigations and research on the smelting/refining and recycling of nonferrous metals and to contribute to the development of human resources in these areas through an alliance between industry and academia. In fiscal 2014, the third year of activities, the following symposiums and site tour were held.

Event	E-scrap Symposium
Date and place	November 2014, Institute of Industrial Science, The University of Tokyo (Meguro-ku, Tokyo)

Focusing on recycling of E-scrap (a general term for end-of-life electrical and electronic products), 10 lectures were given, attended by about 200 representatives of industry, government, and academia. On the following day, a tour of the HMC Department at our Hitachi Works and the Nippon Mining Museum was conducted for students and young researchers.

Event	Precious Metals Symposium
Date and place	January 2015, Institute of Industrial Science, The University of Tokyo (Meguro-ku, Tokyo)

The JX Metals Endowed Research Unit and the International Research Center for Sustainable Materials hosted this special joint symposium. Eight lectures and short presentations by poster authors were made on the theme of "The Front Lines of Refining and Recycling Technologies for Precious Metals," with 200 representatives of industry, government, and academia.

Special Feature 2 Safety Initiatives of the JX Nippon Mining & Metals Group

Material Issue: Ensuring Occupational Health and Safety

Haruo Tsuruoka
Deputy General Manager,
Environment and Safety Office
Isohara Works
JX Nippon Mining & Metals Corporation

Tetsuo Kawahara
General Manager,
Environment and Safety Office
Hitachi Works
JX Nippon Mining & Metals Corporation

Satoshi Matsuzawa
General Manager,
Environment and Safety Office
Kurami Works
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Hideyuki Otsubo
General Manager,
Environment and Safety Office
Saganoseki Smelter & Refinery
Pan Pacific Copper Co., Ltd. (PPC)

Tatsuji Ota
Executive Officer
In charge of Administration, Human Resources, Public Relations & CSR, and Environment & Safety Departments
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Tokio Takahashi
Director
JX Safety Education Center

Keiji Kainosho
General Manager,
Environment & Safety Department
JX Nippon Mining & Metals Corporation

Moderator
Masayoshi Yamamoto
General Manager,
Public Relations & CSR Department
JX Nippon Mining & Metals Corporation

Creating a Culture of Safety

Roundtable Discussion by Safety Managers

For the JX Nippon Mining & Metals Group, ensuring the safety of employees and subcontractors working on Company premises is a major precondition for business continuity, along with other prerequisites such as securing compliance and protecting the environment. Creating an atmosphere where people can work with peace of mind takes long, relentless efforts. We talked about safety initiatives and challenges with those responsible for safety in the Head Office and at individual operating sites.

Date:
Monday, June 15, 2015

Place:
Boardroom, Head Office

Note: Positions are as of the date of the discussion.

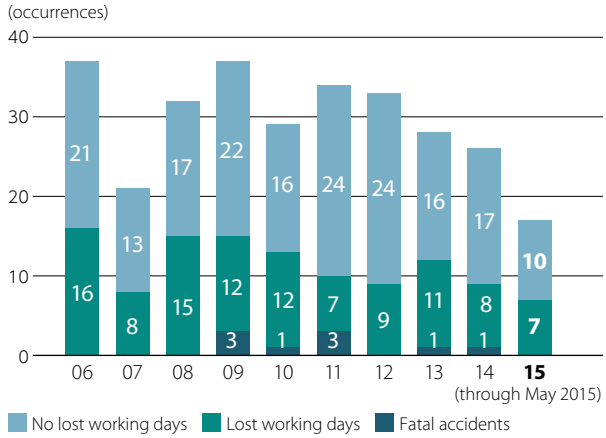
Safety Performance and Policy of the JX Nippon Mining & Metals Group

Moderator Before starting the discussions, let us hear about the status of accident occurrence in the JX Nippon Mining & Metals Group and what types of actions are planned in response.

Kainosho As the graph shows, the occurrence of accidents in the Group peaked in fiscal 2009 and has been on a downward trend since that time. We still have issues to solve, however, as the number of accident occurrences up to May 2015 was higher than the previous year, and fatal accidents have not been eliminated.

Accident Occurrences in the JX Nippon Mining & Metals Group

(excluding Toho Titanium Group)



In response, the following key policy measures were established in the Management Policy on Health and Safety for 2015. These measures have the specific goals of achieving the following targets: (1) fatal accidents: zero, (2) number of accident victims: no more than 90% of the smallest number in the past three years, and (3) fire/explosion accidents: zero.

Management Policy on Health and Safety for 2015: Key Policy Measures

1. Creating a culture of safety
   1. Identifying major risks and thoroughly enforcing safety measures
   2. Preventing the recurrence of similar accidents
   3. Improving safety awareness and risk sensitivity
2. Issue-based accident prevention activities (selected according to the situation at each operating site)
   1. Preventing accidents relating to handling of heavy objects by human effort
   2. Preventing accidents relating to cranes or slinging work
   3. Preventing accidents relating to forklifts and other vehicle-type heavy machinery
   4. Preventing entanglement accidents during equipment repair, inspections, etc.
   5. Preventing cutting or severing accidents by metal materials (strips, foils, chips)
3. Matters for ongoing implementation
   1. Maintaining and improving the working environment and maintaining and enhancing both physical and mental health
   2. Preventing traffic accidents

Distinctive Approaches to Safety at Each Operating Site

Moderator With this background explanation in mind, please tell us about the initiatives being carried out at each operating site.

Kawahara (Hitachi Works) The biggest feature of the Hitachi Works is that all types of Company operations take place there, including smelting and refining, electronic materials, recycling and environmental services, and technology development. Over the past several years, we have been holding meetings among the general managers of each department to exchange information with a view to forming a culture of safety. At these meetings, we discuss how we can create a culture of safety while linking each of the businesses with their different historical backgrounds. Given the unique nature of our site, we do things differently than other sites; for example, during safety patrols, managers from different departments visit workplaces outside their own. As a result of such efforts, the number of accident occurrences has steadily declined. We still have issues to resolve, however, such as the lack of standardization across departments in documentation and signs.

Matsuzawa (Kurami Works) After a fatal forklift accident occurred at the Kurami Works in 2011, we focused on initiatives for eliminating such incidents. We are still carrying out countermeasures today, such as expanding operating skill checks throughout the entire factory, and separating walkways from vehicle routes. At monthly safety meetings, we try to make sure nothing is overlooked, whether in studying measures to deal with major risks pointed out by each workplace during inspections by top management, or in devising measures to prevent recurrences of similar accidents. At the same time, we continue to take small but important measures, such as having all managers greet arriving workers in the morning at the front gate, reminding them to work safely, and having the general manager of the Kurami Works take part, along with myself, in morning safety pep talks at each workplace.

Tsuruoka (Isohara Works) There are numerous factories that have "Safety First" banners, but the Isohara Works is the only one I know of that displays "Safety First, Quality Second, Production Third." I believe this tells the story of our stance regarding safety. The Isohara Works is a plant composed of individual workplaces, each boasting highly unique manufacturing methods and products. For this reason, each workplace has set and is working toward implementing its own safety management policy, while we aim for loose governance across the plant as a whole. Naturally, many detailed activities are carried out at a plant-wide level, too. These include patrols by the general manager of the Isohara Works and the Health and Safety Committee; studies of accidents that have occurred and safety measures taken at other operating sites; and training of new employees upon entry and after 3 months, 12 months, and 24 months. One of the issues we face is that, as a development-oriented plant, we frequently introduce new equipment. Safety assessments are always carried out before the equipment goes into operation to determine safety and risks, but as you would expect, there are many issues that do not surface until actual operation starts.

Otsubo (PPC Saganoseki) Our safety activities at the Saganoseki Smelter & Refinery revolve around the three pillars of insisting on basic rule observance, thoroughly enforcing safety measures based

on identification of major risks, and strengthening communication. I would like to mention some distinctive initiatives regarding these areas. To insist on the observance of basic rules, we perform monthly checks of hand signals and callouts when crossing roadways and use of railings on stairways. The assumption is that people who cannot perform such basic actions cannot be expected to follow safety precautions.

To enforce safety measures, we determine high-risk work, and at the beginning of each month we pass out fliers promoting safety awareness. To strengthen communication, employee names are written in large letters on helmets, and we take other measures to create an environment where employees even in different workplaces consult with each other freely. All of these are really small measures, but I believe the sum of the parts helps to build a culture of safety.

Insisting on Rule Observance and Improving Risk Sensitivity

Moderator Hearing from each of you, I can appreciate that you are tailoring your approaches to specific operating sites as you seek to build a culture of safety. I imagine these efforts also involve plenty of challenges and concerns.

Kawahara (Hitachi Works) At our site, we have focused on preventing accident recurrence after a runaway truck caused a fatal accident in 2013, but there have been many reports of failure to observe basic rules such as putting wheel blocks in place when stopped. As seen also in the Saganoseki case, I feel getting people to follow basic rules can be really difficult. Even so, by remaining persistent with our efforts, we have recently seen a decline in rule violation reports in this area, and plan to keep up with these efforts in the future.

Ogata Making rules is easy, but it is awfully difficult to get people to follow them thoroughly. For this reason, a key issue is to what extent we can create an atmosphere where anyone who notices something, not just us safety managers, will feel free to give a word of caution on the spot. The idea is that someone who gets to the point of issuing caution can always be expected to observe that rule, so we need to increase the number of such people. Right now, I feel that each of the operating sites is on the way to the next level. Without a doubt, overall safety awareness by employees has reached a relatively high level compared with what it used to be. Now, we need to spread that level of awareness to more employees and complete the building of a true culture of safety at the site as a whole.

Tsuruoka (Isohara Works) It used to be that when people experienced danger, that was enough incentive for them to follow rules. Today, however, as safety measures have improved, we have a situation where such experiences have become fewer. As a result of this, workers might be increasingly tempted to think that they can get away with only limited precautions. I fear that this could lead to a decline in risk sensitivity.

Takahashi In order to raise risk sensitivity even a little in this situation, we have the JX Safety Education Center, to which I belong. The center provides classes for large numbers of employees each year. Due to the limited capacity, however, employees are able to attend these sessions only once every three to four years. During that interval, I feel it would be beneficial for each operating site to offer one or two supplementary education sessions using its own facilities.

Kainosho According to data up to March of this year, persons who undergo training at the Safety Education Center have an accident

occurrence rate of only about one-third that of the Group average. While this result confirms the effectiveness of the classes, unfortunately the rate started rising from April. It seems the effects of the training wear off after a certain period of time. In response, we have come up with the idea of training instructors, so as to raise the level of supplementary education at each operating site. This will enable us to increase the frequency of risk sensitivity training, including for people from subcontractors working on Company premises.

Ota My feeling is that safety and accident prevention efforts by the entire Group, including subcontractors as well as employees of each of the operating sites, are becoming increasingly important.

Ogata Just yesterday, I took part in an event at Saganoseki we call "A day to think about safety." We hold this on the anniversary of a fatal accident. The event is held to remember the victims and to make sure the incident does not fade from memory. We re-create the actual accident that occurred on that day and practice rescuing the victims. Of course, not every accident can be re-created, but I felt this was a highly usable chance to have employees who did not experience the incident firsthand understand how frightening such an accident can be.

Eliminating Accidents

Moderator What would you suggest is necessary for eliminating accidents?

Takahashi First of all, we need to take measures on the machinery end right from the design stage. The next step is setting rules and making them known, such as by putting up signs. For the latter, however, there are many aspects that depend on human effort, so the key is each individual's safety awareness and risk sensitivity.

Matsuzawa (Kurami Works) I believe there is no silver bullet; all we can do is take the time needed to make improvements on both the hard and soft fronts, making machines safer and raising safety awareness. In particular, when it comes to introducing new machines or other equipment, I feel we can do more to reflect safety needs in the design.

Kainosho Making machinery safer is something that needs to be pursued, of course, but there are limits to that. In the end, there will still be aspects that depend on people. Besides the Safety Education Center that was mentioned earlier, to improve safety awareness and risk sensitivity we are considering such measures as preparing accident case study videos and drawing up a systematic educational curriculum, as we will continue taking a multifaceted approach to these issues.

Otsubo (PPC Saganoseki) People often talk about passing along technology and skills, but you seldom hear talk of "passing along safety," which I think is just as important. A systematic educational curriculum is of course needed, but we can expect even greater benefits if we include education that passes along the safety experiences at each workplace from one generation to the next, such as accidents that occurred in the past and how terrifying they were. I would like to get involved in helping to create this kind of workplace environment.

Creating a Corporate Climate of "Safety First"

Ota While we of course need to raise the safety awareness of each employee, it is even more important to make sure the concept of "Safety First" is instilled in the organization. Earlier, we heard from Mr. Tsuruoka about the "Safety First, Quality Second, Production Third" banners at the Isohara Works. Even if people understand that concept in their heads, though, I wonder if in real life there may be cases where the workplace ultimately puts more emphasis on "Production First" in an effort to achieve financial targets, for example.

Ogata Although people have been saying "Safety First" for dozens of years, there was a time when that was little more than a catchphrase. At least today, however, "Safety First" has been clearly put forth as the policy of the Group as a whole. The fact that accidents still happen, though, shows that there are still many situations even today where safety is not the first priority. This gap is something that no doubt vexes everyone out there responsible for workplace safety, because when an accident occurs there is no way of undoing the damage. When you really are not sure what to do, I think the best thing is to talk it over with each other, drawing out each person's wisdom, then deciding what can be done to ensure safety and carrying that out. Of course, the conclusion may be that it will take time and expense, but the first step toward "Safety First," I believe, is to create this kind of atmosphere in the workplace.

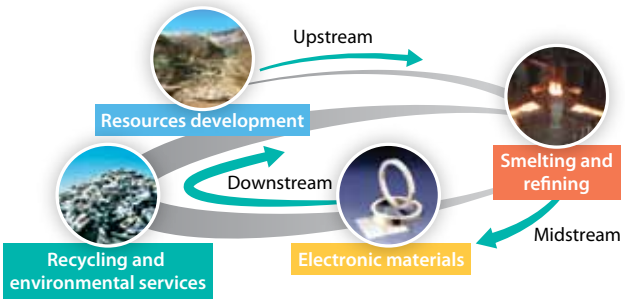
Ota In that regard, not only safety managers but top management as well must always have in mind that business activities are based on "Safety First," and must put that into practice. I have to remind myself about this as well, but we must never, not even one in 100 times or one in 1,000 times, suggest to subordinates or others around us by our attitude that production takes priority over safety. Also important is a frank atmosphere where, in the event a Company officer were to give such an impression, the safety manager and others around him or her feel free to point out the error. In such a corporate climate, if everyone from top management on down, including safety managers, employees in each workplace, and people from subcontractors, keeps up with persistent, ongoing efforts, I believe we will be able to establish a true culture of safety.

Moderator Thank you all very much.

Business Overview

Overview of JX Nippon Mining & Metals Group Business Segments

JX Nippon Mining & Metals is a comprehensive manufacturer of nonferrous metals. We contribute to society by stably providing copper and other nonferrous metal resources and materials in a sustainable manner, conducting a full range of operations from resources development to smelting and refining, electronic materials fabrication, and recycling and environmental services.



Resources Development Business

We mine copper ores, developing mines with an eye on the mineral deposit potential.

Exploration

Mining

Grinding

Flotation

Exploration to development

- Following exploration, to narrow down prospective sites to those with promising mineral deposits, we conduct more detailed studies to consider the feasibility of mine development from technical and economic standpoints. When the decision is made to go ahead with development, construction work starts on the infrastructure and ore processing facilities.

Operation

- Mined ores having a copper grade of around 1% go through processes of crushing and grinding, followed by flotation to select the usable contents, producing copper concentrate with a grade of around 30%.

Smelting and Refining Business

Using copper concentrate imported from overseas with a grade of around 30% as the raw material, we produce refined copper by upgrading it to a purity of 99.99% in flash smelting furnace, converter, anode furnace, and electrorefining processes.

Copper concentrate

Converter

Copper concentrate is poured successively into a flash smelting furnace, converter, and anode furnace, removing iron and sulfur content to create copper anode having a purity of around 99%. Electrolysis is then applied to the copper anode to produce copper of 99.99% purity for shipment.

Copper anode casting

Electrorefining

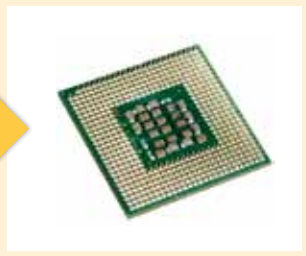
Refined copper

Electronic Materials Business

Starting with refined nonferrous metals manufactured in the smelting and refining processes, we perform the necessary processing, such as alloying, high purification, surface treatment, and rolling.

We then provide electronic materials with a wide range of properties for use in electronic equipment, automotive, medical device, and other industries.

Copper sputtering targets for semiconductors



Applications: Integrated circuits

Examples of electronic materials product manufacturing processes

Each of the products is manufactured based on advanced metal processing technologies developed over the years.

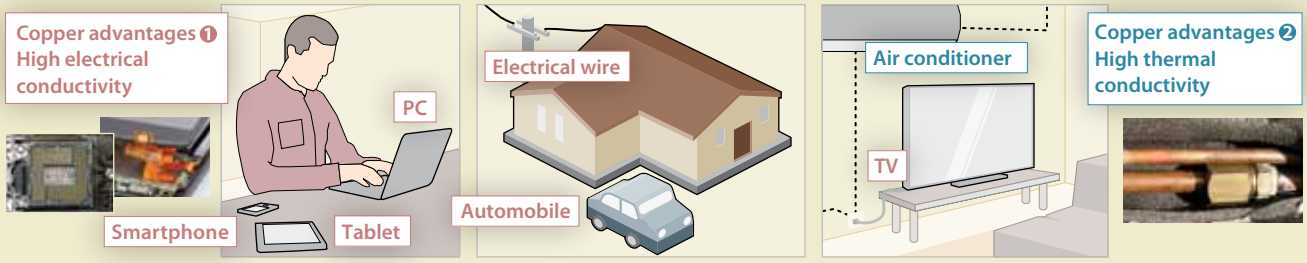
- Copper sputtering targets for semiconductors
  Sputtering targets are made from refined copper, further purifying it and then employing processes that include forging, rolling, and surface treatment. The final use is as a material for the extremely fine interconnects of semiconductor integrated circuits.
- Treated rolled copper foil
  Refined copper is melted and cast, followed by repeated rolling until its thickness is only 5 to 150 microns. Being more bendable than electro-deposited copper foil, treated rolled copper foil is used in flexible printed circuit boards inside smartphones, for example.

Treated rolled copper foil

Applications: Flexible printed circuit boards

Our Everyday Lives

With advantages such as high electrical and thermal conductivity, copper is used all around us.



Recycling and Environmental Services Business

By recovering and reusing nonferrous metal resources from end-of-life electronic devices and industrial waste, we are contributing to environmental conservation and to the realization of a recycling-oriented society.

Making use of domestic and overseas networks, we collect end-of-life electronic devices and industrial waste, which first undergo preprocessing as necessary, such as crushing, incineration, and melting. The resulting materials are then put through smelting and refining processes to recover refined copper, precious metals, rare metals, and other metals.

End-of-life electronic devices and other items for recycling

Refined metals

Business Overview

Business Results in Fiscal 2014 (April 1, 2014, to March 31, 2015)

Demand for refined copper was solid, sustained by growth in China and other emerging nations and by the strong US economy. The international copper price (London Metal Exchange [LME] price), however, temporarily dropped from around 310 cents per pound in the first half of the year, to below 250 cents during the second half, averaging 297 cents for the full year. This drop can be attributed to factors including fears of a slowdown in China's economic growth and an increase in LME inventory. On the foreign exchange market, meanwhile, the value of the yen versus the US dollar continued trending downward, averaging ¥110 per dollar for the full year.

Against this background, consolidated net sales of the JX Nippon Mining & Metals Group rose 11% from the previous fiscal year, to ¥1,156.0 billion, while ordinary income rose 19%, to ¥56.6 billion. However, primarily due to the impact of booking a special loss of ¥59.1 billion resulting from factors including an impairment loss on assets relating to resources development, the Group posted a net loss of ¥5.7 billion.

* The Company discloses financial information through its holding company, JX Holdings, Inc.

Fiscal 2014 results (consolidated)

(billions of yen)

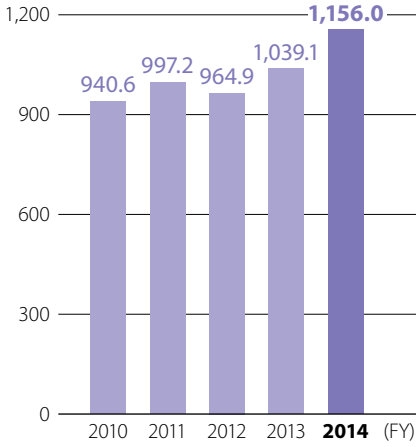
	Fiscal 2013	Fiscal 2014	Year-on-year change
Net sales	1,039.1	1,156.0	+11%
Operating income	13.8	33.2	+140%
Ordinary income	47.4	56.6	+19%
Net income (loss)	(11.2)	(5.7)	—
Total assets	1,521.4	1,739.6	+14%
LME copper price (US cent/pound)	322	297	–8%
Exchange rate (JPY/USD)	100	110	+10%

Financial Performance (Consolidated)

* Figures up to fiscal 2011 do not include the results of the titanium business.

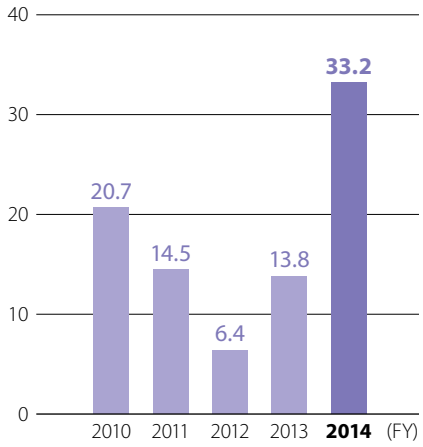
Net sales

(billions of yen)



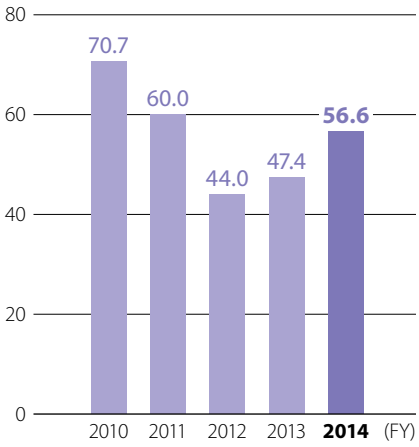
Operating income

(billions of yen)



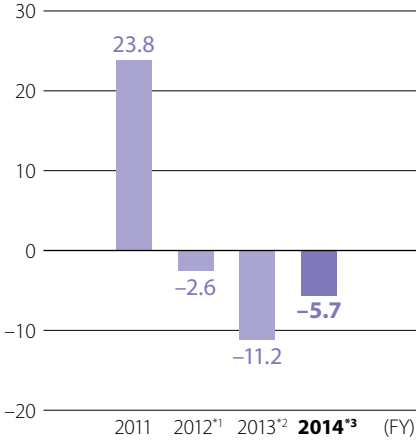
Ordinary income

(billions of yen)



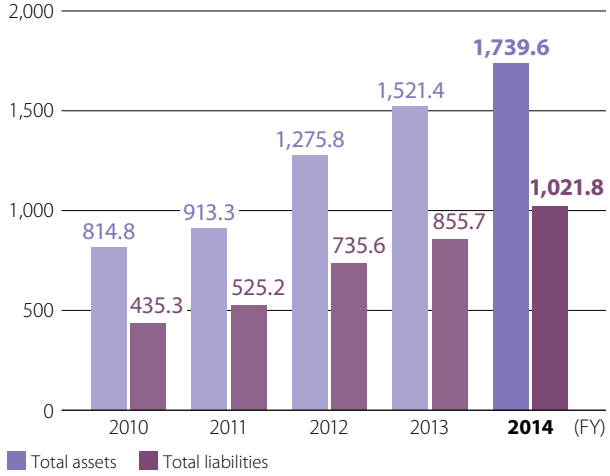
Net income (loss)

(billions of yen)



Total assets and total liabilities

(billions of yen)



*1 The Group booked a special loss of ¥32.7 billion, mainly due to impairment of goodwill following a decline in Toho Titanium's stock price, resulting in a net loss of ¥2.6 billion.

*2 The Group booked a special loss of ¥56.0 billion, mainly due to impairment of assets relating to resources development, resulting in a net loss of ¥11.2 billion.

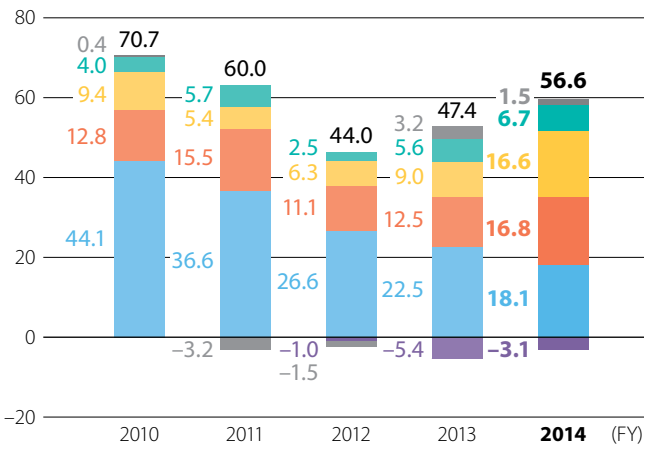
*3 The Group booked a special loss of ¥59.1 billion, mainly due to impairment of assets relating to resources development, resulting in a net loss of ¥5.7 billion.

Segment Information

The Group's business consists of five segments: resources development, smelting and refining, electronic materials, recycling and environmental services, and titanium.

Ordinary income trends per segment*

(billions of yen)

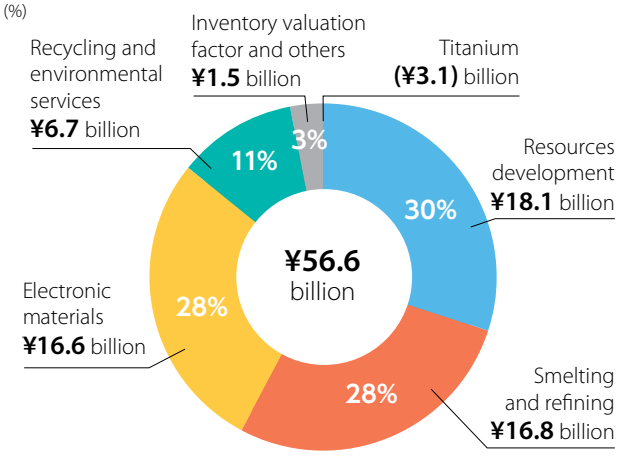


Resources development / Smelting and refining / Electronic materials / Recycling and environmental services / Titanium / Inventory valuation factor and others

* Figures up to fiscal 2011 do not include the results of the titanium business.

Ratio of ordinary income by segment* (FY2014)

(%)



Resources development / Smelting and refining / Electronic materials / Recycling and environmental services / Titanium / Inventory valuation factor and others

* Titanium is excluded from the ratio calculations.

Year-on-year change in ordinary income (FY2014)

(billions of yen)

	FY2013	FY2014	Year-on-year change	Main factors in year-on-year change
Resources development business	22.5	18.1	–4.4	Income declined by ¥4.4 billion mainly due to the drop in copper prices. Production of copper concentrate at the Caserones Copper Mine started in May 2014.
Smelting and refining business	12.5	16.8	+4.3	Income rose by ¥4.3 billion, with the main factors being the weaker yen and an improvement in copper concentrate purchasing conditions (smelting and refining margin). The sales volume of refined copper increased, against the background of strong demand in Japan and Asia as a whole.
Electronic materials business	9.0	16.6	+7.6	Backed by strong smartphone and tablet sales, sales of our main products grew, including sputtering targets for semiconductors, treated rolled copper foil, and precision rolled materials. Aided also by the benefits of a weaker yen, income increased by ¥7.6 billion.
Recycling and environmental services business	5.6	6.7	+1.1	Income grew by ¥1.1 billion, owing primarily to the expanded collection of recycled materials and the start of a low-concentration PCB waste treatment service.
Titanium business	(5.4)	(3.1)	+2.3	Losses were cut by ¥2.3 billion, due chiefly to increased sales that reflected recovering titanium demand and to the benefits of restructuring. The business posted positive income in the second half of fiscal 2014.

Business Climate Indicators

Trends in key indicators affecting Group performance are as indicated below.

Segments affected	Indicators	Units	FY2010	FY2011	FY2012	FY2013	FY2014
All segments	Exchange rate	(JPY/USD)	86	79	83	100	110
	LME copper price	(US cent/pound)	369	385	356	322	297
Resources development business	Equity entitled copper mine production	(thousand tons/year)	111	105	105	127	148
Smelting and refining business	Sales volume of refined copper by PPC	(thousand tons/year)	588	566	551	588	623
Electronic materials business	Sales volume of treated rolled copper foil	(thousand kilometers/month)	3.3	2.6	2.7	3.0	4.1
	Sales volume of precision rolled materials	(thousand tons/month)	3.8	3.5	3.3	3.4	3.8
Recycling and environmental services business	Recovered volume of gold	(tons/year)	6.5	7.0	5.8	6.1	5.9

Net sales by region

(billions of yen)

	Japan	Rest of world	China	Rest of Asia	North America	Europe	Other	Total
FY2013	559.7	479.4	299.5	149.4	21.3	5.9	3.3	1,039.1
FY2014	591.7	564.2	362.9	161.5	26.1	10.4	3.3	1,156.0

Segment Overview and Progress in Meeting 2nd Medium-Term Management Plan

The JX Nippon Mining & Metals Group drew up its 2nd Medium-Term Management Plan (fiscal 2013 to 2015) aimed at maximizing corporate value, premised on furthering appropriate governance based on strict compliance and the creation of a CSR promotion framework, and is pursuing initiatives in each of the business segments.

Resources Development Business


Escondida Copper Mine (world's top copper producer in 2014)


Trial application of biomining technology in the Radomiro Tomic Copper Mine

Business Overview

We are actively involved in promising copper mine development projects from the initial mineral exploration phase.

At the Caserones Copper Mine, which the Group has taken the lead in developing since acquiring mining rights in 2006, copper concentrate production began in May 2014. We have also invested in some of the world's largest copper mines, such as Los Pelambres, Escondida, and Collahuasi. Our equity entitled copper mine production amounted to around 150,000 tons in 2014.

Key Strategies of the 2nd Medium-Term Management Plan

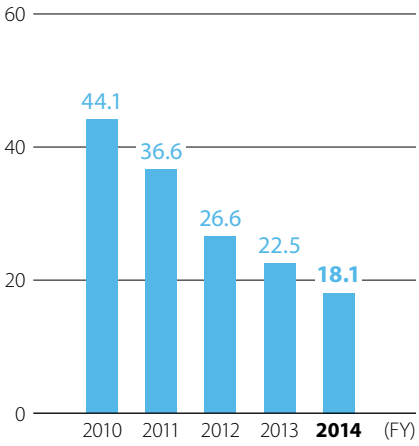
- Take steps to expand copper mining rights and interests
  - Complete Caserones Copper Mine (Chile) development and ramp up production
  - Consider developing the Quechua Copper Deposit (Peru)
  - Carry out mineral exploration in the Frontera district (Chile)
- Promote commercialization of new smelting technology
  - Develop N-Chlo (Nikko Chloride) Process*1
  - Develop biomining technology*2

Advances in Fiscal 2014

- Production of copper concentrate started at the Caserones Copper Mine in May 2014, following the March 2013 launch of refined copper production using a hydro-metallurgical refining technology (SX-EW process). As of June 2015, we are working to ramp up production with a view to stable operation.
- In the Frontera district, having completed the initial engineering study and preliminary economic feasibility assessment based on the results of mineral exploration, we are proceeding with studies toward mine development.
- At the beginning of 2015, commercial application of biomining technology was started at the Radomiro Tomic Copper Mine operated by Codelco (National Copper Corporation of Chile). Drawing on the results, the application of this technology is expected to grow.

Ordinary income

(billions of yen)



*1 Our proprietary hydro-metallurgical refining process using hydrochloric acid to efficiently recover copper, gold, silver, and other metals from low-grade copper concentrate.

*2 A hydro-metallurgical method that accelerates the extraction of copper from ore in acidic conditions by utilizing the activities of microorganisms.

Status of Operations at Caserones Copper Mine


Caserones Copper Mine


Grinder (semi-autogenous grinding mill)

Achieve Stable Procurement of Copper Resources for Japan

At the Caserones Copper Mine, which the Group has taken the lead in developing since acquiring mining rights in 2006, copper concentrate production began in May 2014, following the March 2013 launch of refined copper production using a hydro-metallurgical refining technology (SX-EW process). As of June 2015, we are working to ramp up production with a view to stable operation.

Once stable operation is achieved, the mine will produce approximately 150,000 tons of copper concentrate (copper content) annually, most of which will be shipped to the Group's smelting and refining facilities in Japan for processing into refined copper. This is equivalent to more than 10% of the amount actually imported by Japan in fiscal 2014. It should lead to more stable procurement of copper resources not only by the Group but by Japan as a whole.

Contribute to Chile's Economic Development

The Caserones Copper Mine will contribute over the coming decades to Chile's economic development through employment, tax revenues, and benefits to related industries, among other factors. The operator of the mine, Minera Lumina Copper Chile (MLCC), is working to ensure that these contributions are realized in favorable ways, by building good relations with nearby communities, ensuring the safety and health of workers, preserving the natural environment, and otherwise paying utmost attention to various stakeholders.

Specifically, MLCC has designed a Community Management Program around the following four objectives: (1) expanding employment, (2) ensuring transportation safety, (3) providing social infrastructure, and (4) managing water resources. It is working to build a relationship of trust through active communication with local communities, extending from local governments to indigenous people. When the surrounding area suffered extensive damage from record heavy rains at the end of March 2015, MLCC was quick to lend assistance, including provision of drinking water and food and restoration of roads. (See page 71 for details.)

Overview of the Caserones Copper Mine

Location

Approx. 160 km southeast of Copiapó, the capital of the Third Region (Atacama Region) of Chile, at an altitude of 4,200 to 4,600 m

Equity shares (as of June 2015)

Equity shares in Minera Lumina Copper Chile (MLCC), operator of the Caserones Copper Mine
Pan Pacific Copper (PPC): 77.37%
Mitsui & Co.: 22.63%

Initial investment amount

Approx. US$4.2 billion

Mine life

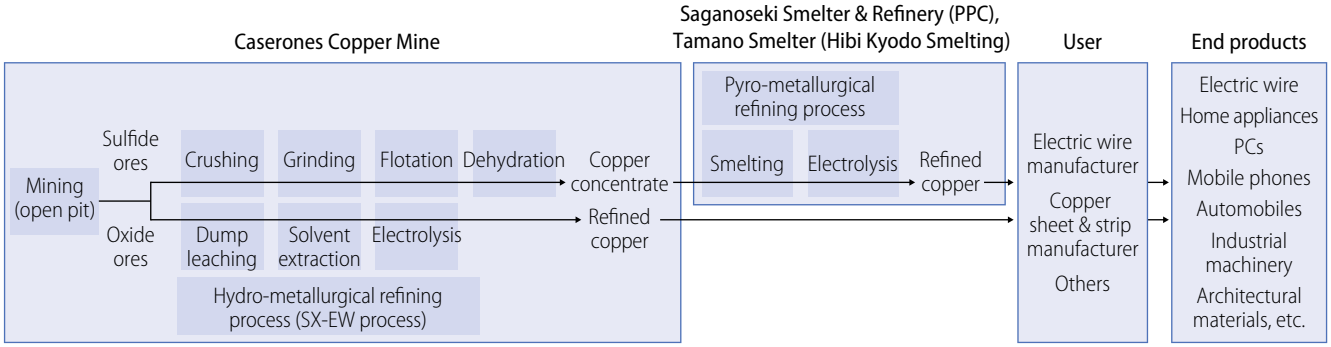
28 years (2013 to 2040)

Production volume

		First 10 years	Total for 28 years
Copper	Copper in concentrate*	150,000 t/year	3,140,000 t
	Refined copper	30,000 t/year	410,000 t
	Total	180,000 t/year	3,550,000 t
Molybdenum		3,000 t/year	87,000 t

* Copper grade: approx. 35%

Production Flow of Caserones Copper Mine



Smelting and Refining Business


Refined copper produced using the permanent cathode method


Tamano Smelter, Hibi Kyodo Smelting

Business Overview

Our refined copper production capacity is among the largest in the world, at around 1.33 million tons a year combined for Pan Pacific Copper (PPC)'s sites in Japan and LS-Nikko Copper in South Korea. We provide a stable supply of high-quality refined metal products, including copper and precious metals, to Asian markets where demand is expanding.

Key Strategies of the 2nd Medium-Term Management Plan

- **Build up the business structure to become one of the world's most cost-competitive suppliers**
  - Achieve safe, stable operations
  - Improve smelting and refining margin

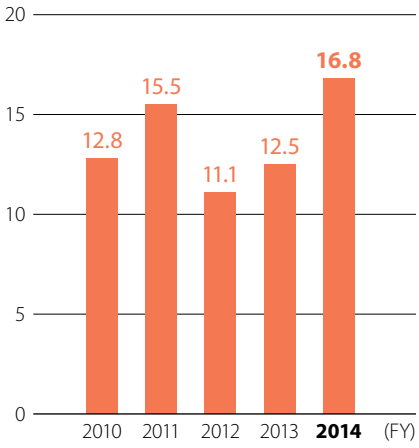
Advances in Fiscal 2014

- In March 2015, we completed switching over the electrorefining process at the Tamano Smelter of Hibi Kyodo Smelting to the permanent cathode method, and we raised its refined copper production capacity from 260,000 tons to 290,000 tons annually (of which PPC's offtake is around 200,000 tons). The production capacity of the Group as a whole grew to 1,330,000 tons. This includes the capacity of LS-Nikko Copper, which in June 2014 was expanded from 600,000 tons to 680,000 tons. Thanks to this capacity boost and the various measures being taken to raise efficiency and lower costs, greater-than-ever competitive strength is being realized.

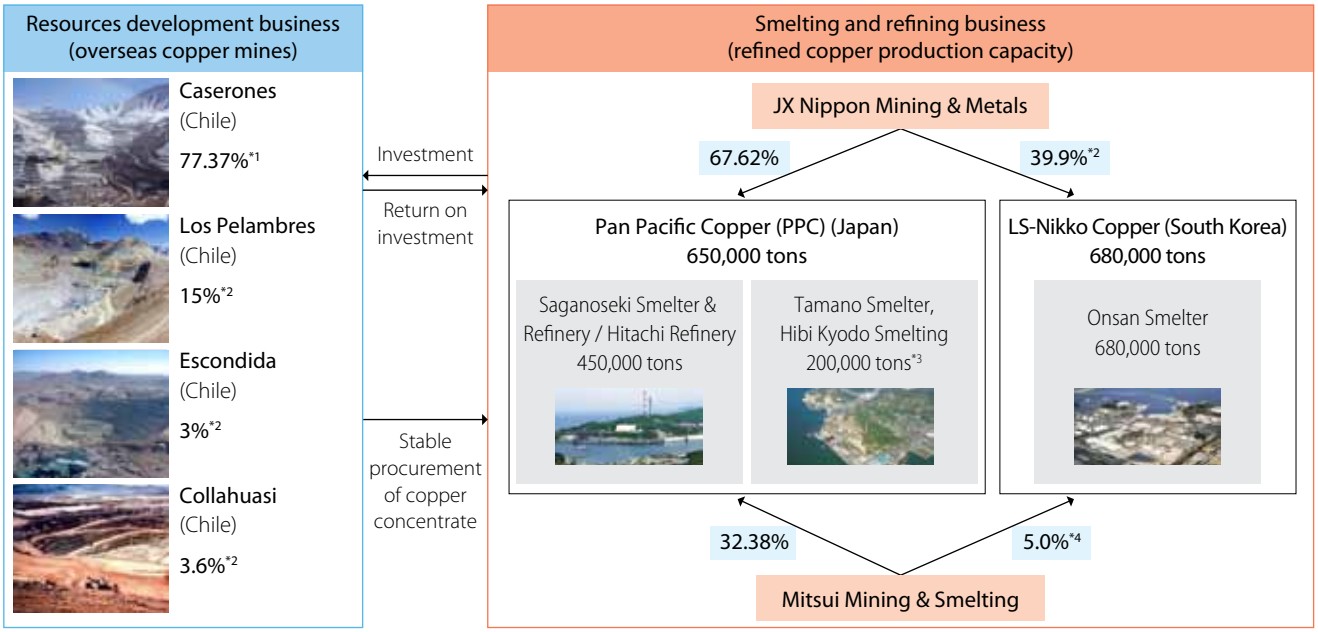
* One method of copper electrorefining. Using stainless steel plates as the cathode, it can produce refined copper more efficiently and of higher quality than conventional methods. It is called "permanent" because the stainless steel plate can be reused.

Ordinary income

(billions of yen)

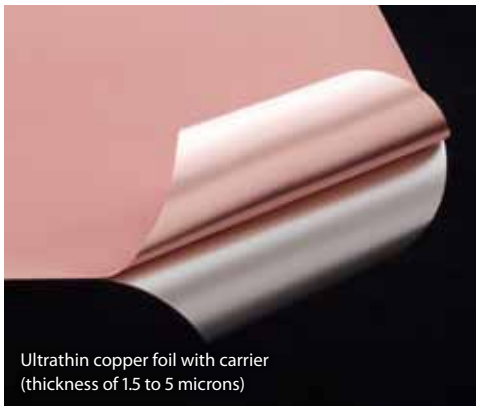


Outline of Resources Development and Smelting and Refining Businesses



*1 PPC equity share
*2 Indirect ownership portion of JX Nippon Mining & Metals
*3 PPC's offtake of the total production capacity of 290,000 tons
*4 Indirect ownership portion of Mitsui Mining & Smelting
(All as of June 2015)

Electronic Materials Business


Ultrathin copper foil with carrier
(thickness of 1.5 to 5 microns)


JX Metals Precision Technology's Kakegawa Works

Business Overview

We develop and provide high-quality, high-performance electronic materials in a timely manner, drawing on our technological advantages related to nonferrous metals in areas including high-purity refining, high-density sintering, surface treatment, and precision rolling and fabrication. Our materials are matched to rapidly progressing needs in the electronic equipment and automotive markets, where we maintain high global shares.

Key Strategies of the 2nd Medium-Term Management Plan

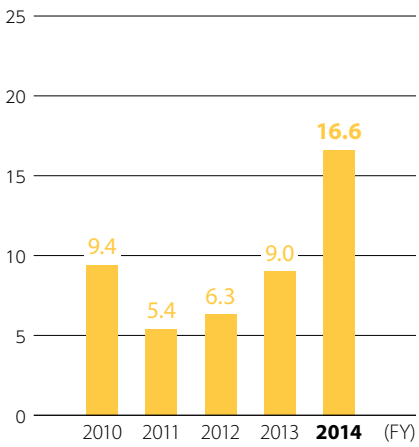
- Maintain and expand top-class share globally in each product market
  - Achieve profitability of new Kakegawa Works and cathode materials business as early as possible
  - Improve profitability by developing new fields and materials
  - Expand network of overseas sites

Advances in Fiscal 2014

- The Kakegawa Works of JX Metals Precision Technology is engaged mainly in OEM production of automotive connectors, through full-process production of precision rolled materials from stamping and plating to assembly. It established full-scale production systems in February 2015 by completing the transfer of plating equipment from the Hitachi area. The Kakegawa Works will continue to supply high-quality products, especially for the eco-car market, where further growth is expected.
- In March 2015, the Longtan Works of Nikko Metals Taiwan started an electroless UBM plating service, which is essential to making semiconductor packages smaller and more highly integrated. A new coil center for precision rolled materials in Dongguan, China, went into full operation in May 2015. By taking advantage of these sites outside Japan, we are achieving faster delivery and improved customer services.
- Through a restructuring of the electro-deposited copper foil business and withdrawal from the general-purpose product market due to fierce price competition, we completed a shift to a business structure dedicated to high-functionality products, such as ultrathin copper foil with carrier.

Ordinary income

(billions of yen)



Outline of Electronic Materials Business

Principal IT-related materials	Global market share (in 2014)	Primary applications	End-use applications				
			PCs	Mobile phones, smartphones	Digital appliances, AV	Communications infrastructure, data centers	Automobiles
Treated rolled copper foil	70% **No. 1**	Flexible printed circuit boards	○	◎	◎		○
Sputtering targets for semiconductors	60% **No. 1**	CPUs, memory chips, etc.	◎	◎	◎	○	○
ITO targets for LCDs	30% **No. 1**	Transparent conductive films	◎	◎	◎		○
Sputtering targets for magnetic applications	55% **No. 1**	Hard disks, etc.	◎		○	○	
Phosphor bronze	20% **No. 1**	Connectors, springs for electronic parts	○	◎	○		○
Corson alloy (C7025)	45% **No. 1**	Lead frames, connectors	◎	○	○	○	○
Titanium copper	65% **No. 1**	High-class connectors, etc.	○	◎	○		○
In-P compound semiconductors	50% **No. 1**	Optical communication devices, ultrafast ICs			○	◎	○

Recycling and Environmental Services Business


Low-concentration PCB waste treatment system at JX Nippon Tomakomai Chemical


Precious metals recovered from recycled materials

Business Overview

We engage in recycling business, making use of the equipment and technologies of the smelting and refining business to efficiently recover copper, precious metals, rare metals, and other resources from recycled materials. We also conduct environmental services business, providing zero-emissions processing of industrial waste materials to render them harmless without producing any secondary waste. In Japan, the Hitachi Metal Recycling Complex (HMC) Department of the Hitachi Works was established in 2009, as we took steps to expand the variety of metal elements recovered and strengthen our nationwide network for collection and processing of recycled materials. Now that the amount of recycled materials generated in Japan is declining, we are increasing collection from outside Japan and endeavoring to build a recycling-oriented business on a global scale.

Key Strategies of the 2nd Medium-Term Management Plan

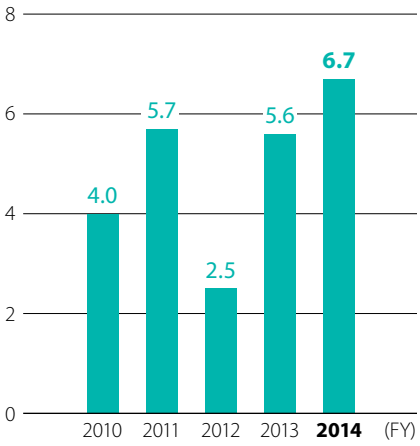
- Create a global, environmentally viable resource recycling business designed for zero emissions
  - Expand collection outside Japan
  - Roll out and expand new businesses
  - Consolidate metal production sites for efficiency and cost reduction

Advances in Fiscal 2014

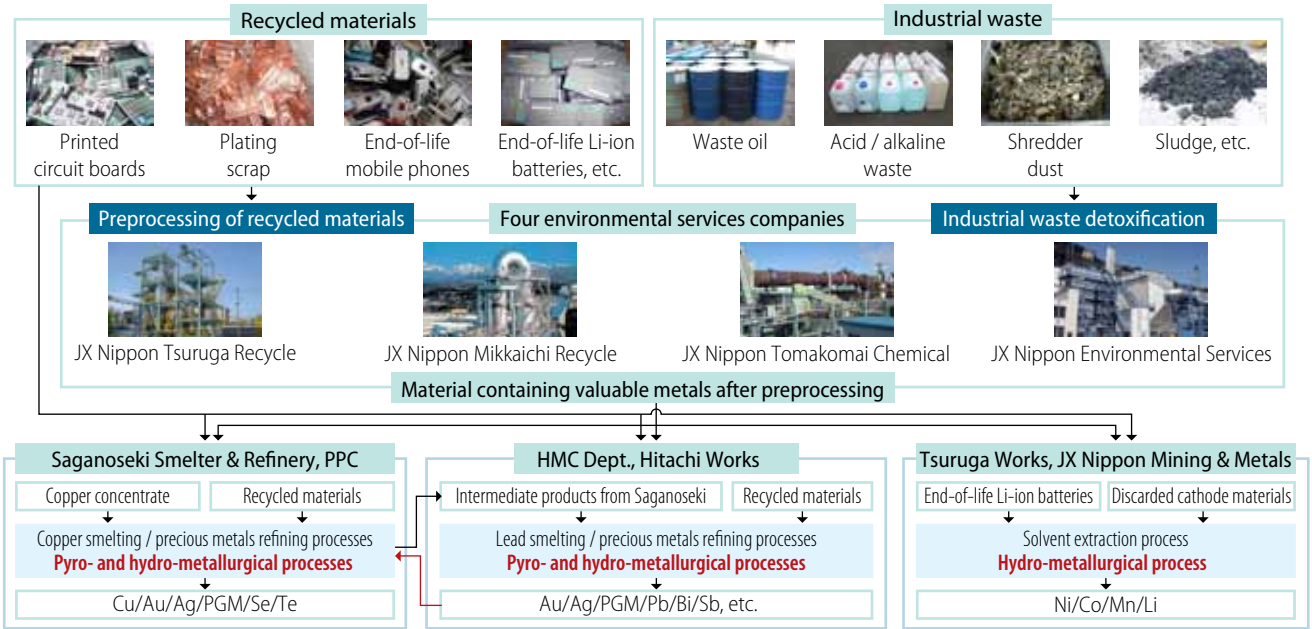
- JX Nippon Tomakomai Chemical began providing a low-concentration PCB waste treatment service in March 2014 after receiving certification from the Ministry of the Environment, and this service is now proceeding smoothly.
- Collection of recycled materials outside Japan is increasing steadily in volume, as the Changhwa Recycle Center in Taiwan, begun in 2010, is now in smooth operation, and we have strengthened customer services at our U.S. site, established in May 2014.

Ordinary income

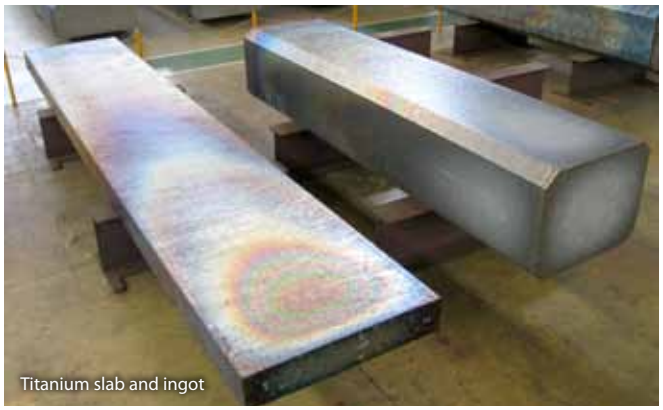
(billions of yen)



Outline of Recycling and Environmental Services Business



Titanium Business


Titanium slab and ingot


Signing ceremony of joint venture agreement on Saudi Arabia project

Business Overview

Titanium, which is a light, strong, and corrosion-resistant metal, is used for aircraft, power plants, desalination plants, and many other applications. Toho Titanium Co., Ltd., is a Group company that refines titanium ore and produces various titanium products. In the first half of fiscal 2014, the company continued to undergo a significant reduction in production and sales due to inventory adjustment in the aircraft industry and to sluggish demand in general industries. However, its production has been increasing from the second half to meet recovering demand. Based on the projection that titanium demand will grow over the long term, Toho Titanium is conducting the restructuring of domestic operations and promoting overseas projects to enhance its competitiveness.

Key Strategies of the 2nd Medium-Term Management Plan

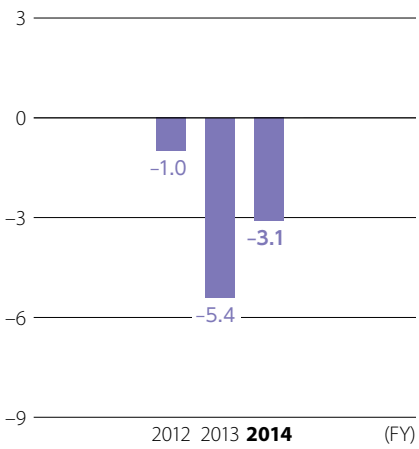
- Carry out restructuring to meet the changing titanium demand structure

Advances in Fiscal 2014

- The company adjusted the titanium sponge and ingot production capacity of the Chigasaki Plant, while restructuring other domestic operations, to improve cost structure and efficiency. These initiatives delivered the anticipated results.
- Toho Titanium and partner companies in Saudi Arabia concluded a joint venture (JV) agreement in December 2014 to build a new titanium sponge plant in the country. The construction of the new plant (production capacity: 15,600 tons per year) started in May 2015, and commercial production will begin by the end of 2017. The new plant is expected to help make our titanium business more competitive, supported by the following factors:
  ① Increasing titanium demand from energy, chemical, and desalination plants in Saudi Arabia; Reasonable electricity cost in the country; and
  ② Stable procurement of the raw material (titanium tetrachloride) from a JV partner that is the second biggest titanium dioxide producer in the world.

Ordinary income*

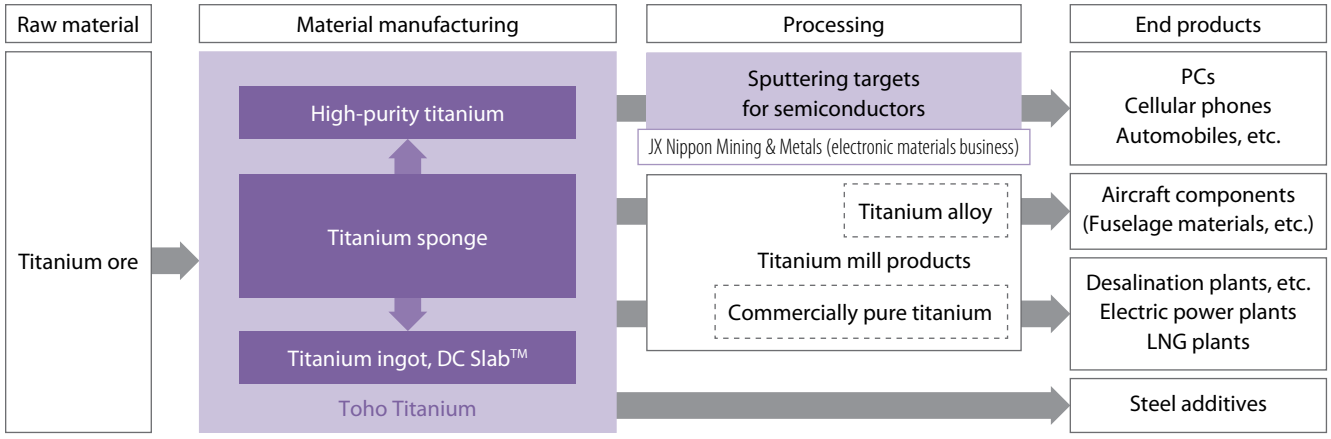
(billions of yen)



* JX Nippon Mining & Metals Group consolidated financial results

Location of new titanium sponge plant in Saudi Arabia (Yanbu)

Outline of Titanium Business



Scope of the Group's business

Production Sites in Japan and Overseas Operating Sites

As of July 1, 2015

Domestic

1 JX Nippon Tomakomai Chemical

2 Esashi Works,
JX Metals Precision Technology

3 Ichinoseki Foil Manufacturing

4 Isohara Works,
JX Nippon Foundry

5 Hitachi Works
Hitachi Works, Pan Pacific Copper
JX Nippon Environmental Services
Kamine Clean Service
Hitachi Plant, Toho Titanium

6 Tatebayashi Works,
JX Metals Precision Technology

7 Nasu Works, Metal Mold
Production & Development Center,
JX Metals Precision Technology

8 Kurami Works,
Kurami Office, JX Nippon Coil Center
Chigasaki Plant, Toho Titanium

9 Shimoda Onsen

10 JX Nippon Mikkaichi Recycle
Kurobe Plant, Toho Titanium

11 Kakegawa Works,
JX Metals Precision Technology

12 Tsuruga Plant,
JX Nippon Tsuruga Recycle

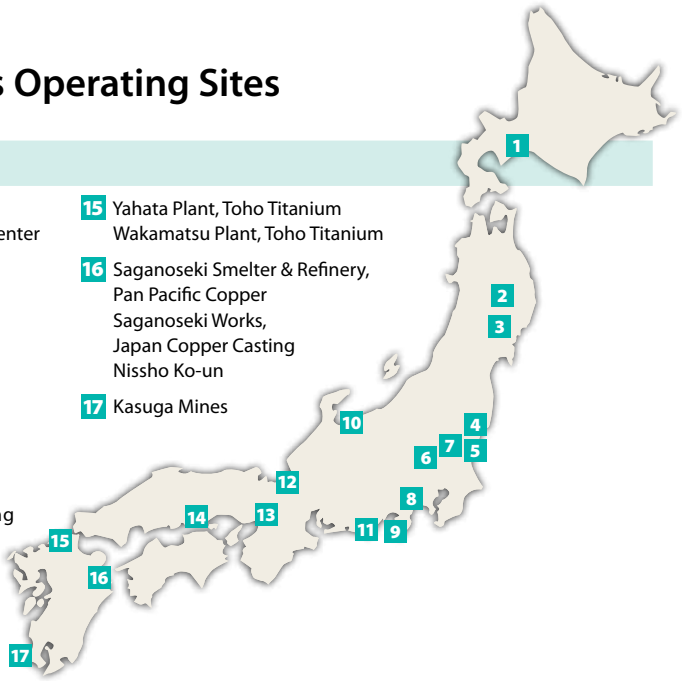
13 Takatsuki Plant, JX Metals Trading

14 Tamano Smelter,
Hibi Kyodo Smelting
Hibi Smelting Logistics

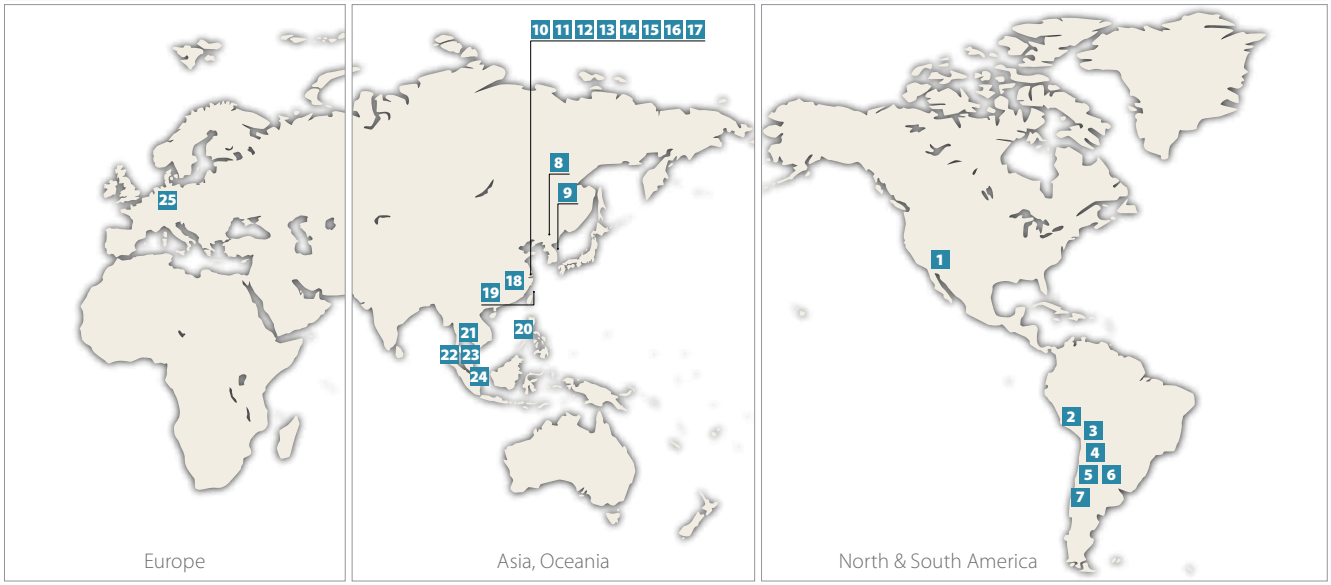
15 Yahata Plant, Toho Titanium
Wakamatsu Plant, Toho Titanium

16 Saganoseki Smelter & Refinery,
Pan Pacific Copper
Saganoseki Works,
Japan Copper Casting
Nissho Ko-un

17 Kasuga Mines



Overseas



1 JX Nippon Mining & Metals USA, Inc.

2 Pan Pacific Copper Exploration Peru, S.A.C.
Compania Minera Quechua S.A.

3 Collahuasi Mine

4 Escondida Mine

5 Caserones Copper Mine

6 Los Pelambres Mine

7 Chile Office
Chile Office, Pan Pacific Copper Co., Ltd.
Pan Pacific Copper Exploration
Chile Limitada
SCM Minera Lumina Copper Chile

8 JX Nippon Mining & Metals Korea Co., Ltd.

9 LS-Nikko Copper Inc.
Poongsan-Nikko Tin Plating Corporation

10 JX Nippon Mining & Metals Shanghai Co., Ltd.

11 Pan Pacific Copper (Shanghai) Co., Ltd.

12 Nikko Metals Shanghai Co., Ltd.

13 Nippon Mining & Metals (Suzhou) Co., Ltd.

14 Nikko Fuji Precision (Wuxi) Co., Ltd.

15 JX Nippon Mining & Metals Dongguan Co., Ltd.

16 Hong Kong Nikko Shoji Co., Ltd.

17 Shenzhen Nikko Shoji Co., Ltd.

18 Changzhou Jinyuan Copper Co., Ltd.

19 Nikko Metals Taiwan Co., Ltd.
Taipei Office, Pan Pacific Copper Co., Ltd.

20 JX Nippon Mining & Metals Philippines, Inc.

21 Thai Office, Pan Pacific Copper Co., Ltd.

22 Materials Service Complex (Thailand) Co., Ltd.

23 Materials Service Complex Malaysia Sdn. Bhd.

24 JX Nippon Mining & Metals
Singapore Pte. Ltd.

25 JX Nippon Mining & Metals Europe GmbH

Corporate Data

Company Name:
JX Nippon Mining & Metals Corporation

Paid-in Capital:
¥40.0 billion (ownership: JX Holdings, Inc. (100%))

Representative:
Shigeru Oi, President and Chief Executive Officer

Net Sales:
¥1,156.0 billion (consolidated result for fiscal 2014)

Ordinary Income:
¥56.6 billion (consolidated result for fiscal 2014)

Head Office:
6-3, Otemachi 2-chome, Chiyoda-ku,
Tokyo 100-8164, Japan

Business Lines:
- Resources Development
- Smelting and Refining
- Electronic Materials
- Recycling and Environmental Services

Total Number of Employees (Non-consolidated):
1,370 (as of March 31, 2015)

Total Number of Employees (Consolidated):
6,695 (as of March 31, 2015)

Domestic Operating Sites:
- Hitachi Works (Ibaraki Prefecture)
- Isohara Works (Ibaraki Prefecture)
- Technology Development Center (Ibaraki Prefecture)
- Kurami Works (Kanagawa Prefecture)
- Tsuruga Plant (Fukui Prefecture)

Overseas Operating Sites:*
Chile Office

* The JX Nippon Mining & Metals Group conducts business in 11 countries worldwide.

Employees

The employees of the JX Nippon Mining & Metals Group are the leading participants in the fulfillment of its corporate social responsibility through their respective work duties. For the Group as a whole to raise the level of its achievements, a working environment must be provided in which employees can perform to the best of their abilities with peace of mind.

For ensuring occupational health and safety, we drew up the Basic Policy on Health and Safety and strive to foster a culture of safety toward the elimination of accidents and illnesses. For developing and utilizing human resources, we create personnel systems that value the diversity of employees working in various domestic and overseas locations, and work to enhance education programs, thereby providing a foundation empowering employees to make the most of their abilities.

Related Material Issues

- Ensuring occupational health and safety
- Developing and utilizing human resources

Health and Safety Activities

From its inception, the JX Nippon Mining & Metals Group has always considered the maintenance of occupational health and safety to be an essential condition for continuation of its business, and it has endeavored to provide an environment where employees can work with peace of mind. The Group drew up the Basic Policy on Health and Safety aimed at the elimination of accidents and illnesses, and efforts are made to foster a culture of safety.

JX Nippon Mining & Metals Basic Policy on Health and Safety

We place the highest priority on ensuring the health and safety of all members working at the JX Nippon Mining & Metals Group and thereby strive to create a safe and secure workplace.

1. We will continuously improve health and safety management levels through the establishment and efficient operation of the health and safety management system.
2. We will work to identify, eliminate, and reduce hazards and harmful factors in all areas of business operations and to ensure no accidents occur.
3. We will work to maintain and improve employees' mental and physical health by ensuring good communication and a comfortable working environment.
4. We will actively provide information and education in order to develop human resources that can act spontaneously and have strong safety competencies.
5. We will not only comply with health and safety laws and regulations but also establish and observe necessary voluntary standards.

Management Policy on Health and Safety

Each year, the Group formulates the Management Policy on Health and Safety, setting goals and key policy measures based on the findings following an analysis of the previous year's health and safety performance. The policy is discussed and approved by the Central Health and Safety Committee and then promulgated across the Group.

Management Policy on Health and Safety for Fiscal 2014

Goals

1. Fatal accidents: zero
2. Occurrences of accidents: reduction of 10% or more relative to the least number of accidents in the past three years
3. Explosions and fires: zero
4. Occupational diseases: zero

Examples of key policy measures

1. Creating a culture of safety
2. Thorough accident-prevention activities for each issue

Organization for Occupational Health and Safety Management

Meetings Related to Health and Safety

In compliance with the Industrial Safety and Health Act, the Group formed health and safety committees at each operating site and in each Group company. At the Head Office, the Central Health and Safety Committee holds an annual meeting, in addition to ordinary meetings held five times a year. Both annual and ordinary meetings are chaired by the general manager of the Environment & Safety Department and attended by representatives of Group businesses. At these meetings, the members primarily go over various measures for health and safety, discuss the Management Policy on Health and Safety, and deliberate measures to prevent the reoccurrence of accidents. Health and safety patrols are conducted once a year, and Group safety staff meetings are held twice a year to discuss health and safety management status and measures and to exchange related information. In cases where unique safety measures are found to be in place at a specific operating site or Group company, steps are taken to share these measures across the entire Group, such as by presenting implementation examples at Group safety staff meetings and conducting factory tours.

Safety Audits

Environment and safety audits are conducted by a team under the supervision of the president to examine operating sites directly run by the Company and major domestic Group companies. Issues discovered in each audit are reported to the president, then the team notifies the auditee of the issues, asking it to make improvements and monitoring progress as a follow-up measure. Environment and safety audits were conducted at 10 operating sites and companies in fiscal 2014.

Measures for Legal Compliance

To ensure full compliance with the latest revisions to laws and regulations concerning health, safety, and the environment, regular compliance inspections are performed by an outside organization, and a legal compliance monitoring system has been introduced to obtain the latest information on legal revisions on a weekly basis. When information on important legal revisions is obtained under this system, instructional handbooks and manuals are created and issued, facilitating a prompt response by each operating site. In addition, we have compiled instructional handbooks outlining laws, guidelines, public notices, and other rules related to particular items, in order to enhance understanding of legal requirements by those involved.

Conducting an environment and safety audit (Nasu Works, JX Metals Precision Technology)

Health and Safety Performance in 2014

Occupational Accidents, Etc.[*1]

Our health and safety record for 2014 is shown in the table below. The number of occupational accidents at domestic operating sites decreased in 2014, but there was one fatal accident during the year, as in 2013.

Category		2012	2013	2014
Safety performance at domestic operating sites[*2]	Instances of fatal accidents (people)	0	1	1
	Instances of accidents with lost work days (people)	9[*3]	11	8
	Instances of accidents without lost work days (people)	24[*3]	16	17
	Total (people)	33	28	26
	Frequency rate of industrial accidents[*4]	0.26	0.00	0.28
	Accident severity rate[*4]	0.00	0.00	0.00
	Explosions and fires (occurrences)	2[*5]	4[*5]	4[*5]
(Reference) Safety performance at overseas operating sites	Instances of accidents with lost work days (people)	3	7	11
	Instances of accidents without lost work days (people)	5	5	5
	Total (people)	8	12	16

*1 Data on health and safety performance is compiled on a calendar-year basis.

*2 The figures include the performances of Group companies and subcontractors.

*3 Two occurrences of occupational diseases are included. Lung ailments caused by dust inhalation occurring in the past (one resulting in work leave and one involving no leave) were certified as industrial accidents and were therefore included in the numbers here for occupational accidents. We are continuing to take countermeasures to prevent disease from dust, such as providing medical examinations and educating workers.

*4 Both the frequency rate of industrial accidents (the number of casualties caused by occupational accidents per million hours of total actual work) and the accident severity rate (the number of work days lost per thousand hours of total actual work) are the rates for employees of the Company. (Reference) In the calendar year 2014, the frequency rate of industrial accidents and the accident severity rate for all businesses in Japan were 1.66 and 0.09, respectively. (Source: Ministry of Health, Labour and Welfare, "Survey on Industrial Accidents.")

*5 There were no physical injuries due to fire or explosion.

Fatal Accident Occurrence

On June 3, 2014, a fatal occupational accident occurred at the Saganoseki Smelter & Refinery of Pan Pacific Copper, in which a Group employee died after becoming entangled in a belt conveyor system. The person was an employee of Nissho Ko-un, a Group company engaged mainly in loading and unloading raw materials and products. A similar fatal accident involving entanglement occurred within the Group on October 5, 2011. At that time, the Group set management standards on preventing entanglement in belt conveyors, conducted a comprehensive inspection of belt conveyor management, and devised safety measures. Despite those efforts, we failed to prevent the occurrence of a similar accident. The cause of the accident this time was found to be inadequate safety measures for keeping workers clear of an operating belt conveyor. Drawing on this lesson, a comprehensive inspection was carried out once again to assess the adequacy of measures to prevent entanglement in belt conveyors. We are determined to make every effort to prevent another recurrence.

Achievements of Health and Safety Activities in 2014 and Remaining Issues

As key policy measures in our Management Policy on Health and Safety for fiscal 2014, we chose "Creating a culture of safety" and "Thorough accident-prevention activities for each issue." The aim was not for these initiatives to be directed by the Head Office, but to have each operating site (workplace) take the lead in creating a culture of safety in their own workplace, and in eliminating accidents there.

Activities to Build a Culture of Safety

Definition of a Safety Culture

Safety culture is that assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, plant safety issues receive the attention warranted by their significance.

(Adapted from the definition by the International Atomic Energy Agency [IAEA])

The Group has conducted various activities to create a culture of safety, having made "Safety First" part of its Basic Policy on Health and Safety, and having adopted the above definition of safety culture in 2012. Individual operating sites continue to hold discussions to determine where their own safety situation is inadequate and what needs to be done, and after getting a clear picture of their issues, to address them thoroughly with effective actions. Activities in 2014 were aimed at instilling "Safety First" in the thinking and behavior of individuals and the organization and at enhancing our safety education system. To these ends, efforts were devoted to making full use of the JX Safety Education Center, strengthening level-specific education, and providing support and guidance to subcontractors. We also provided education enabling individuals to learn from past errors by not letting fatal accidents fade from memory, but using them to prevent a recurrence.

From 2015 onward, our activities go beyond the thoroughgoing initiatives aimed at enforcing basic safe behavior that we pursued up to 2014. We are now focused on eliminating risks as they emerge and raising safety awareness and risk sensitivity. Specifically, the key policy measures guiding our safety activities are (1) identifying major risks and thoroughly enforcing safety measures (preventing serious accidents), (2) preventing the recurrence of similar accidents, and (3) improving safety awareness and risk sensitivity.

Safety lecture by the senior supervisor for safety (Saganoseki Smelter & Refinery, Pan Pacific Copper)

Issue-Based Accident Prevention Activities

As indicated by Herbert Heinrich (Heinrich's Law), for every fatal accident there are many more minor accidents. Unless every effort is made to prevent these minor accidents and incidents, it will not be possible to reduce the overall accident rate, making it difficult to prevent fatal or otherwise serious incidents. Starting in 2012, we analyzed trends relating to all the occupational accidents that had occurred in the prior three years and identified five issues based on those trends. Each operating site was then asked to assign an order of priority for the five issues based on their individual situation (according to risk level and the number of occurrences to date), and to carry out activities aimed at eradicating accidents by means of a three-year program from 2012 to 2014. The initiative was highly effective in reducing the number of accidents caused by contact with hazardous substances and hot objects, and those related to operations at high locations. However, less success was achieved with regard to the other issues, namely, accidents caused by handling heavy objects, getting caught or entangled, and being cut or scraped. Continued efforts will need to be made in these areas.

Collection of cases regarding accidents

For each of these issues, a record of actual accidents is being compiled and other steps are being taken to further our understanding of accident trends and preventive measures.

Given this situation, the following five new issues were identified in 2015, and initiatives for preventing accidents will be stepped up further:

1. Preventing accidents relating to handling of heavy objects by human effort
2. Preventing accidents relating to cranes or slinging work
3. Preventing accidents relating to forklifts, front-end loaders, backhoes, and other vehicle-type heavy machinery
4. Preventing entanglement accidents during equipment repair, inspections, etc.
5. Preventing cutting or severing accidents from metal materials (strips, foils, chips)

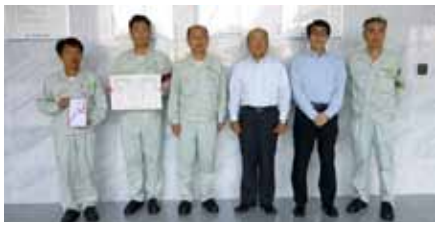
Promoting Physical and Mental Health

The Group realizes how important it is that all employees are able to maintain good physical and mental health as they work. We also recognize the significance of good mental health in ensuring an enjoyable life for employees and their families as well as heightening productivity and creating vibrant workplaces. The Group carries out measures supporting employees (and their families, in some cases) in maintaining good mental health. Specifically, we drew up the Mental and Emotional Health Maintenance Plan in 2008, followed this up with the establishment of implementation organizations at each operating site including domestic and overseas Group companies, and set up counseling services for providing face-to-face, telephone, and online counseling. Employees undergo stress checks once every two years. In October 2014, a lecture was given at the Head Office to managerial personnel on workplace harassment, an issue that may cause mental health problems. The event was attended by around 100 persons.

Other Activities

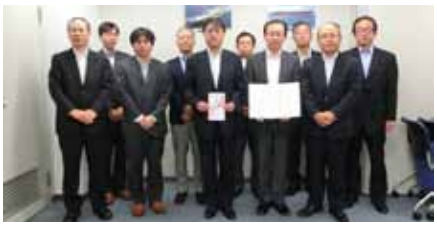
Introduction of a Safety Commendation System

In September 2011, we introduced a safety commendation system at operating sites directly run by the Company and domestic affiliated companies. Through this system, the president officially commends operating sites and companies that have continuously operated without an accident for a designated period, the length of the period being determined according to the number of personnel. In fiscal 2014, the following three entities received commendations:



Kurami Works

Ichinoseki Foil Manufacturing



Nippon Marine

Operating Sites That Have Obtained OHSAS 18001

Fiscal year certification was obtained	Operating sites
Fiscal 2006	Hibi Smelter, Pan Pacific Copper Co., Ltd. (including Tamano Smelter, Hibi Kyodo Smelting Co., Ltd., Sankin Hibi Harbor Transportation Co., Ltd.)
Fiscal 2008	Hitachi Works (including Technology Development Center, Hitachi Refinery of Pan Pacific Copper Co., Ltd., JX Nippon Environmental Services Co., Ltd., Hitachi Office of JX Nippon Foundry Co., Ltd.), Kurami Works (including JX Nippon Coil Center Co., Ltd., Kurami Office of JX Metals Trading Co., Ltd.), Saganoseki Smelter & Refinery of Pan Pacific Copper Co., Ltd. (including Japan Copper Casting Co., Ltd., Nissho Ko-un Co., Ltd., PPC Plant Saganoseki Co., Ltd.), Nikko Metals Taiwan Co., Ltd. (Bade Works)
Fiscal 2009	Isohara Works (including Isohara Administration Office of JX Nippon Foundry Co., Ltd.), Isohara Fabricating Works, JX Nippon Tomakomai Chemical Co., Ltd., JX Nippon Mikkaichi Recycle Co., Ltd., JX Nippon Tsuruga Recycle Co., Ltd., Gould Electronics GmbH
Fiscal 2010	Tatebayashi Works of JX Metals Precision Technology Co., Ltd.
Fiscal 2011	Esashi Works of JX Metals Precision Technology Co., Ltd.
Fiscal 2013	Nasu Works and Kakegawa Works of JX Metals Precision Technology Co., Ltd.
Fiscal 2014	Nikko Metals Taiwan Co., Ltd. (Longtan Works)

JX Safety Education Center

The JX Group opened the JX Safety Education Center in January 2013 in Hitachi City, Ibaraki Prefecture. The center was established as an educational facility for raising the risk sensitivity and safety awareness of employees in the JX Group and subcontractors. It is equipped to provide simulated experiences of the risks lurking in the workplace. The effects are maximized by means of a unique curriculum that has trainees use all five senses.

Role as an Educational Facility of the JX Group

To eliminate accidents, enhancing the risk sensitivity and safety awareness of individual employees is essential. Risk sensitivity means the ability to recognize risks as dangerous. Sharpening this ability leads employees to follow rules and keep away from dangers. The center attempts to raise risk sensitivity by providing trainees with simulated experiences of accidents that have actually occurred in the past, so that they can come to instinctively recognize the dangers. Around half of all accidents are recurrences of past incidents. For this reason, undergoing training at the center is a sure way to reduce the number of accidents that occur.

In fiscal 2014, the center enhanced its curriculum with regard to experiencing the dangers posed by heavy equipment, as well as fires and explosions, as accidents in these two areas are seen as significant risks at each of the JX Group sites and are likely to be serious. The center also actively takes in trainees from overseas operating sites, not only domestic sites. To date, trainees have come from affiliated companies in China, Taiwan, and Saudi Arabia, and they are putting their experiences to use in safety programs back in their home countries. Further efforts are being made to raise the quality of the education, by building a more effective curriculum, while improving the teaching skills of instructors.

Examples of Experiential Training at the Safety Education Center

❶ Experiencing the Dangers Posed by Heavy Equipment

Based on examples of past accidents, trainees experience the dangers when a forklift is moving (collisions due to blind spots, load shifting, slipping, etc.), when it is loaded and unloaded, and when it is inspected and maintained. As a result, they learn how to avoid risks from the respective standpoints of drivers, work assistants, and people walking in the vicinity. In another simulated accident where the impact of a runaway truck is experienced, they learn the importance of preventive measures and how to react in case of an accident.

Experiencing load shifting while driving a forklift on an uneven road

Experiencing blind spots from a forklift driver's seat

❷ Experiencing Fires and Explosions

Simulated accidents involving gasoline fires and explosions and spreading of tank fires let trainees experience how fires start due to the specific gravity of gasoline vapor being heavier than air, thereby demonstrating the scope of fire risks. Trainees also experience a hydrogen gas explosion caused by flow electrification of kerosene, learning about the risk of electrification due to friction, peeling, or water vapor emissions, along with the importance of preventing the buildup of charges by selecting equipment made of appropriate materials, neutralizing the electrical charge, or removing gases.

Gasoline fire

Experiencing how a tank fire spreads

Benefits of Training at the JX Safety Education Center and Strengthening of Supplementary Education at Operating Sites

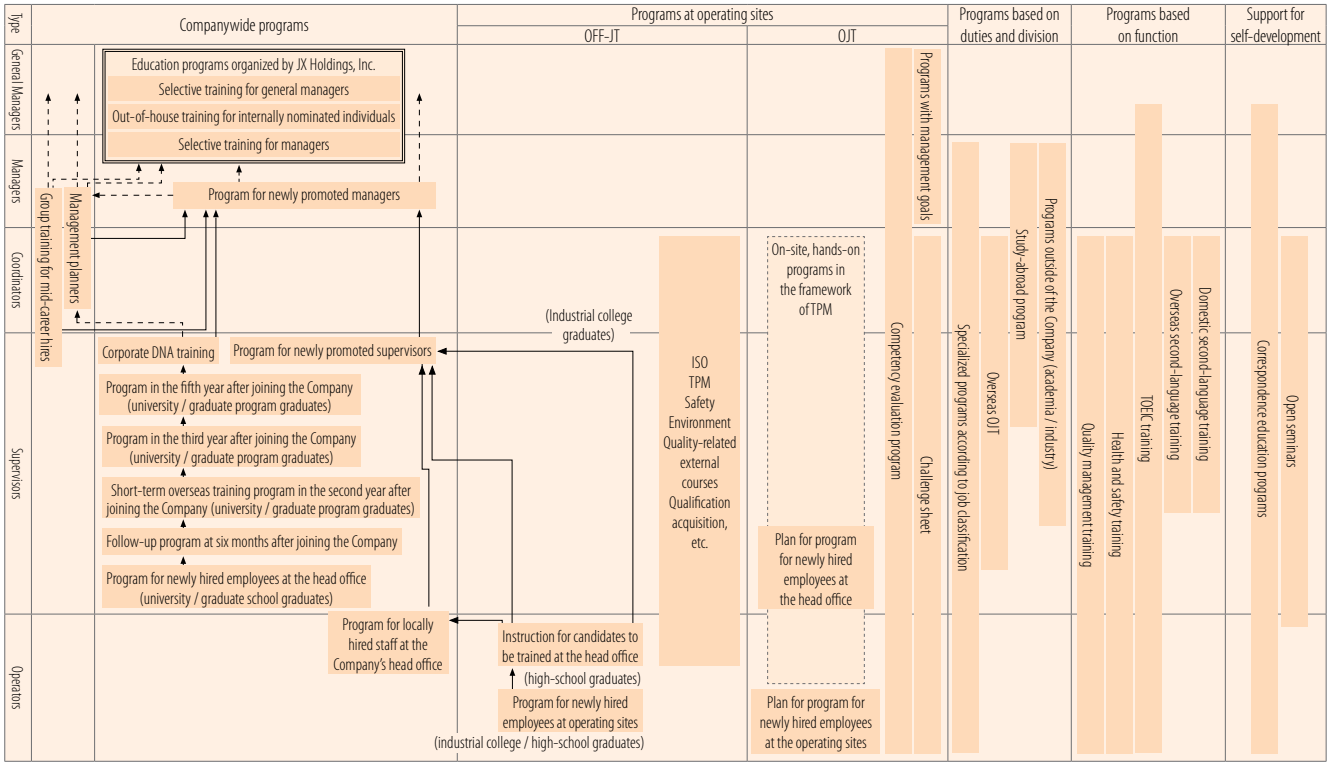
During the period of approximately two years from January 2013, when the center was established, to April 2015, the total number of trainees from the JX Nippon Mining & Metals Group reached 3,416, or 60% of those eligible (3,730 trainees in the JX Group as a whole). The accident rate per 1,000 employees for those who have undergone the training is around one-third that of those who have not, while the types of accidents covered by the curriculum have been declining in frequency, showing the clear benefits of this education. Due to the center's limited capacity to accommodate trainees, however, it currently takes three to four years to provide training to all employees and others working in the Group, including subcontractors. To prevent a drop in risk sensitivity during this time among those who have undergone training, a supplementary education system is being put in place, including the provision of simpler risk simulation facilities at each operating site and the education of more instructors.

Developing and Utilizing Human Resources

The JX Nippon Mining & Metals Group needs to develop and utilize the employees engaged in daily operations to raise the level of its CSR accomplishments through the process of conducting business. By creating personnel systems that value the diversity of employees working in various domestic and overseas locations, and by enhancing education programs, we are providing a foundation enabling employees to make the most of their abilities.

Education Programs for Human Resources Development

JX Nippon Mining & Metals actively carries out the development of employees, who are important stakeholders. Our education programs range from training for young employees who are graduates of university or graduate school in their first to fifth year of employment, to training aimed at imparting the knowledge and skills required for each position. We are also investing effort in developing global human resources; related initiatives include having employees study abroad and offering long-term language training in Japan. The scope of our education programs extends to encouraging participation in various types of training for self-development, including use of open seminars and correspondence courses.



Fiscal 2014 Human Resources Development Systems and Education Programs (JX Nippon Mining & Metals)

Enhancing Education Programs by Job Category

To build up the specialized skills requisite to professionals in carrying out their duties, we have developed job-specific education promotion systems headed by executives, involving specialized education programs developed and implemented for each job category.

Examples of education programs for facilities (mechanical, electrical, and civil) engineers

Employees—mainly graduates of university or graduate school in their first to fifth year of employment—are assembled from each plant for group training. Besides systematically raising their specialized expertise and creative abilities, the program aims to facilitate socializing of employees outside their workplaces.

- Off-the-job skills and technology training by job category

Mechanical engineers	Skills training (machinery assembly, pump handling, arc welding, tungsten inert gas welding, gas welding, drawings, hydraulic skills, and compressor handling) Structural design training (learning structural design basics; designing, building, and installing actual plant equipment; and reporting results at presentation session)
Electrical engineers	Skills training (electrical measurement, practical training in circuits, learning CPU basics, practical training in inverters, and learning about power substation protection systems) High-voltage electrical equipment training (learning how to decide overcurrent relay settings and learning about preventive maintenance of high-voltage electrical equipment)
Civil engineers	Basics of structural calculation, practice in creating construction plans, learning key points of construction work, and practice in construction management

- Plant education (common to mechanical, electrical, and civil engineers)

Trainees undergo on-the-job training by working in turn at multiple plants (Kurami Works, Hitachi Works, Isohara Works, and PPC's Saganoseki Smelter & Refinery) over a period of four years. They learn the maintenance methods unique to each plant, acquiring knowledge of each plant's diagnostic techniques while experiencing the differences in operations. As trainees learn about past equipment malfunctions at each plant, they also attempt troubleshooting based on their own knowledge and experience, benefiting from hands-on learning available only at the respective plants.

Content of Level-Specific Training at JX Nippon Mining & Metals

The first five years of employment after graduating from university or graduate school are treated as a period of systematic education, during which time level-specific training is carried out emphasizing the acquisition of specific business skills.

Education Programs Implemented in Fiscal 2014

Program for new employees	1 Understanding the current business conditions and management issues of the Company and its corporate social responsibility. 2 Acquiring basic skills requisite to a businessperson, including business manners, English conversation, financial accounting, team building, etc. 3 Developing a sense of cooperation and camaraderie among employees entering the Company at the same time.
Program at six months after joining the Company	1 Looking back on their lives as members of society after entering the Company and examining current issues. 2 Strengthening basic skills requisite to a businessperson, such as communication and presentation.
Program in the third year after joining the Company	1 Deepening understanding of the current business conditions and management issues of the Company. 2 Acquiring additional business skills, such as logical thinking. 3 Understanding role expectations and enhancing motivation.
Program in the fifth year after joining the Company	1 Cultivating autonomous problem-solving skills by having employees raise issues faced in actual work at training sessions in order to experience first-hand the problem-solving process and uncover issues for self-improvement to foster an ability to solve one's own problems. 2 Acquiring business skills necessary for problem solving, such as problem identification, problem resolution, project management, etc., as the final step in the educational programs for university-graduate employees.
Corporate DNA training	1 Deepening understanding of the Company's social responsibility in relation to operational management and its initiatives through a study tour of the Toyoha Mine, a representative example of these initiatives, and other activities. 2 Deepening understanding of the Company's corporate philosophy and its corporate DNA, and at the same time encouraging trainees to be proud employees of the Company by instilling an awareness of the place of their duties in this framework.

Training Programs Implemented in Fiscal 2014

(hours)

	Managerial staff			General employees			All staff and employees		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Total hours of programs (annual)	5,372	10	5,382	73,136	5,926	79,062	78,508	5,936	84,444
Per employee	12	10	12	39	30	38	34	30	33

Survey scope: JX Nippon Mining & Metals, JX Nippon Environmental Services, and Pan Pacific Copper (Saganoseki Smelter & Refinery, Hitachi Refinery)

Enhancing Education Programs for Global Readiness

The JX Nippon Mining & Metals Group has prepared various education programs for global readiness, aimed at developing human resources that can advance its global operations and making the Group as a whole more globally minded.

Overview of the Education Programs for Global Readiness at JX Nippon Mining & Metals

	Target employee group	Details
Second-year overseas training	All graduates of university or graduate school in their second year with the Company	Twelve weeks of study at overseas language schools, etc., matched to foreign language level (TOEIC score); university-level classes in Europe or North America or training in Chinese, Korean, or Spanish at overseas language schools.
Short-term study-abroad language program	Persons requiring a certain level of language competence for their work	Four to 12 weeks of study in English, Chinese, Korean, or Spanish at overseas language schools, etc.
Second-language training	Persons requiring a certain level of language competence for their work	Language training outside work hours for persons desiring to study Chinese, Korean, Spanish, or another language for self-development who have received approval from their manager (two-hour weekly classes, tuition paid by the Company).
In-company TOEIC training	Those interested (mandatory for graduates of university or graduate school up until their 10th year of employment)	TOEIC tests administered annually.
Global readiness education geared to job type	Individuals selected from each job type	Global readiness education programs prepared and instituted based on circumstances surrounding each job type.

VOICE Participant in Education Program for Global Readiness (Short-term study-abroad language program)

In the short-term study-abroad language program, employees who need a certain degree of language ability in their work are sent to an overseas language school or educational institution for four to twelve weeks of study.

Shingo Ikegami
Staff Member,
Sputtering Target Department,
Thin Film Materials Division
Electronic Materials Group

Study at the language school basically consisted of face-to-face lessons from 8:00 in the morning until 6:00 in the evening, taught by Philippine instructors. Perhaps because I was not used to speaking in English, initially I could do little more than use basic expressions; but as the days progressed, I was able to hold discussions on advanced topics with the instructor and other students, even if my English was not all that polished. Outside of the lessons, I carried on communicating in English when going out shopping and so on. Before I knew it, English was coming out naturally. I feel it was a hugely rewarding period of time. Not all the English I learned while on study abroad was immediately useful in business, but the experience overcame much of the distance I had felt from English and reduced my resistance to speaking the language. This was for me the biggest takeaway. My aim is to continue raising my level and in the future to make use of these skills in situations such as negotiations with overseas customers.

Personnel Systems

The Company has designed personnel evaluation systems, consisting mainly of Competency Evaluation, Performance Evaluation, and Self-Statement systems.

Creating Appropriate Personnel Evaluation Systems

The Company has introduced a Competency Evaluation System based on competency models and a Performance Evaluation System centered on the management of goals.

In Competency Evaluation, employees are interviewed by their supervisors based on competency items determined by the nature of their work and job position. The resulting assessment of whether they have the necessary competency is used for deciding promotions.

In Performance Evaluation, employees meet with their supervisors to discuss the extent to which they attained goals set at the beginning of the fiscal year, and the degree of challenge presented by the goals. Their performance is then evaluated, and the results of these evaluations are reflected in employee bonuses.

By implementing these personnel evaluation systems properly, we seek to improve fairness in the treatment of employees and the development of their abilities, so that employees themselves can better appreciate the benefits of the process.

Self-Statement System

A Self-Statement System was introduced to help the Company understand the aspirations of individual employees and reflect them in human resource development and elsewhere. Employees submit this statement on the specified form once a year, looking back on their work and indicating their ambitions along with any other personal matters they would like the Company to know about.

Initiatives Targeting Diversity

The Group values diversity in both human resources and work approach. In compliance with relevant laws and regulations in Japan and overseas, the Group is pursuing initiatives including the reemployment of workers aged 60 and older, and promotion of active participation in the workplace of women. By creating programs enabling employees to take leave for child rearing, elderly care, and international volunteering, we provide an environment that supports various work styles.

Creating Workplaces Where Women Can Play Significant Roles ☑

The Group strives to create workplaces that empower female employees to play active and significant roles.

As of March 31, 2015, a total of 1,089 female employees were working in the Group worldwide. Of these, approximately 20% occupy managerial positions (supervisor class and above). JX Nippon Mining & Metals employs 201 female employees (including part-time employees), of whom approximately 15% are in managerial roles. We ensure that all employees are treated equally, with no gender differences in base pay.

Work-Life Balance ☑

The Company believes that, for employees to be able to work energetically, work life needs to be complemented by a satisfying family life. In fiscal 2014, three employees started using the child-rearing leave program.

Use of child-rearing leave program in fiscal 2014

	No. of employees using program in fiscal 2014	No. of employees eligible to use program*	Usage rate (%)
Male	0	72	0
Female	3	3	100
Total	3	75	4

* For convenience, eligible employees are defined as employees with a child less than one year old.

Rate of return from child-rearing leave (percentage of employees who took leave and then returned to their jobs)

	No. of employees returning to work in fiscal 2014	No. of employees planning to return	Return rate (%)
Male	0	0	—
Female	2	2	100
Total	2	2	100

Retention rate after return from child-rearing leave (percentage of those still employed 12 months after return from leave)

	No. of employees returning to work in fiscal 2013	No. of employees still employed 12 months later	Retention rate (%)
Male	0	0	—
Female	4	4	100
Total	4	4	100

Employment of Persons Aged 60 and Older ☑

The main approach to employing persons aged 60 and older is a program for reemploying those who have retired. Those who are reemployed do not merely carry on their duties but make important contributions to business operations, primarily by passing on their technological know-how and skills to younger employees and by maintaining and improving safety and quality control.

Status of rehiring efforts (JX Nippon Mining & Metals)

(April 1, 2014, to March 31, 2015)

No. of age-limit retirees	No. of reemployed	Reemployment rate (%)
21	16	76%

Initiatives for Hiring Persons with Disabilities

The Company actively seeks to hire persons with disabilities, helping to expand their opportunities to participate in society. In fiscal 2014, those with disabilities accounted for 2.08% of the Company's employees, exceeding the 2.0% legal requirement.

Maintaining Good Labor-Management Relations ☑

Labor unions have been formed at nearly all Group companies in Japan.

At each Group company, good relations built on mutual trust are maintained between management and employees. At regular meetings between representatives of management and the labor union, management discloses details of the company's business, while at the Health and Safety Committee meetings, causes of accidents and incidents are analyzed thoroughly. Thus, labor unions play an important role as a partner with management, including by conveying information and gathering views within the organization. Recognizing health and safety as a particularly important theme to be confirmed between management and labor, 95% of Group companies with labor unions include matters relating to health and safety in their labor agreements.

When changes are made in the company organization or business activities, adequate time is given for preliminary explanations and discussions before conducting the necessary procedures in accordance with the labor agreement.

In fiscal 2014, there were no strikes or lockouts in the Group.

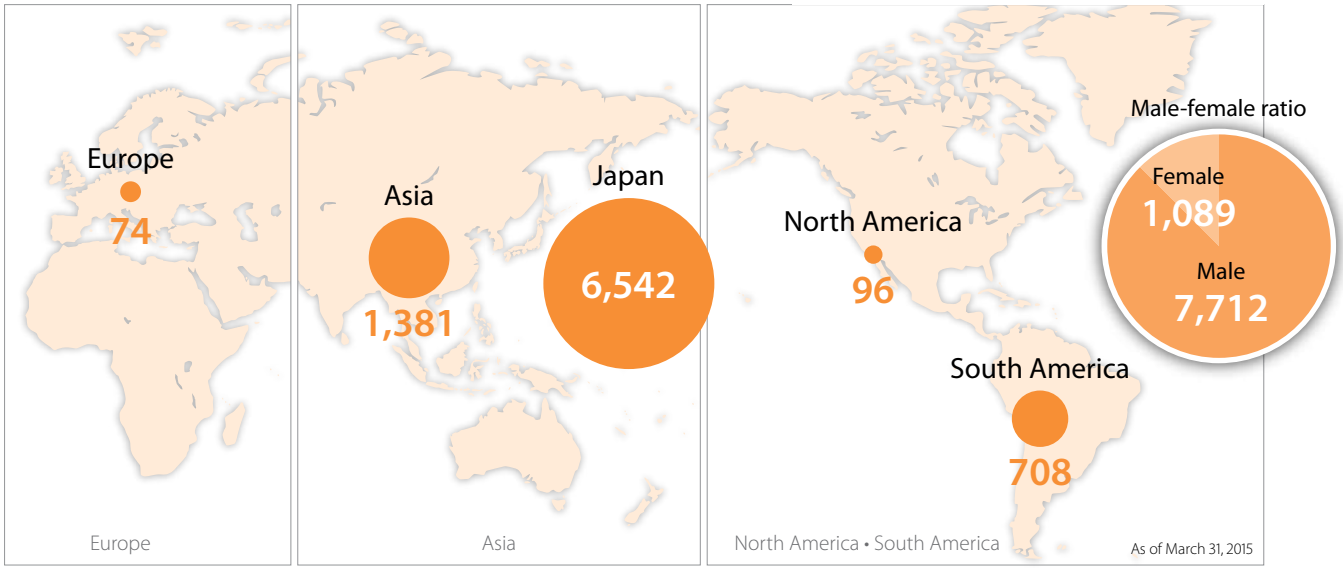
Membership in labor unions (as of March 31, 2015)

	Male	Female	Total
No. of union members	4,493	582	5,075
Membership rate	58%	53%	58%

Age 29 or younger	Age 30 to 49	Age 50 or older	Total
1,294	3,047	734	5,075
71%	62%	36%	58%

Employees Active in Japan and Overseas

Survey scope: Companies in which JX Nippon Mining & Metals has 50% or greater voting rights directly or indirectly



No. of employees (by employment status and employment contract type; as of March 31, 2015)

	Full-time			Part-time			Total	Temporary staff	Total workforce
	Open-ended contract	Fixed-term contract	Subtotal	Open-ended contract	Fixed-term contract	Subtotal			
Male	6,805	832	7,637	24	51	75	7,712	104	7,816
Female	848	190	1,038	13	38	51	1,089	66	1,155
Total	7,653	1,022	8,675	37	89	126	8,801	170	8,971

No. of employees (by region; as of March 31, 2015)

	Japan	North America	South America	Asia	Europe	Subtotal
Male	5,946	77	625	1,003	61	7,712
Female	596	19	83	378	13	1,089
Subtotal	6,542	96	708	1,381	74	8,801
Temporary staff	148	4	5	10	3	170
Total workforce	6,690	100	713	1,391	77	8,971

No. of employees (by employment category; as of March 31, 2015)

	Male	Female	Subtotal
Managerial	2,476	214	2,690
Non-managerial	5,236	875	6,111
Subtotal	7,712	1,089	8,801

	Age 29 or younger	Age 30 to 49	Age 50 or older	Total
Managerial	276	1,431	983	2,690
Non-managerial	1,548	3,515	1,048	6,111
Subtotal	1,824	4,946	2,031	8,801

	Japan	North America	South America	Asia	Europe	Subtotal
Managerial	1,961	26	297	389	17	2,690
Non-managerial	4,581	70	411	992	57	6,111
Subtotal	6,542	96	708	1,381	74	8,801

No. of locally hired managers at overseas operating sites (as of March 31, 2015)

Employees at overseas operating sites who are local citizens	2,114
Of whom are in managerial positions	145

No. of newly hired employees (April 1, 2014, to March 31, 2015)

	Male	Female	Subtotal
New hires	818	179	997
Percentage of total number employed as of March 31, 2015	11%	16%	11%

	Age 29 or younger	Age 30 to 49	Age 50 or older	Total
New hires	515	373	109	997
Percentage of total number employed as of March 31, 2015	28%	8%	5%	11%

	Japan	North America	South America	Asia	Europe	Subtotal
New hires	526	8	126	336	1	997
Percentage of total number employed as of March 31, 2015	8%	8%	18%	24%	1%	11%

No. of employees ending employment (April 1, 2014, to March 31, 2015)

	Male	Female	Subtotal
Departing employees	752	144	896
Percentage of total number employed as of March 31, 2015	10%	13%	10%

	Age 29 or younger	Age 30 to 49	Age 50 or older	Total
Departing employees	327	288	281	896
Percentage of total number employed as of March 31, 2015	18%	6%	14%	10%

	Japan	North America	South America	Asia	Europe	Subtotal
Departing employees	369	3	107	326	91	896
Percentage of total number employed as of March 31, 2015	6%	3%	15%	24%	123%*	10%

* Due to restructuring of the electro-deposited copper foil business resulting in the cessation of the business of Gould Electronics GmbH

Toho Titanium Wakamatsu Plant Welcomes Trainees from Saudi Arabia

Toho Titanium, looking to boost its future competitiveness in the titanium business, established a joint venture in Saudi Arabia for titanium sponge production and is currently building a new plant in that country. To boost the skills of the Saudi Arabian employees who will be responsible for operations at the plant, in April 2015 the company accepted and began training 23 persons at the Wakamatsu Plant (Kitakyushu City, Fukuoka Prefecture), its main facility in Japan for titanium sponge production. During the next two years until the first half of 2017, when the construction of the new plant is scheduled for completion, a total of 74 trainees will be accepted.

Building a Competitive New Plant in Saudi Arabia, Where Titanium Demand Is Expected to Grow

In December 2014, Toho Titanium concluded a joint venture agreement with the world's leading titanium dioxide manufacturer Cristal and other partners in Saudi Arabia for local production of titanium sponge. Construction of the new plant began in May 2015, and it is scheduled to start commercial production by the end of 2017.

Titanium has the superior properties of high strength, light weight, and corrosion resistance. Along with leading-edge uses in the aerospace industry, it has broad applications, including use in various industrial plants. Economic growth in the Middle East is spurring the construction of many electric power plants and desalination plants. Desalination plants make extensive use of titanium for pipes and other components because of its outstanding resistance to seawater corrosion. Demand from these plants is expected to increase further in coming years.

Since the titanium sponge from which titanium products are made is not produced in the region, Toho Titanium decided to partner with local firms for the construction of a new plant where advanced technology developed in Japan over many years can be put to use. The new plant will benefit from a steady supply of the raw material titanium tetrachloride from Cristal, and from the low cost of electricity in Saudi Arabia, which should give it a significant global advantage in terms of cost-competitiveness.

Training of Saudi Arabian Operators, a Key to Stable Operation

Operator training is regarded as one of the most important requirements for achieving stable operation of the new plant. It was therefore decided to conduct training sessions in Japan for the key Saudi Arabian employees who will be responsible for operations after the opening of the new plant.

The first group of 23 trainees arrived in Japan in March 2015. While English is the language of communication in the workplace, the trainees were given a month of Japanese-language lessons in Saudi Arabia and another month after arriving in Japan to help them adjust quickly to daily life during their stay. In April 2015, they began on-the-job training at the Wakamatsu Plant, on which the new plant will be modeled. A second group of 51 trainees will arrive in the fall of 2015, making a total of 74 persons expected to undergo training.

VOICE

Kyo Suzuki
Administrator,
Project Department,
Saudi Project Division
Toho Titanium Co., Ltd.

When operations begin, the new plant will start out with a staff of around 120 to 130, including 60 or so Japanese technical staff. By the time it goes into full operation, plans call for a staff of 200. Since we expect to eventually reduce the number of Japanese technical staff to around 10 persons, developing local human resources is an urgent need. There are still two years to go before the plant goes into operation, but we have already established a full-scale training program.

Because all the trainees coming to Japan are Muslims, we have taken steps to accommodate their religious requirements, by setting up prayer rooms in the plant and dormitory for example , and making sure to provide halal food that does not contain ingredients like pork and alcohol. We also provided education in advance to Japanese staff working at the Wakamatsu Plant on showing proper respect to Muslims, so that the trainees can be accommodated smoothly.

It is my hope that the trainees, while gaining experience available only in Japan, will also grow as human beings and play central roles in the new plant.

Meshel Obaid Alaofi
Project Department,
Saudi Project Division
Toho Titanium Co., Ltd.

My job is in the crushing process, the final step in making titanium sponge. My current goal is to master the visual observation of the processes and packing. Every morning, I take part in safety warm-up exercises at the plant with my fellow workers before heading to the work site. Besides increasing my knowledge of operations, I want to learn from the Japanese attention to time management and good teamwork. In private life, I notice the differences in climate and in food. Because Saudi Arabia has only summer and winter, I am glad for the opportunity to experience the four seasons of Japan.

Being able to train at the Wakamatsu Plant, a world leader in terms of both scale and equipment for titanium smelting and refining, is a highly valuable opportunity. I hope to put the knowledge and experience gained here to good use in the operation of the new plant.

Environment

The preservation of the earth's environment is a common challenge for all human beings, not just corporations. The JX Nippon Mining & Metals Group aims to contribute toward meeting this challenge by promoting effective use of copper and other nonferrous metals through technological innovation in each of its business segments. We seek to further reduce the environmental burden of our business pursuits as much as possible. Our Basic Environmental Policy goes beyond compliance with environmental protection regulations, calling for technology development in such areas as energy conservation, resource conservation, and environmental protection toward the prevention of global warming and reduction of waste materials. Our efforts in these areas are managed by setting numerical goals in the Medium-Term Action Plan.

Related Material Issues

- Protecting the environment
- Using resources effectively

Implementing Environmental Protection Initiatives

Basic Environmental Policy

As a global manufacturer of nonferrous metal resources and materials, the JX Nippon Mining & Metals Group is driving forward the following initiatives aimed at contributing to environmental conservation on a global scale through innovation in the productivity of resources and materials.

Numerical Data of the Environmental Activities Report

In some tables, summations of individual figures and figures in total columns differ due to rounding.

Voluntary Action Plan for Environmental Protection

Environmental management system

1. Environmental management organization

The general manager of the Environment & Safety Department is responsible for coordinating environmental efforts. Based on the conviction that personnel on-site should be responsible for ensuring environmental protection, the top managers at each operating site serve as supervisory environmental managers. At the same time, we will further invigorate the Environment Measures Committee and advance mutual understanding between labor and management in relation to environmental protection.

2. Environmental management system

Through Groupwide commitment, from top management to frontline employees, and through appropriate implementation of the ISO 14001-compliant environmental management systems, we will continuously strengthen environmental conservation measures and reduce environmental risks.

3. Environmental auditing

Supervisory environmental managers at each operating site will carry out reviews of the results of internal audits conducted at each operating site to verify the status of environmental management and of compliance with environmental regulations. Additionally, the Environment & Safety Department's environment and safety audit team will carry out periodic environmental audits of each operating site, research and identify problems as well as areas requiring remediation from an environmental management perspective, and continually strive to improve accident prevention and environmental conservation measures.

Measures to be taken

We will undertake the following measures to minimize the environmental impact of the Group's business activities:

- Help prevent global warming
- Promote resource efficiency and recycling
- Reduce waste materials
- Better manage chemical substances
- Maintain biodiversity
- Promote our recycling business
- Promote technology and product development and introduce new technologies
- Promote green purchasing
- Conduct training, public relations initiatives, and social activities to communicate our Autonomous Action Plan and raise awareness of our environmental protection measures

Environmental conservation at our overseas businesses

1. Environment-friendly operations in our overseas business activities

We will ensure an appropriate approach to environmental conservation at overseas operating sites by promoting a thorough understanding of the need to take into account our environmental impact and of the need to strictly observe environmental regulations.

2. Environment-friendly importing and exporting activities

In addition to adhering to the Basel Convention on waste materials, we will strive to ensure that our exporting and importing partners cause no harm in the area of environmental conservation.

Emergency response measures

1. Emergency response manuals and drills

Emergency reporting systems are in place at the Companywide, business group, and operating site levels, and we have revised and organized emergency response manuals from the perspective of minimizing the environmental impacts of accidents. In addition, emergency response drills are conducted on a regular basis.

2. Responses to environmental accidents

Should an environmental accident occur during business activities or due to a product defect, we will take steps to minimize the environmental impact of such an accident by acting in accordance with emergency response manuals and other provisions.

Numerical Goals of 3rd Medium-Term Action Plan (fiscal 2013 to 2015)

We have placed the prevention of global warming and the reduction of waste materials as key issues, and have set numerical goals related to these issues.

3rd Medium-Term Action Plan (Fiscal 2013 to 2015)

Goal items	Numerical goals for fiscal 2014	Performance in fiscal 2014	Overview
Energy consumption intensity[*1]	Achieve 1% year-on-year reduction at majority of operating sites	Achieved by 14 of 23 operating sites (Goal achieved)	The overall goal was achieved, as 14 of the 23 applicable operating sites met the goal by raising yield, improving equipment efficiency, and other means. We will continue efforts to improve equipment efficiency and enhance utility facilities in order to reduce energy consumption further.
Domestic CO_2 emissions[*2]	Cumulative emissions of less than 3.17 million tons for fiscal 2013 to 2015[*3]	1.67 million tons (Goal achieved)	By implementing energy-saving measures, our CO_2 emissions were 1.67 million tons, 0.47 million tons less than the 2.14-million-ton limit set for fiscal 2013 to 2014, achieving the goal. In fiscal 2015, we will continue aiming to achieve emissions levels below the acceptable limit.
Ratio of non-value-bearing waste volume[*4]	Maintain a ratio of less than 0.7%	0.6% (Goal achieved)	In fiscal 2014, by continuing to expand the separation of waste materials for reuse and thermal recovery, our ratio of non-value-bearing waste volume came to 0.6%, achieving the goal. In fiscal 2015, we will further work to reduce the volume of non-value-bearing waste.

Boundary

Domestic: The 3rd Medium-Term Action Plan covers the following operating sites, where energy use is at or above the level of Type 2 Designated Energy Management Factories under the Act on the Rational Use of Energy.
Hitachi Works (HMC Dept., Copper Foil Dept.); Isohara Works; Kurami Works; Pan Pacific Copper Co., Ltd. (Saganoseki Smelter & Refinery, Hitachi Refinery); Hibi Kyodo Smelting Co., Ltd. (Tamano Smelter); Japan Copper Casting Co., Ltd.; JX Nippon Environmental Services Co., Ltd.; JX Nippon Tomakomai Chemical Co., Ltd.; JX Nippon Mikkaichi Recycle Co., Ltd.; JX Nippon Tsuruga Recycle Co., Ltd.; JX Metals Precision Technology Co., Ltd. (Esashi Works, Tatebayashi Works, Kakegawa Works); Toho Titanium Co., Ltd. (head office/Chigasaki Plant, Yahata Plant, Wakamatsu Plant, Kurobe Plant)

Overseas (4 operating sites): Changzhou Jinyuan Copper Co., Ltd.; JX Nippon Mining & Metals Philippines, Inc.; Gould Electronics GmbH; Nippon Mining & Metals (Suzhou) Co., Ltd.

*1 Under the 2nd Medium-Term Action Plan (fiscal 2011 to 2012), energy consumption intensity was evaluated by using indexed intensities for all operating sites covered by the 2nd Plan. Under the 3rd Medium-Term Action Plan, intensities are evaluated on an individual operating site basis, and the Group's overall performance is evaluated based on whether or not a majority of operating sites achieves their energy consumption intensity goals.

*2 Under the 2nd Medium-Term Action Plan (fiscal 2011 to 2012), CO_2 emissions were evaluated by reducing energy consumption intensity for the entire Group including overseas operating sites. Under the 3rd Medium-Term Action Plan, we have limited the scope of evaluation to CO_2 emissions from domestic operating sites. This is because the 3rd Plan was formulated in view of the Japanese government's Fourth Basic Environment Plan, which aims for a 25% reduction in CO_2 emissions from fiscal 1990 levels by fiscal 2020.

*3 We are aiming to reduce CO_2 emissions from domestic operations in stages, starting with a 6% reduction from the fiscal 1990 level in fiscal 2012 and targeting a 25% reduction from the fiscal 1990 level by fiscal 2020. On this basis, we have set emission reduction goals during the three years of the 3rd Medium-Term Action Plan (fiscal 2013 to 2015). Emissions from fuel usage are calculated using the coefficients stipulated by the Act on Promotion of Global Warming Countermeasures. Emissions from electricity usage are calculated using the coefficient of 0.417 t-CO_2/MWh (the actual figure for fiscal 1990 as given in the Environmental Action Plan of the Federation of Electric Power Companies of Japan).

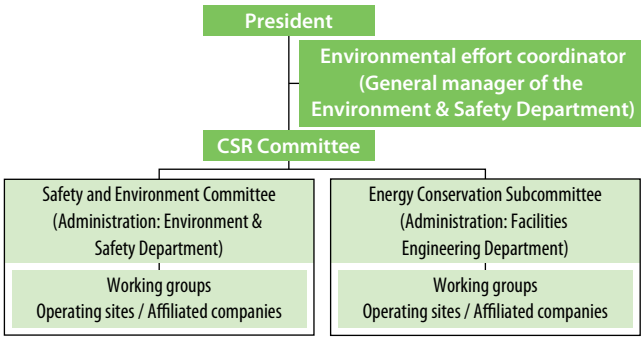
*4 Ratio of non-value-bearing waste volume = (Volume incinerated + Volume of final disposal) / Volume of waste and sellable materials generated.

Environmental Management System

The JX Nippon Mining & Metals Group has established an environmental management system in line with ISO 14001 standards for ensuring achievement of the Voluntary Action Plan for Environmental Protection, which was formulated based on the Basic Environmental Policy.

A multilevel organizational structure has been created, including various committees and subcommittees, in which everyone, from senior management headed by the president to employees at each operating site and at subsidiaries and affiliated companies, is working together to promote environmental conservation and avoid environmental risk.

Environmental Management System Overview



Compliance with Environmental Laws and Regulations

Through the effective operation of environmental management systems at each operating site and at subsidiaries and affiliated companies, the Group is ensuring compliance with environmental laws and regulations. The Head Office's Environment & Safety Department monitors and supervises the state of compliance and reports to the CSR Committee through the Safety and Environment Committee. The Group seeks to strengthen its compliance approach by such means as environmental manager meetings held each year to share information on legal and regulatory trends and to hear compliance status reports from each operating site.

Environmental Auditing

In addition to internal environmental audits at each operating site at least once a year, environmental audits are carried out periodically by the Head Office's Environment & Safety Department. Audits were conducted at 10 operating sites in fiscal 2014.

Environmental Education

The Group conducts periodic environmental education, training, and drills for each employee level at each operating site in order to spread awareness regarding the Basic Environmental Policy, the Voluntary Action Plan for Environmental Protection, and related laws and regulations.

Environmental Accidents

In fiscal 2014, the following environmental accidents occurred. In each case, however, necessary steps have been taken to address these accidents, and measures are in place to prevent their reoccurrence.

Date of occurrence	Operating site	Description
June 2014	Head office/Chigasaki Plant of Toho Titanium Co., Ltd.	Trouble with a chlorination furnace led to the release of hydrogen chloride from an exhaust vent exceeding ordinance limits.
October 2014	Head office/Chigasaki Plant of Toho Titanium Co., Ltd.	Due to a problem with exhaust gas equipment, hydrogen chloride exceeding the ordinance limits on concentration was detected at an exhaust vent.
December 2014	Isohara Works	Due to an error in the management of wastewater treatment equipment, BOD concentration of wastewater measured at the site exceeded ordinance limits.
March 2015	Changzhou Jinyuan Copper Co., Ltd.	Pipe leakage and other factors resulted in levels of wastewater above the domestic Chinese standard in rainwater runoff.

Environmental Assessment of Suppliers

The JX Nippon Mining & Metals Group promotes environmental conservation in the entire supply chain, including its suppliers. Based on the Group's Green Purchasing Guidelines, suppliers are asked to create an environmental management system to reduce their environmental impact. Green purchasing surveys are conducted periodically to confirm implementation by major suppliers. (See page 70 for details.)

Initiatives to Address Global Warming

Fundamental Policy

Global warming is causing changes in many aspects of the climate, from frequent abnormal weather to rising sea levels, and is having a major impact on ecosystems. Climate change is a threat not only to the business activities of the JX Nippon Mining & Metals Group but to the sustainable development of society as a whole, and therefore must be addressed effectively. The Group has defined long-term targets for reducing emissions of CO_2 and other greenhouse gases, which it is pursuing by promoting energy conservation and expanding the usage of renewable energy. As its long-term emission reduction target, the Group has adopted the goal of achieving a 25% reduction in CO_2 emissions from fiscal 1990 levels by fiscal 2020. This is the same as the target given in the Fourth Basic Environment Plan adopted by Cabinet decision in April 2012. Toward this end, our 3rd Medium-Term Action Plan (fiscal 2013 to 2015) defines the goals of decreasing energy consumption intensity by 1% each year, and keeping the three-year total for CO_2 emissions from domestic operations to below 3.17 million tons.

Activity Results in Fiscal 2014

* Results at the Caserones Copper Mine were added from the second half of fiscal 2014.

Energy Consumption and Energy Consumption Intensity in Manufacturing Activities

In fiscal 2014, the Group's overall energy consumption in terms of its calorific value was 24,562 TJ, compared with 19,760 TJ in fiscal 2013.*1 The addition of the Caserones Copper Mine in the second half of fiscal 2014 was the main factor for an increase of 4,802 TJ. Around one-half of the Group's total energy consumption in Japan is accounted for by energy consumed at smelters and refineries. The energy consumption intensity at the Group's smelters and refineries for fiscal 2014 decreased by 0.5 points year on year.

The Group is actively carrying out efficiency measures to reduce energy consumption. At the Saganoseki Smelter & Refinery of Pan Pacific Copper, consolidation of sulfuric acid processes reduced electric power usage by a total annual calorific value of 107 TJ, with no change in production volume.

The Tamano Smelter of Hibi Kyodo Smelting likewise reduced its electric power usage by 101 TJ according to the same measure by changing the type of coke used in the smelting process and through reducing pressure loss in the sulfuric acid processes. Further contributing to energy saving via improved current efficiency was the completion of a switchover to the permanent cathode (PC) method*2 in the electrorefining process.

At our overseas operating sites as well, we are taking steps to reduce energy consumption, such as installing pump-inverter control equipment and beginning phased replacement of conventional lighting with LED lamps. We continue to pursue additional energy conservation means and to recover waste heat by installing energy-efficient equipment.

*1 The Group uses coefficients in accordance with the Act on the Rational Use of Energy at both domestic and overseas operating sites.

A breakdown of energy consumption is shown below.

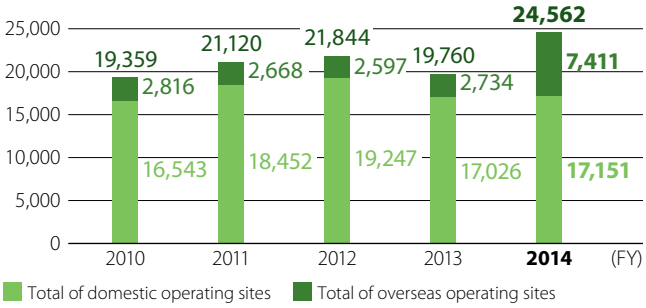
FY2014: Electricity (indirect): Domestic 13,318 TJ Overseas 5,390 TJ
Fuel (direct): Domestic 3,833 TJ Overseas 2,021 TJ

TJ: 10^{12} J

*2 One method of electrolytic copper refining. Using stainless steel plates as the cathode, it can produce refined copper more efficiently and of higher quality than conventional methods. The method is called "permanent" because the stainless steel plates can be reused.

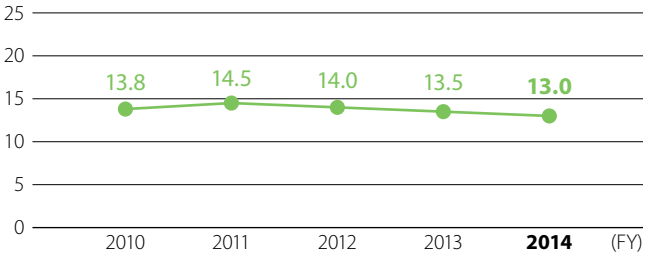
Energy Consumption (Fuel + Electricity)

(calorific value in TJ)



Energy Consumption Intensity at Smelters and Refineries (Fuel + Electricity)

(GJ per ton of refined copper produced)



Breakdown by Fuel Type

	Domestic	Overseas
Kerosene (kl)	2,214	0
Light oil (kl)	2,536	27,544
Class A heavy oil (kl)	11,125	1,089
Class B heavy oil (kl)	13,297	0
Class C heavy oil (kl)	26,882	9,368
LPG/butane (t)	5,890	8
LNG (t)	5,664	0
Coke (t)	9,312	0
City gas (1,000 m^3)	11,714	12,573

CO_2 Emissions from Energy Consumption for Manufacturing Activities*1

In fiscal 2014, the Group's total CO_2 emissions from energy consumption in Japan and overseas were 1,501 thousand tons of CO_2.*2 A rise in energy consumption compared with fiscal 2013 caused CO_2 emissions from energy consumption to rise as well, and was the result of adding the Caserones Copper Mine to the totals from the second half of fiscal 2014.

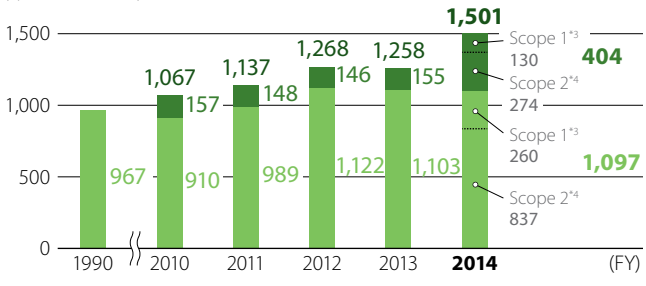
Around one-half of the Group's total energy consumption is accounted for by energy consumed at smelters and refineries. Through the consolidation of facilities and improved production efficiency, the Group reduced CO_2 emission intensity at these sites to 0.90 in fiscal 2014, down approximately 30% from 1.34 in fiscal 1990.

*1 Emissions are calculated using emission coefficients in accordance with the Act on Promotion of Global Warming Countermeasures. Coefficients that individual power companies made public and statistical data released by the International Energy Agency (IEA) are used to calculate amounts of emissions from electricity consumption at domestic and overseas operating sites, respectively. In addition to the CO_2 emissions from energy consumption regulated under the above act, the Company includes in its calculations CO_2 emissions from burning fuel that was used as a reducing agent (with the exception of those emissions from titanium operations), which are outside the scope of the above act.

*2 The CO_2 emission coefficient for Tokyo Electric Power Company, Inc., in fiscal 2013 announced by the Ministry of the Environment was revised at the end of July 2015, but this report has adopted the previous figure of 0.000530 t-CO_2/kWh.

CO_2 Emissions from Energy Consumption

(1,000 tons of CO_2)

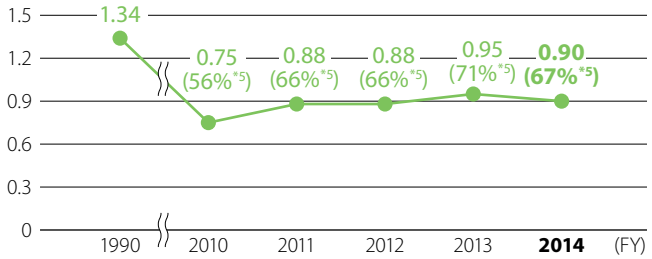


*3 The amount of fuel consumed is converted to equivalent CO_2.

*4 The amount of electricity consumed is converted to equivalent CO_2.

CO_2 Emission Intensity at Smelters and Refineries ☑

(tons of CO_2 per ton of refined copper produced)



*5 Compared with fiscal 1990

CO_2 Emissions Other Than from Energy Consumption, and Other Greenhouse Gas Emissions from Manufacturing Activities* ☑

In the Group, operating sites in the recycling and environmental services business submit reports on the emissions of CO_2 from sources other than energy consumption as well as the emissions of other greenhouse gases. In fiscal 2013, such emissions totaled approximately 67 thousand tons of CO_2. In fiscal 2014, we reduced this amount by approximately 15%, to around 56 thousand tons of CO_2 (approximately 53 thousand tons of CO_2 from sources other than energy consumption and 3 thousand tons of CO_2 equivalent of N_2O).

* Emissions are calculated using emission coefficients in accordance with the Act on Promotion of Global Warming Countermeasures. CO_2 emissions other than from energy consumption resulted from the treatment of waste oil, waste plastic, and waste rubber tires. N_2O was added to the other greenhouse gases requiring notification. It was emitted in the treatment of sludge, waste oil, waste plastic, and waste rubber tires, as well as in fuel consumption.

Energy Consumption and CO_2 Emissions in the Logistics Stage ☑

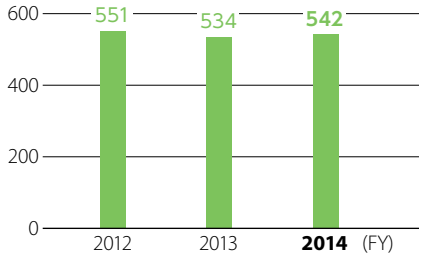
In fiscal 2014, energy consumption in the logistics stage of applicable Group companies in Japan*1 was 542 TJ and CO_2 emissions were 38.1 thousand tons, compared with 534 TJ and 37.6 thousand tons, respectively, in fiscal 2013.

The Group operates two multipurpose carrier ships, the *Mar Camino* and the *Koryu*, which transport sulfuric acid from Japan to the west coast of South America, and on the return trip transport copper concentrate to Japan. Energy consumption of the two ships in fiscal 2014 was 12,377 tons of marine fuel oil and 1,026 tons of marine diesel oil. With the commissioning of the *Koryu* in December 2013, CO_2 emissions rose 16%, from 36.0 thousand tons recorded in the previous year to 41.8 thousand tons.

The Group will continue to make efforts to reduce logistics-related energy consumption and CO_2 emissions, not only by improving loading ratios and enlarging lot sizes but by adopting additional innovative methods, such as using multipurpose carrier ships for optimizing transport methods.

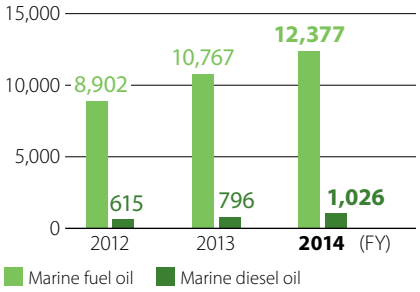
Energy Consumption: Domestic*1

(calorific value in TJ)



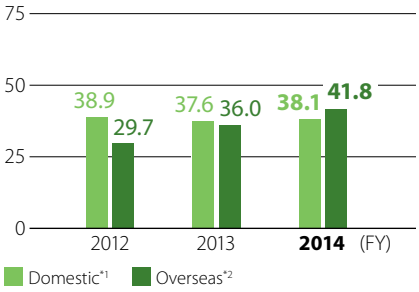
Energy Consumption: Overseas*2

(tons)



CO_2 Emissions

(1,000 tons of CO_2)



*1 Two Group companies—Kasuga Mines and Pan Pacific Copper—are specified consigners as defined by the Act on the Rational Use of Energy.

*2 These are the actual values (Jan.-Dec.) for the two ships *Koryu* and *Mar Camino* operated by Nippon Marine. CO_2 emissions are calculated using coefficients announced by the International Maritime Organization (IMO).

Expansion of Renewable Energy Usage

The Group has engaged in hydroelectric power generation since 1907, during the Hitachi Mine era to which JX Nippon Mining & Metals traces its history.

Today, we carry out power generation operations at the Kakinosawa Power Plant, in Iwaki, Fukushima Prefecture, and sell the power generated to specified-scale electricity utilities. From October 2014 to June 2015, the electric power generation capacity of the Kakinosawa Power Plant was increased by upgrading the waterwheels and the generator and power substation equipment to enable more effective use of valuable water resources.

A photovoltaic power generation facility with a capacity of 240 kW went into operation in April 2013 at the Kakegawa Works of JX Metals Precision Technology. Photovoltaic power generation was also carried out at the Hibi Smelter of Pan Pacific Copper.

Renewable Power Generation in Fiscal 2014

Site	Total generated power	Total volume of electricity sales
Kakinosawa Power Plant	16,053 thousand kWh	15,869 thousand kWh
Kakegawa Works photovoltaic power generation facility	704 thousand kWh	683 thousand kWh

Initiatives for Effective Resource Use and Waste Reduction

Fundamental Policy

Effective use of finite natural resources is required for the sustainable development of society.

The JX Nippon Mining & Metals Group is committed to helping prevent the depletion of natural resources and to protecting the environment. We therefore endeavor to make effective use of water resources, to use recycled resources as raw materials, to utilize by-products, and to reduce the final disposal volume of wastes by recycling them. In our recycling and environmental services business, we are leveraging the sophisticated technologies we have accumulated through our resources development and smelting/refining operations to detoxify waste materials and recover valuable metals from these materials, helping to realize a recycling-oriented, zero-emission society.

Activity Results in Fiscal 2014

* Results at the Caserones Copper Mine were added from the second half of fiscal 2014.

Effective Use of Water Resources ☑

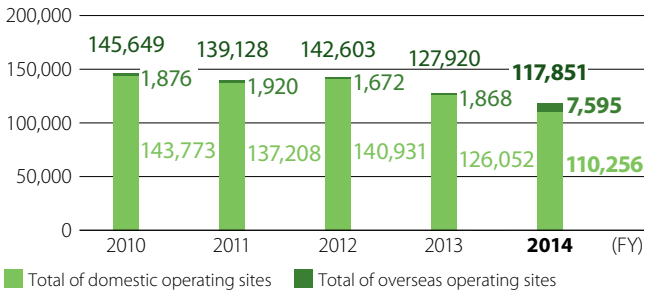
The Group's water usage in fiscal 2014 amounted to 117,851 thousand m³, of which 76% was seawater. The volume of water discharged was 152,650 thousand m³, of which 89% was discharged into the sea.

Water usage at domestic sites declined substantially after some smelting and refining facilities that were using seawater for cooling switched to use of recycled water in the latter half of fiscal 2013. Water use in fiscal 2014 was thus around 22% below fiscal 2012 levels. Water usage intensity at operating sites engaged in smelting and refining, which account for 86% of total water usage, dropped by 32m³ per ton of refined copper produced year on year. Due mainly to the addition of Caserones Copper Mine data to the totals from the second half of fiscal 2014, water usage overseas increased approximately fourfold.

The volume of water discharged declined, on the other hand, with a decrease of about 10m³ per ton of refined copper produced in water discharge intensity, due in part to increased rainfall.

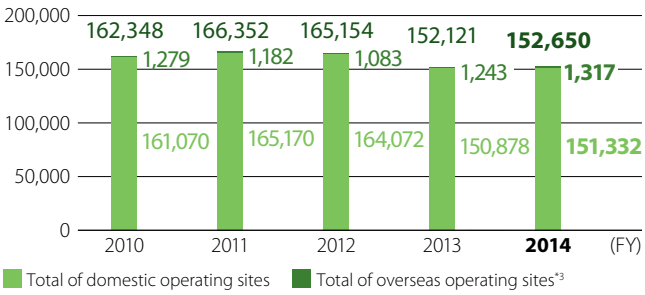
Water Usage*1

(1,000 m³)



Discharge Volumes*2

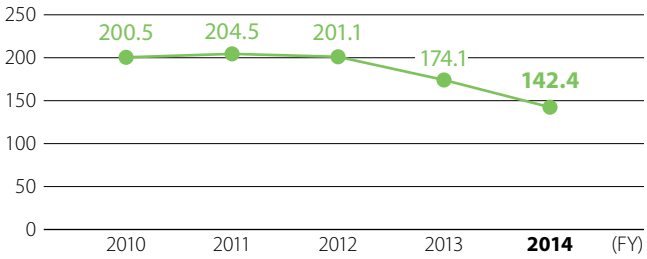
(1,000 m³)



*3 Totals for overseas sites reflect retroactive revisions to data from past years to correct for errors in reporting discharged volume at some operating sites.

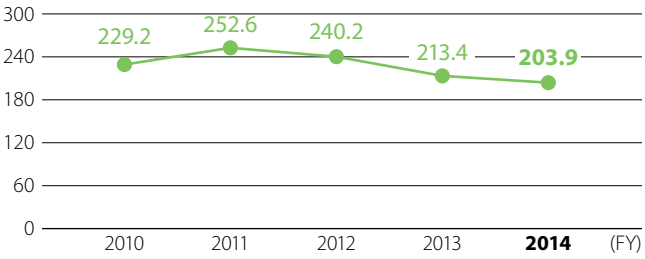
Water Usage Intensity at Smelters and Refineries

(m³ per ton of refined copper produced)



Discharge Intensity at Smelters and Refineries

(m³ per ton of refined copper produced)



Water Usage*1

	Unit	Fiscal 2013	Fiscal 2014
Total water usage volume	Thousand m³	127,920	117,851
Seawater	Thousand m³	105,330	89,584
Groundwater/industrial water	Thousand m³	20,479	26,143
Tap water	Thousand m³	2,022	2,050
Rainwater	Thousand m³	88	73

*1 Seawater usage at the Saganoseki Smelter & Refinery of Pan Pacific Copper is calculated based on pumping capacity. Groundwater usage at JX Nippon Mikkaichi Recycle is calculated by multiplying water discharge volume by a fixed rate. Freshwater usage at the Saganoseki Smelter & Refinery of Pan Pacific Copper, and water usage at the other operating sites, are based on flowmeter readings or on invoices from the water company.

Discharge Volumes*2

	Unit	Fiscal 2013	Fiscal 2014
Total discharge volume	Thousand m³	152,121	152,650
Oceans	Thousand m³	135,583	135,798
Rivers	Thousand m³	15,767	16,097
Sewage system	Thousand m³	771	755

*2 The volume of water discharged into public waters (oceans and rivers) is calculated based on drainage weirs of the Hitachi Works, Isohara Works, Saganoseki Smelter & Refinery of Pan Pacific Copper, JX Nippon Tomakomai Chemical, and JX Nippon Mikkaichi Recycle. Water discharge volume at the Kurami Works and at the Chigasaki Plant of Toho Titanium is calculated by multiplying groundwater usage by a fixed rate.

That for the Yahata Plant of Toho Titanium is a quantitative value. The volume of water discharged into public waters by other operating sites is based on flowmeter readings. The volume of water discharged into the sewage system in the case of Changzhou Jinyuan Copper is as measured by a water treatment company. The figures for other operating sites are based on flowmeter readings or on invoices from the sewage company.

Usage of Recycled Resources as Raw Materials

The ores and other natural resources extracted from the natural environment are finite and must be preserved for future generations. The Group is expanding usage of recycled resources as raw materials. In fiscal 2014, the Group's total material input was 2,896 thousand tons. Of this amount, recycled resources accounted for 271 thousand tons, or approximately 9.4% of the total material input.

Material Input

	Unit	Fiscal 2013	Percentage of total material input (%)	Fiscal 2014	Percentage of total material input (%)
Total input volume	Thousand tons	2,843	–	2,896	–
Primary raw materials*1	Thousand tons	2,602	91.5	2,625	90.6
Recycled raw materials	Thousand tons	240	8.5	271	9.4

* Of the copper concentrate produced at the Caserones Copper Mine, the volume input into the Group's smelters and refineries is not included.

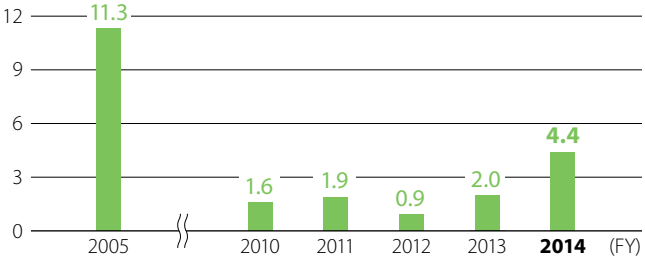
Reuse and Reduction of Waste

The total volume of waste materials the Group generated in fiscal 2014 was 384 thousand tons, of which 82%, or 315 thousand tons (total), was reused within the Group. As a result, the total volume of final waste discharge, including sales of value-bearing waste, was approximately 68 thousand tons. The volume of final disposal,*1 excluding the volume recycled externally or otherwise used, was approximately 4.4 thousand tons in fiscal 2014. This was more than double the volume in the previous fiscal year, the main factor in the increase being the addition of data for the Caserones Copper Mine to the totals. To achieve future reductions in waste discharge volume, we will continue to make repeated reuse of all neutralized slag generated at smelters and refineries. We are also seeking to expand uses for waste materials at all operating sites, including those manufacturing electronic materials, through proper waste separation.

*1 The volume of final disposal is defined as the volume of materials disposed of in landfills directly by the Group, as well as those materials for which the purpose of external discharge could not be clearly identified as either recycling, heat recovery, or incineration.

Volume of Final Disposal*2

(1,000 tons)



*2 These figures do not include the amount disposed in offshore landfills by Toho Titanium, or slag from the Caserones Copper Mine.

Total Volume of Waste Materials Generated

	Unit	Fiscal 2013	Fiscal 2014
Total volume of waste materials generated	Thousand tons	360	384
Volume recycled within the Group	Thousand tons	299	315
Total volume of waste materials discharged	Thousand tons	60.3	68.4
Recycling (sales of value-bearing waste)	Thousand tons	30.6	34.7
Recycling (waste)*3	Thousand tons	25.9	27.1
Heat recovery*3	Thousand tons	1.4	1.4
Incineration*3	Thousand tons	0.4	0.8
Final disposal*3	Thousand tons	2.0	4.4

Discharge Volume by Type of Waste

	Unit	Fiscal 2013	Fiscal 2014
Total discharge volume*4	Thousand tons	29.7	33.7
Sludge	Thousand tons	20.5	18.8
Cinder	Thousand tons	2.5	3.3
Waste acid/waste alkaline	Thousand tons	1.5	2.8
Slag	Thousand tons	0.7	1.8
Waste plastic	Thousand tons	1.0	1.7
Waste oil	Thousand tons	0.9	1.4
Other	Thousand tons	2.6	3.9

*4 Total discharge volume in this table is the total of items marked with "*3" in the "Total Volume of Waste Materials Generated" table in the column to the left.

Use of By-Products

In fiscal 2014, the Group produced 3,605 thousand tons of by-products. The breakdown is shown in the table below. Slag*1 is utilized as sandblasting materials,*2 cement materials, caisson fillers,*3 or aggregates for wave-dissipating blocks. Iron concentrate and gypsum are used in cement.

*1 Waste left over after smelting the desired metal from ore. In the case of copper smelting, the slag is iron silicate, which is used as a raw material for making cement.

*2 A polishing/grinding material. It is blasted by compressed air, etc., at an object as an abrasive to grind its surface. Some of the slag produced at copper smelters is used as a sandblasting material to remove rust from ship hulls.

*3 A caisson is a hollow concrete container used when building an underwater structure such as a breakwater. A caisson filler is material poured into a caisson to prevent it from floating to the surface by buoyancy.

By-Product Production

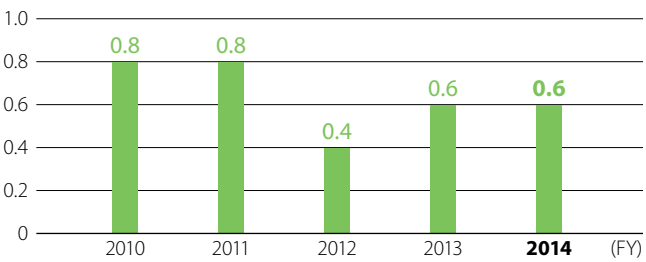
	Unit	Fiscal 2013	Percentage of total production (%)	Fiscal 2014	Percentage of total production (%)
Total production volume	Thousand tons	3,435	–	3,605	–
Sulfuric acid	Thousand tons	1,676	49	1,744	48
Slag	Thousand tons	1,253	36	1,318	37
Gypsum	Thousand tons	347	10	380	11
Iron concentrate	Thousand tons	160	5	162	5

Initiatives to Reduce Waste from Manufacturing Activities

The Group sets and works to meet goals for the non-value-bearing waste ratio, which accounts for the combined volume of waste for final disposal as well as incinerated waste that is not reused as recycled material. The 3rd Medium-Term Action Plan calls for keeping this ratio to less than 0.7%. In fiscal 2014, the ratio was 0.6%, achieving the goal. We will seek to keep meeting the goals by improving product yield rates and resource recovery rates and by properly separating waste to increase the amounts that are recycled.

Ratio of Non-Value-Bearing Waste Volume

(%)



* In the 3rd Medium-Term Action Plan, data on the ratio of non-value-bearing waste volume is collected for the Group operating sites listed on page 51, where energy use is at or above the level of Type 2 Designated Energy Management Factories.

Environmental Risk Management

Fundamental Policy

Air and water systems are basic media affecting human health and living environments. In carrying out our business operations, the JX Nippon Mining & Metals Group gives top priority to protecting the environment relating to these two systems. In addition to abiding by all relevant laws, regulations, and agreements to reduce environmental impact, we have developed our own voluntary standards to monitor compliance with air and water area restrictions. We also implement the PDCA cycle to reduce environmental risks.

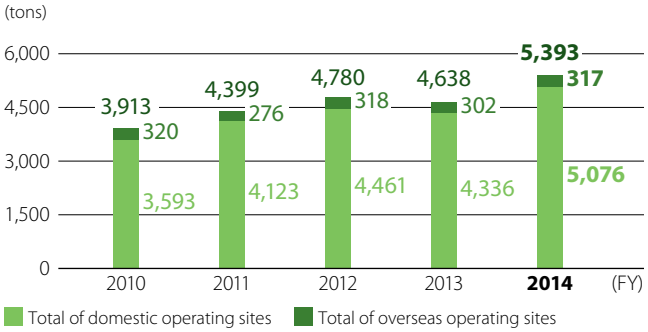
Activity Results in Fiscal 2014

* Results at the Caserones Copper Mine were added from the second half of fiscal 2014.

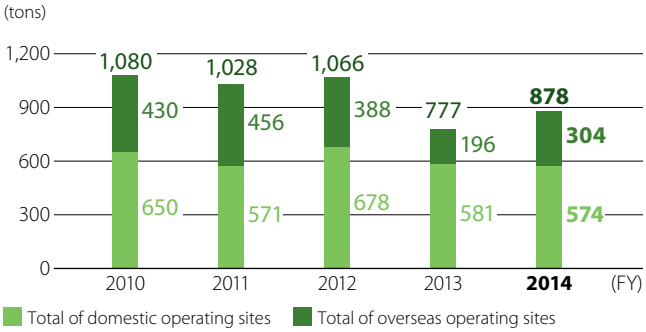
Preventing Air Pollution

The Group monitors waste gas emissions at all operating sites in compliance with laws and regulations, ordinances, agreements, and voluntary standards. In fiscal 2014, emissions of both sulfur oxides (SOx) and nitrogen oxides (NOx) increased from fiscal 2013. The year-on-year increase for SOx was 755 tons. The main factors were increased production of refined copper at domestic smelting and refining facilities, and a lower rate of desulfurization in sulfuric acid processes due to equipment trouble and other factors. As sulfur content has increased in copper concentrate, the main raw material for smelting and refining, more sulfur needs to be converted into sulfuric acid. However, we are continuing to take various initiatives to reduce SOx emissions, and aim to maintain stable operations by improving sulfur conversion rates while introducing environmentally friendly facilities. NOx increased year on year by 101 tons, the main factor being the addition of the Caserones Copper Mine to emission totals in the second half of fiscal 2014.

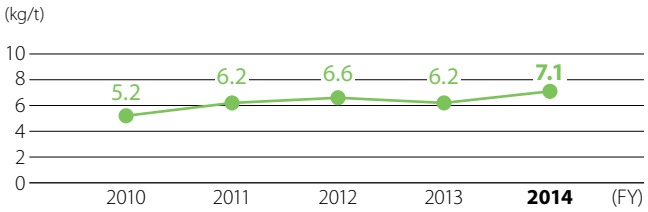
SOx Emissions Volume



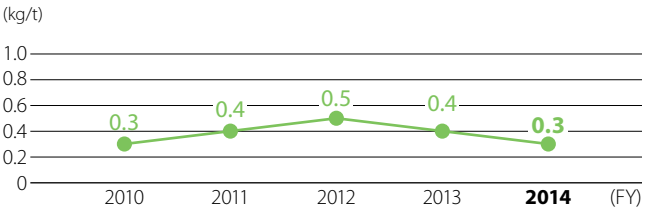
NOx Emissions Volume



SOx Emission Intensity at Smelters and Refineries (kg of SOx emissions per ton of refined copper produced)



NOx Emission Intensity at Smelters and Refineries (kg of NOx emissions per ton of refined copper produced)



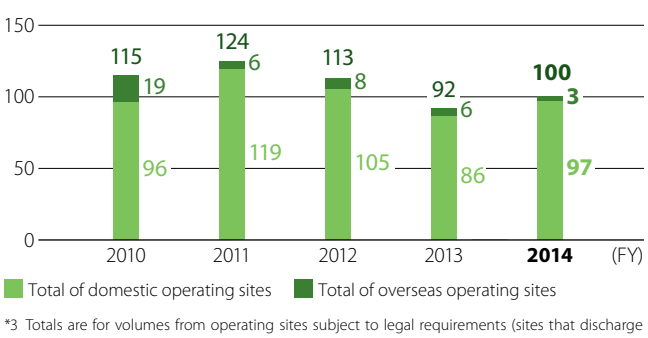
Preventing Water Pollution

The Group monitors water discharge at all operating sites in compliance with laws and regulations, ordinances, agreements, and voluntary standards. The COD*1 and BOD*2 levels are shown below.

*1 Chemical oxygen demand: An index of water quality according to the amount of oxygen needed to oxidize substances in water. This is a representative indicator for measuring contamination by organic substances in oceans and lakes.

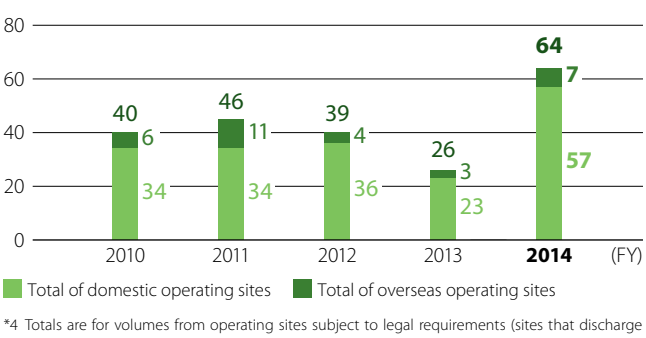
*2 Biochemical oxygen demand: An index of the amount of oxygen needed for organic matter in water to be broken down by microorganisms. This is a representative indicator for measuring contamination by organic substances in rivers and streams.

COD*3



*3 Totals are for volumes from operating sites subject to legal requirements (sites that discharge wastewater into the ocean or lakes for domestic operating sites).

BOD*4



*4 Totals are for volumes from operating sites subject to legal requirements (sites that discharge wastewater into rivers or streams for domestic operating sites).

Chemical Management

The Group strictly adheres to the Act on Confirmation, Etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act). Also, as part of our environmental management activities, we are working to reduce our environmental impact by setting targets for decreasing the release and transfer volumes of specified chemical substances at each operating site. To provide easy-to-understand information regarding the characteristics of chemical substances used and their handling, we apply the GHS classification*1 in compiling safety data sheets (SDS).*2

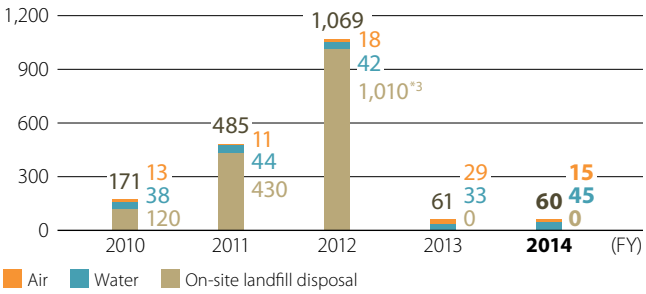
Regarding the Group's total release and transfer volumes of chemical substances to be reported in compliance with the PRTR Act, the release volume in fiscal 2014 decreased by 1 ton from the previous fiscal year. Transfer volume decreased by approximately 132 tons. This decrease was achieved by recycling waste solvent into value-bearing resources and by recycling and making effective use of collected dust, among other means.

*1 Globally Harmonized System of Classification and Labeling of Chemicals: A system that classifies chemicals by the type and level of hazard and promotes the clear presentation of this information on product labels and safety data sheets.

*2 Safety data sheet: A data sheet provided by chemicals suppliers to users giving information about the properties of the substance, with the aim of protecting the safety and health of users handling chemical substances.

Volume of Release/Transfer

Breakdown of Release Volumes



*3 Neutralized sludge generated after the Motoyama acid mine drainage treatment facility went into full operation in fiscal 2012 at the Toyoha Mine. After the smooth operation of the plant reduced the labor requirements of this facility, the Toyoha Mine was removed from PRTR Act applicability in fiscal 2013.

JX Nippon Mining & Metals Group PRTR Substances in Fiscal 2014

(tons)

No.	Material number	Chemical substances	Total release volume			Total transfer volume	
			Air	Water	On-site landfill disposal	Waste	Sewage system
1	1	Zinc compounds (water soluble)	0.1	5.1	0.0	0.0	0.0
2	31	Antimony and its compounds	0.1	1.2	0.0	6.2	0.0
3	44	Indium and its compounds	0.0	0.0	0.0	0.5	0.0
4	48	O-ethyl O-4-nitrophenyl phenylphosphonothioate (EPN)	0.0	0.4	0.0	0.0	0.0
5	71	Ferric chloride	0.0	0.2	0.0	0.0	0.0
6	75	Cadmium and its compounds	0.1	0.2	0.0	89	0.0
7	80	Xylene	0.1	0.0	0.0	0.0	0.0
8	82	Silver and its water-soluble compounds	0.1	0.5	0.0	0.0	0.0
9	87	Chromium and chromium (III) compounds	0.0	0.1	0.0	0.0	0.0
10	132	Cobalt and its compounds	0.0	0.2	0.0	18	0.0
11	144	Inorganic cyanide compounds (except complex salts and cyanates)	0.6	0.3	0.0	0.0	0.0
12	150	1,4-dioxane	0.0	0.2	0.0	0.0	0.0
13	158	1,1-dichloroethylene (vinylidene chloride)	0.0	0.2	0.0	0.0	0.0
14	159	cis-1,2-dichloroethylene	0.0	0.1	0.0	0.0	0.0
15	242	Selenium and its compounds	0.0	1.1	0.0	0.0	0.0
16	272	Copper salts (water soluble, except complex salts)	0.3	6.1	0.0	1.1	0.0
17	279	1,1,1-trichloroethane	0.0	0.7	0.0	0.0	0.0
18	296	1,2,4-trimethylbenzene (pseudocumene)	0.1	0.0	0.0	0.0	0.0
19	300	Toluene	0.9	0.0	0.0	196	0.0
20	305	Lead compounds	0.6	0.4	0.0	18	0.0
21	308	Nickel	0.0	0.0	0.0	0.0	0.2
22	309	Nickel compounds	0.1	1.2	0.0	11	0.1
23	332	Arsenic and its inorganic compounds	0.5	1.4	0.0	25	0.0
24	354	Di-n-butyl phthalate	0.0	0.0	0.0	0.5	0.0
25	374	Hydrogen fluoride and its water-soluble salts	0.0	10	0.0	2.5	0.0
26	384	1-bromopropane	11	0.0	0.0	0.0	0.0
27	405	Boron compounds	0.0	11	0.0	5.8	0.0
28	412	Manganese and its compounds	0.0	3.4	0.0	22	0.0
29	438	Methylnaphthalene	0.7	0.0	0.0	0.0	0.0

(g-TEQ)

30	243	Dioxins	0.11	0.007	0.0	3.6	0.0

* The number of chemical substances subject to reporting is 54.

* Except for dioxins, all figures are for totals of substances of 0.10 ton or more.

* There were no cases of chemical substances discharged into the soil.

Detoxification of PCB-Containing Equipment, Etc.

The JX Nippon Mining & Metals Group carries out systematic disposal of equipment containing high levels of polychlorinated biphenyls (PCBs) using the services of Japan Environmental Storage and Safety Corporation.* By fiscal 2014, disposal by the Saganoseki Smelter & Refinery and other sites had been completed.

We also began detoxifying equipment containing low levels of PCBs by entrusting a private-sector certified facility starting in fiscal 2012. In March 2014, Group company JX Nippon Tomakomai Chemical received certification from the Minister of the Environment to provide a low-concentration PCB waste treatment service and began detoxification of Group equipment containing low levels of PCBs. (See page 35 for details.)

* Japan Environmental Storage and Safety Corporation (JESCO) is a special company wholly owned by the Japanese government. It was first established as the Japan Environmental Safety Corporation to carry on the PCB waste disposal program formerly conducted by Japan Environment Corporation. In December 2014, the Japan Environmental Safety Corporation was reorganized and renamed JESCO.

Compliance with the REACH Regulation

The European Union's Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH Regulation) came into effect in June 2007. Based on precautionary principles, the purpose of this regulation is to standardize the management and identification of chemicals that are distributed within Europe and to monitor their risks and clarify their environmental impact. The Group respects the intent of the REACH Regulation, has completed preliminary registration of products that are subject to the regulation, and plans to complete official registration by 2018.

Operating Sites That Have Obtained ISO 14001 Certification

Domestic	Hitachi Works (including the Hitachi Refinery of Pan Pacific Copper Co., Ltd.; JX Nippon Environmental Services Co., Ltd.); Copper Foil Dept. of Hitachi Works (including Ichinoseki Foil Manufacturing Co., Ltd.); Isohara Works; Kurami Works (including Kurami Office of JX Nippon Coil Center Co., Ltd.); Headquarters, Pan Pacific Copper Co., Ltd. (including Osaka Office, Nagoya Office, and Fukuoka Office), Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd. (including Japan Copper Casting Co., Ltd., and Nissho Ko-un Co., Ltd.); Hibi Smelter, Pan Pacific Copper Co., Ltd. (including Hibi Kyodo Smelting Co., Ltd., Hibi Smelting Logistics Co. Ltd.); JX Nippon Tomakomai Chemical Co., Ltd.; JX Nippon Tsuruga Recycle Co., Ltd.; JX Nippon Mikkaichi Recycle Co., Ltd.; (head office, Chigasaki Works, Toho Titanium Co., Ltd. (including Kurobe Works and Wakamatsu Works)); Esashi Works, Tatebayashi Works, Nasu Works, Kakegawa Works, JX Metals Precision Technology Co., Ltd.; JX Metals Trading Co., Ltd.
Overseas	JX Nippon Mining & Metals Philippines, Inc.; JX Nippon Mining & Metals USA, Inc.; Materials Service Complex Malaysia Sdn. Bhd.; Gould Electronics GmbH; JX Nippon Mining & Metals Korea Co., Ltd.; Nikko Fuji Precision (Wuxi) Co., Ltd.; Bade Works, Longtan Works, Nikko Metals Taiwan Co., Ltd.

Our Business Activities and the Environment

The JX Nippon Mining & Metals Group monitors the environmental impact arising from its business activities and seeks to reduce the impacts based on careful analysis.

Mass Balance Table for the Group

Raw materials (thousand tons)

PRIMARY MATERIALS

Total of domestic operating sites	2,326
Total of overseas operating sites	299

RECYCLED RESOURCES

Total of domestic operating sites	257
Total of overseas operating sites	15

Energy (TJ)

ELECTRIC POWER

Total of domestic operating sites	3,833
Total of overseas operating sites	2,021

FUEL

Total of domestic operating sites	13,318
Total of overseas operating sites	5,390

Water (thousand m^3)

FRESHWATER

Total of domestic operating sites	20,672
Total of overseas operating sites	7,595

SEAWATER

Total of domestic operating sites	89,584
Total of overseas operating sites	0

INPUT

JX Nippon Mining & Metals Group

Principal products

Copper concentrate*	17 thousand tons
Refined copper	681 thousand tons
Sulfuric acid	1,744 thousand tons
Gold	40 tons
Silver	338 tons
Platinum	572 kg
Palladium	3,530 kg
Other metals, such as selenium and tellurium	234 tons
Electro-deposited and treated rolled copper foil	17 thousand tons
Copper alloy and special steel strips and other related products	35 thousand tons
Titanium (sponge, ingots)	22 thousand tons

Emissions

CO_2 (thousand tons)

Total of domestic operating sites	1,097
Scope 1	260
Scope 2	837
Total of overseas operating sites	404
Scope 1	130
Scope 2	274

SOx (tons)

Total of domestic operating sites	5,076
Total of overseas operating sites	317

NOx (tons)

Total of domestic operating sites	574
Total of overseas operating sites	304

CHEMICAL SUBSTANCES (RELEASE AND TRANSFER) (tons)

Total of domestic operating sites (domestic only)	456

FINAL LANDFILL DISPOSAL (tons)

Total of domestic operating sites	1,828
Total of overseas operating sites	2,555

WASTEWATER (thousand m^3)

Total of domestic operating sites	151,332
Total of overseas operating sites	1,317

OUTPUT

* The production volume outside the Group at the Caserones Copper Mine in the second half of fiscal 2014.

Initiatives for Biodiversity

Fundamental Policy

The Hitachi Mine, to which the JX Nippon Mining & Metals Group traces its history, took many different measures to ensure that the greenery and natural environment of the local areas would be preserved for future generations. For example, to reforest the surrounding mountains that had been devastated by smoke pollution, the Company planted some five million trees on 1,200 ha of land in those mountains. Over the years, the Company also distributed 5.13 million saplings to the surrounding areas for free, and in all was responsible for planting around 10 million trees.

The Group extracts ores in its upstream resources development business. Given the nature of the business, we consider conservation of the environment, including protection of biodiversity, to be essential to our business continuity. For the sake of the sustainable growth of our business, we will actively continue making voluntary efforts to preserve biodiversity.

Activities at the Caserones Copper Mine

Of the total of 385 km^2 (38,500 ha) of land owned by Minera Lumina Copper Chile (MLCC), operator of the Caserones Copper Mine, MLCC has designated 0.87 km^2 (87 ha) as a protected area from the impact of the construction of mining facilities and other such activities, and takes steps to preserve biodiversity by protecting the animals and plants in this area. MLCC observes the following rules for the protected area: (1) in case trees are cut in a certain area, another area 1.6 times larger than the felled forest area must be planted; and (2) in case it is necessary to cut any protected plant, 10 times the number of the same type of plant must be planted. Under the guidance of experts, plants in a wetland plant zone spanning 9,400 m^2 (0.94 ha) of the Caserones Valley were wholly transplanted to La Ollita Valley, the nearest place with an appropriate habitat. The vega plant, one of the protected plants at the Caserones Valley site, has been confirmed to have taken root at the transplanted site. In addition, due to severe depletion of water resources in the Copiapó River system located downstream of the Caserones Copper Mine, the company controlled water consumption by buying an alfalfa farm to halt its cultivation and cutting weeds along the river bank to limit evaporation. To offset new water usage by the mine, the company also provides desalinated seawater for downstream irrigation use.

Activities in Japan

The Group has been promoting reforestation activities, especially at the sites of closed mines. An update on our reforestation activities in fiscal 2014 at the closed Takatama, Oe, Toyoha, and Kameda mine sites is provided below. We are working to maintain and improve the natural environment by continuing to plant trees and vegetation, clear underbrush, and conduct other necessary work at each site.

Closed Takatama Mine Site (Koriyama City, Fukushima)

Tree-planting and maintenance of existing planted areas have been continuing as part of a seven-year plan from fiscal 2012 to 2018. In fiscal 2014, 3,000 broadleaf chestnut, zelkova, konara oak, and flowering cherry saplings were planted in a 1.5 ha area, where the ground had been prepared for full-scale tree-planting in the previous fiscal year. Underbrush was cleared in an area where trees had been planted earlier (1.6 ha), and ground was prepared for tree-planting in the next fiscal year (1.2 ha). Forest development efforts in this area have now been under way for 10 years.

About the Takatama Mine

The Takatama Mine produced gold and other metals from the time it was acquired in 1918 up to its closure in 1976. It is currently managed by Group company Shin-Takatama Mining.

Closed Oe Mine Site (Niki Town, Hokkaido)

Building on the success of an initial five-year reforestation plan (fiscal 2008 to 2012), a new five-year plan was begun in 2013. In fiscal 2014, approximately 4,700 Sakhalin spruce saplings were planted, and ground was prepared for planting in another area of 2.4 ha.

About the Oe Mine

The Oe Mine was acquired in 1915 and closed in 1984. During that time, it produced manganese, gold, silver, copper, lead, and zinc. At present, Hokushin Mining is treating acid mine drainage at the site.

Ishiyama Tailings Dam at the Closed Toyoha Mine (Sapporo City, Hokkaido)

In the aim of transforming the impoundment site at the closed Toyoha Mine into a scenic forest, Japanese white birch growing naturally on this site have been thinned and trees planted in the resulting spaces. These efforts have been made in response to requests from local community associations. Activities in fiscal 2014 focused on preserving the scenic appearance, such as cutting trees and weeding.

About the Toyoha Mine

Acquired in 1914, the Toyoha Mine was one of Japan's leading metal mines, producing indium, zinc, lead, silver, and other metals. The mine was closed in 2006 after its ore reserves were depleted. Wastewater from the mine has been managed strictly, since it is next to the Toyohira River, which supplies water to the residents of Sapporo. For this purpose, an acid mine drainage treatment plant was built in 2011 at a cost of ¥10 billion.

Closed Kameda Mine Site (Hakodate City, Hokkaido)

Reforestation began here in 2007. In the four-year period from fiscal 2007 to 2011, approximately 31,300 saplings were planted in an area spanning some 14.52 ha. In fiscal 2014, underbrush around the planted saplings was cleared (11.52 ha) and field mice were exterminated (14.52 ha).

About the Kameda Mine

The Kameda Mine produced gold, silver, and copper from the time it was acquired in 1915 up to its closure in 1919.

Management of Closed Mines

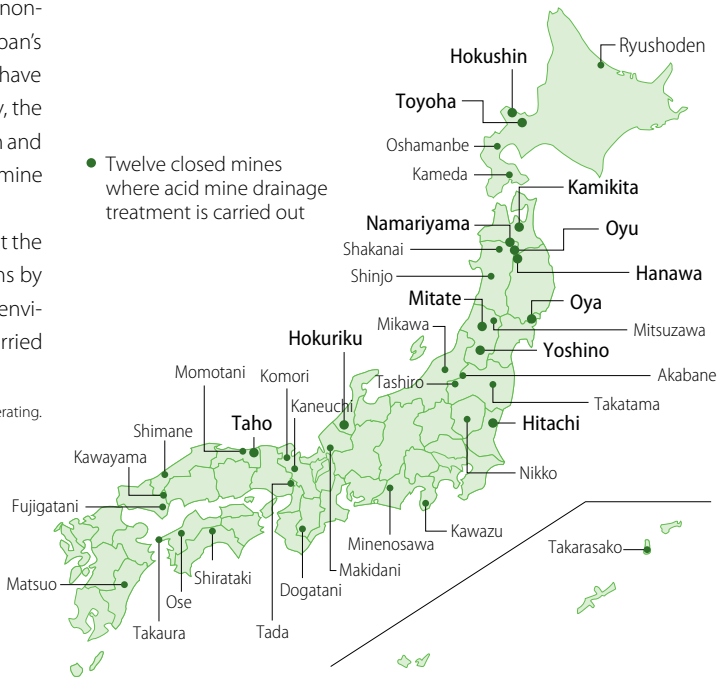
Since the founding of its business in 1905, the Group has been engaged in mining operations across Japan. By ensuring a steady supply of nonferrous metals and other resources, we have contributed to Japan's economic growth. Today, however, nearly all our mining operations have been stopped* due to the depletion of mineral resources. Currently, the Group is working to maintain and restore the natural environment in and around the closed mines. One of our efforts is the treatment of acid mine drainage (AMD).

As part of the DNA Training conducted each year, employees visit the AMD treatment facilities at the Toyoha Mine and hear presentations by top management, increasing awareness of the Group's history of environmental initiatives and the environmental management being carried out today at closed mines.

* Currently, the Kasuga Mine in Kagoshima Prefecture is the only Group mine in Japan still operating.

DNA Training session (Motoyama treatment facility at Toyoha Mine)

Closed mines managed by the Company



Management Work at Closed Mines

Of the 39 closed mines managed by the Company, AMD treatment is an ongoing obligation at 12 mines based on Japan's Mine Safety Act. JX Nippon Mining Ecomanagement is responsible for the work at these mining sites, including AMD treatment and the management of tailings dams.

The work mainly consists of treating the highly acidic mine drainage from the mines and tailings dams, which contain heavy metals, and maintaining and preserving the dams, underground drives, and shafts of the mine sites, making sure that harmful water does not flow into the surrounding environment.

The operation of treatment facilities has to be kept up 365 days a year, since AMD is generated continuously after a mine is closed. This is a result of the chemical reaction of rainwater and other water with ores remaining in the mine and tailings in the dams.

Along with periodic inspections of tailings dams, it is necessary to conduct internal inspections of galleries, which in some places extend for several kilometers, and of culverts, where supernatant and rainwater pass beneath the dams, making repairs as needed.

Other tasks include removing fallen trees and brush that might block the drains of tailings dams, inspecting several kilometers of pipelines, and conducting other thoroughgoing management measures to ensure untreated AMD does not flow into the environment.

AMD treatment facilities and management work (Hanawa Mine)

Settling pond for solid-liquid separation of neutralized water

Water that has cleared national effluent standards is discharged.

Inspection of a gallery

Construction Work to Protect Tailings Dams from Earthquakes and Torrential Rain

After the Great East Japan Earthquake, starting in fiscal 2012 we began conducting voluntary risk assessments of all tailings dams under management of the Group relative to a Level 2 earthquake (seismic motion of the maximum intensity conceivable for the particular area both now and in the future). At the same time, we assessed their stability in localized torrential rain of the kind that has become increasingly common in recent years, as well as the possible downstream impact of the outflow of tailings from the dams. After determining the risks by means of these voluntary inspections, we set priorities for those tailings dams identified as requiring further measures and began the necessary construction work starting in fiscal 2013.

The construction work includes soil stabilization to ensure earthquake resistance and building new drains to obtain sufficient drainage capacity during torrential rain.

1. Locations of countermeasures implemented in fiscal 2014

Earthquake-related: two locations	Kamikita Mine, Shimonosawa Tailings Dam (upstream method; completed)
	Mitsuzawa Mine, 4th Tailings Dam (upstream method; ongoing)
Torrential rain-related: three locations	Kamikita Mine, Tashirodaira 1st Tailings Dam (downstream method; completed)
	Hanawa Mine, Tanosawa Tailings Dam (downstream method; completed)
	Tada Mine, Shiroishi Tailings Dam (downstream method; ongoing) Komori Mine, 2nd Tailings Dam (upstream method; ongoing)

2. Locations of countermeasures planned for fiscal 2015

Earthquake-related: two locations	Oya Mine, Takasegamori Tailings Dam (upstream method; planned)
	Namariyama Mine, waste rock storage facility (planned)
Torrential rain-related: two locations	Tashiro Mine, 1st and 2nd Tailings Dams (downstream method; planned)
	Fujigatani Mine, 2nd and 3rd Tailings Dams (upstream and downstream methods; planned)

Hanawa Mine, Tanosawa Tailings Dam, where torrential rain countermeasures were implemented
(top) Embankment and emergency drain
(bottom) Trash rack to stop flow of tree debris in torrential rain

Kamikita Mine, Shimonosawa Tailings Dam, where earthquake countermeasures were carried out

VOICE

Harue Imagawa
Engineer
JX Nippon Mining Ecomanagement, Inc.

Management That Never Sleeps

Management of AMD treatment facilities at closed mines has to be carried out day and night, every day of the year. For this reason, a system has been established so that an administrator is immediately contacted if a problem arises in the treatment process, such as an abnormal pH value or equipment trouble. We are also preparing emergency water storage and backup generators, as we put in place management measures to enable prompt, appropriate response to trouble.

The management tasks are of many different kinds, covering not only AMD treatment but also managing tailings dams and galleries, planting trees on former mining sites, and communicating with local communities.

Coexisting with the Natural Environment and Community

Most of the closed mines are located far away from urban areas, in locations that can hardly be called convenient. Some of these places are blanketed with snow nearly half the year, so management must in these areas be carried out while adapting to the harsh natural environment. During times of increased water flow from melting snow or heavy rainfall, proper management is of particular importance.

In our management of closed mines, we are doing all we can to improve both the facilities and management approach so as to ensure stable operation even in a harsh natural environment. For example, at the tailings dams in each location, we are preparing drains with the drainage capacity to handle sudden torrential rain and other emergencies, and at the Toyoha Mine, we have built large-scale all-weather indoor AMD treatment facilities because of the big snowfalls in the area.

While only a dwindling number of employees have direct knowledge of the era when the Group operated mines throughout Japan, I feel it is the role of our generation to continue and expand on the initiatives of the Company aimed at coexistence with the natural environment and local community.

Society

The JX Nippon Mining & Metals Group recognizes that the continuity of its business is dependent on its establishing strong relationships of cooperation and trust with various stakeholders outside the Company through closer communication. Along with the timely provision of high-quality products and services matching customer needs, we are building fair and equitable trading relations with suppliers to fulfill our social responsibility throughout the entire supply chain.

As for people in the communities where we conduct our operations, we aim for co-existence and mutual prosperity as good corporate citizens committed to such ideals as environmental protection and respect for human rights.

Related Material Issues

- Respecting human rights
- Promoting community involvement and development

Commitment to Customers

Quality Management Report

The JX Nippon Mining & Metals Group is dedicated to being the best partner to its customers. Accordingly, we work to supply high-quality, safe products and to meet the precise quality improvement needs of customers, thereby building trusting relationships with them.

Promoting Quality Management Systems

Customer demands for quality continue each year to become more advanced and diverse. To address these demands quickly and efficiently, the Group has instituted the Basic Quality Policy and Quality Management Rules.

JX Nippon Mining & Metals Corporation Basic Quality Policy

The JX Nippon Mining & Metals Group hereby sets forth, and acts in observance of, this Basic Quality Policy in order to contribute to the development of a sustainable society while recognizing that its social mission is to stably supply nonferrous metals and materials.

1. Correctly grasp the requirements of customers and society in order to offer products and services that customers will trust and be satisfied with.
2. While paying due attention to safety and environmental conservation, improve and maintain quality at all processes from development, designing, and production to delivery.
3. Establish a quality-management system, and carry out continual improvements and train human resources.
4. Comply with all pertinent laws of Japan and overseas countries, and offer to customers and society transparency with regard to quality.

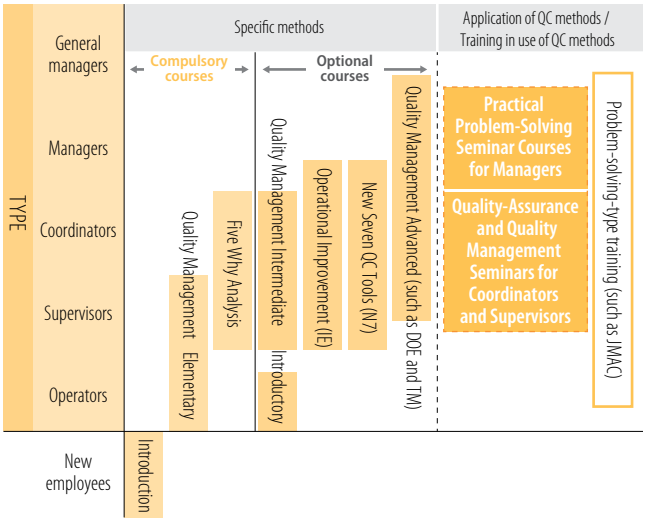
Quality Management Education

A quality management education system has been developed with the following three objectives:

- To standardize and raise quality management levels across the Company
- To improve problem-solving capability, enabling employees to logically deduce the causes of problems and take the lead in solving them
- To pass along and inculcate quality management techniques

To achieve these objectives, we made it compulsory for all Company employees to take the Elementary and "Five Why Analysis" quality management courses.

Quality Management Education System



VOICE

Toru Saito
Instructor, Training & Development Dept.
JX Nippon Research Institute, Ltd.

Lecture session

JX Nippon Research Institute (JXRI) provides training courses in various areas for JX Group companies and others. One area is quality management, where JXRI has been conducting training for JX Nippon Mining & Metals Group companies and operating sites at 16 locations since 1999.

The education in quality management is offered at various levels, including Introductory, Elementary, "Five Why Analysis," Operational Improvement, and Advanced Quality Management, of which Elementary and "Five Why Analysis" are compulsory for all employees.

When Group employees take part in the training, they are asked to think about (1) what kind of person they want to become after the training and (2) solutions for workplace problems. This is because we expect participants to enhance the effectiveness of the training by tying its contents to their work.

Some of the trainees may wonder whether the methods they learned at the training can be directly applied to their work. I feel confident that logical thinking, problem solving, and improvement approaches will certainly help all trainees to raise the quality of their work.

Sharing of Quality-Related Information across Operating Sites

Quality assurance managers' meetings are organized by the general manager of the Technology Development Group twice a year, targeting Group companies and operating sites directly run by JX Nippon Mining & Metals. At these meetings, quality assurance managers report on the quality loss and complaints status, and introduce quality improvement efforts being made at their sites, enabling this information to be shared throughout the Group. In fiscal 2014, the tenth such meeting was held in May and the eleventh meeting was held in December.

Quality Assurance Systems at Operating Sites

The Group does not limit quality improvement efforts to products and services but broadens the concept to include operations and administration. Based on quality management systems such as those defined in ISO 9001 and on various quality improvement programs such as TPM, quality assurance systems are established as appropriate to the characteristics of operations at each site. These systems are made up of personnel responsible for sales, manufacturing, production management, technology, and product development. Applying the PDCA cycle, each operating site is pursuing goals for reducing the percentage of defective products, lowering the number of quality-related complaints, and other matters.

Many domestic and overseas operating sites have obtained ISO 9001 certification, the international standard for quality management systems.

Operating Sites That Have Obtained ISO 9001 Certification

Domestic	Hitachi Works (Copper Foil Dept.), Isohara Works, Kurami Works, JX Nippon Exploration and Development Co., Ltd., Pan Pacific Copper Co., Ltd. (Hibi Smelter, Saganoseki Smelter & Refinery, Hitachi Refinery), Hibi Kyodo Smelting Co., Ltd., Japan Copper Casting Co., Ltd., JX Nippon Coil Center Co., Ltd., JX Metals Trading Co., Ltd. (Takatsuki Plant), Ichinoseki Foil Manufacturing Co., Ltd., JX Metals Precision Technology Co., Ltd. (Tatebayashi Works, Esashi Works, Nasu Works, Kakegawa Works), Toho Titanium Co., Ltd. (head office and Chigasaki Works, Hitachi Works, Yahata Works, Wakamatsu Works, Kurobe Works)
Overseas	JX Nippon Mining & Metals Korea Co., Ltd., Changzhou Jinyuan Copper Co., Ltd., Nippon Mining & Metals (Suzhou) Co., Ltd., Nikko Fuji Precision (Wuxi) Co., Ltd., Nikko Metals Shanghai Co., Ltd., Nikko Metals Taiwan Co., Ltd., JX Nippon Mining & Metals Philippines, Inc., Materials Service Complex Malaysia Sdn. Bhd., JX Nippon Mining & Metals USA, Inc., JX Nippon Mining & Metals Korea Co., Ltd.

Quality Management of Electronic Materials Products

Customers demand a high level of quality and reliability in the electronic materials products of the Group. To meet these demands, we employ meticulous quality-control measures at all stages of product provision, from development and manufacturing to shipment.

Product development stage

Quality-evaluation systems have been developed to analyze physical properties, surface conditions, purities, and other characteristics of products (introduction of analytical equipment, establishment of analysis procedures, etc.). Only products that have been confirmed to possess the necessary levels of quality can move to mass-production stages.

Manufacturing stage

With systems of travel sheets and statistical process control (SPC) systems, we have developed a stringent quality-control structure, which covers everything from the acceptance of raw materials to the shipping of products.

Pre-shipping stage

We have developed a system that allows for thorough and continuous inspections of products by using fine-tuned analytical equipment, and we strictly adhere to internal standards that we have developed for each product. The data from inspections is fed back to development and manufacturing departments through the statistical quality-control (SQC) system to improve the quality and reliability of our products.

Awards Received from Our Customers

Each year, we receive awards from customers in recognition of our stable supply of high-quality products, promotion of business continuity plans, and other efforts. We received the following awards in fiscal 2014.

TSMC Excellent Performance Award

Samsung Electronics Best Partner Award

Launch of Electroless UBM Plating Service Starts in Taiwan

Nikko Metals Taiwan launched an electroless UBM* plating service at its Longtan Works.

Background

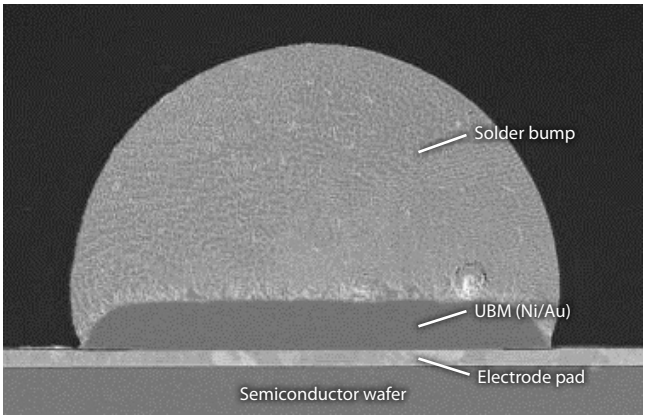
Taiwan is home to many semiconductor manufacturers, including some of the world's leading foundries (companies that manufacture semiconductors on consignment). With the growth of the semiconductor industry and the advancement of technology, demand for UBM plating is expected to rise significantly. The Group has been providing this service at the Isohara Works since 2008. Recently, we introduced the same process at the Longtan Works, as we already had steady sales to current customers in Taiwan and also needed to be able to meet increases in demand in that region. This move should enable us to provide customers in Taiwan with better services, including faster delivery.

Features of the Technology

Our electroless plating technology that harnesses a unique plating solution and process achieves low cost and fast delivery by means of selective plating and batch processing.

Prospects

Now that we have introduced at the Longtan Works the same process and equipment as we have at the Isohara Works, we will be able to provide the service from two locations: Japan and Taiwan. This strengthens our preparedness from a business continuity plan (BCP) standpoint. The Group is always working to enhance its customer services and ensure supply stability.



Electroless UBM plating


Longtan Works


Electroless UBM plating line at Longtan Works

* UBM (Under Bump Metallurgy):
UBM is metallic plating on the electrode pads of wafers that have had circuitry formed on them in front-end-of-line wafer fabrication processes, and is designed to improve the adhesion between the pads and solder bumps. UBM formation is deemed essential to flip-chip bonding, an increasingly used method for making interconnections on microchips as semiconductor packaging technology shifts to smaller sizes and higher integration.

VOICE

Stanley Chen
Manager
Surface Treatment Group,
Functional Materials Division
Nikko Metals Taiwan Co., Ltd.

Introducing the Electroless UBM Plating Service in Taiwan

The electroless UBM plating service was originally provided for customers in Taiwan by the Isohara Works. We decided to start offering it in Taiwan as well, due to the large number of potential customers besides the current ones in Taiwan and China, and given the outlook for the continued growth of the semiconductor industry.

At the Longtan Works, the line for this service went into operation in March 2015 and has been in mass production since this summer.

Customers' Expectations

Customers strongly desire faster delivery and BCP backup. From those standpoints, they have welcomed the start of our processing in Taiwan because it is closer to their sites. Since the wafers are first processed by customers and then come to us for UBM plating, our location near customers helps us build trust because they can visit us anytime.

Looking Ahead

Our immediate mission is to smoothly complete the production site transfer to the Longtan Works for current customers who until now have been served by the Isohara Works. Then, we plan to step up sales efforts aimed at capturing new demand in Taiwan and China. Taking full advantage of the functions of the Longtan Works, we will be raising the operating rate while keeping in mind the possibility of adding new fabrication lines in the future.

Business Site Established in North America for Collecting Recycled Materials

Since launching a valuable metals recycling business in the 1970s and 1980s, the Group has created a network for collecting recycled materials and established and maintained a stable business structure for it as Japan's pioneer in this area.

With such trends as the domestic manufacturing industry shifting overseas and the decline in the population in Japan, the amount of metal scrap generated in the nation has been decreasing, making it necessary to collect recycled materials from overseas markets to obtain a stable supply. The Group established a recycled materials collection center in 2010 in Taichung, Taiwan, where many electronics firms are located, and has since been steadily expanding the amount collected.

With the expectation of further increases in recycled materials in North America, in 2014 we established a Recycle Business Department at JX Nippon Mining and Metals USA, Inc., in Arizona, and started operations there.

The collected materials are processed mainly at the Saganoseki Smelter & Refinery of Pan Pacific Copper, one of Asia's largest recycling centers for copper and precious metals, as well as at other Group sites, to efficiently recover copper, precious metals, and rare metals.

By expanding the efficient recycling system we have thus built up, we are contributing to the establishment of a global recycling-oriented society.

Recycled materials collected at Saganoseki Smelter & Refinery

Recycling process (converter furnace) at Saganoseki Smelter & Refinery

The Group's overseas collection points for recycled materials

VOICE

Sadaharu Koshitani
Recycle Business Manager
JX Nippon Mining and Metals USA, Inc.

Collection of Recycled Materials in North America

My job involves calling on customers in North America, identifying such matters as the processes where recycled materials are generated and their features, negotiating purchase price conditions, and concluding agreements. With the aim of expanding business further, we are conducting market surveys in Mexico, Eastern Europe, and other places where economic growth is anticipated, in addition to doing business in North America.

Collection is going well, as the amount collected in fiscal 2014 was approximately double that of the previous fiscal year.

North America spans a large geographical area, differing from one region to another in terms of environmental regulations, labor and other costs, and public awareness of recycling. I believe it is highly important to take these differences into account, devising optimal business models and services for each region.

Intensifying Competition over Recycled Materials in North America

In recent years, environmental regulations have become increasingly strict in North America, especially in metropolitan areas, and people have become more aware of the environment and of recycling.

The region, however, has very few copper smelting facilities, despite the large amount of recycled materials generated. As a result, most of these materials are sent overseas for processing. Smelting and refining companies from Europe to Asia are carrying out aggressive marketing in the huge market of North America. Competition is expected to heighten further.

Toward Stable Procurement of Recycled Materials

Given this situation, we endeavor to build even stronger relations with customers with an eye to long-term business. Moreover, we are looking to expand the collection target, from current discarded electronic circuit boards mainly with precious metals, to other recycled materials mainly with copper. In such ways, we are working to ensure the stable procurement of recycled materials in North America.

Commitment to Our Suppliers

The Group is committed to fulfilling its corporate social responsibilities throughout the entire supply chain. Based on the JX Nippon Mining & Metals Group Basic Procurement Policy, we strive to build relationships of cooperation and trust with suppliers by conducting transparent and fair transactions with them.

JX Nippon Mining & Metals Group's Basic Procurement Policy

1. **Comply with laws, regulations, and rules and engage in fair transactions.**
   - Respect the letter and spirit of relevant laws and social norms in executing business operations.
   - Conduct purchasing activities based on fair evaluations.
   - Maintain appropriate relationships with business partners based on the highest ethical values.
2. **Protect intellectual property rights.**
   - Strictly control personal information obtained in the course of procurement activities.
   - Do not illegally obtain or illegally use intellectual property, including the patents, utility models, designs, and trademarks of third parties, and do not infringe such rights.
3. **Build relationships with business partners based on mutual understanding and trust.**
   - Provide business partners with high reliability and satisfaction through accurate, fast, and highly transparent activities.
   - Endeavor to achieve robust communication with business partners and consistently promote creativity and innovation through advanced ideas.
   - Contribute to the development of a sustainable society by promoting the purchase of environmentally friendly materials and machinery.
4. **Follow the below principles regarding conflict minerals.**
   - Do not engage in raw materials procurement that contributes to illegal activities in conflict-affected regions or to human rights infringements through such illegal activities.
   - Respect the guidance of the Organisation for Economic Co-operation and Development related to raw materials procurement from conflict-affected areas, and control supply chains in an appropriate manner.

Partnering with Suppliers

To ensure efficient procurement, purchasing functions for the entire JX Group are consolidated within the common-function subsidiary JX Nippon Procurement. JX Nippon Mining & Metals also entrusts most of its procurement operations to that company.

JX Nippon Procurement Basic Purchasing Policy

Basic Purchasing Policy

JX Nippon Procurement is committed to pursuing purchasing operations based on the JX Group Values (EARTH) to develop good partnerships with business partners and to fulfill its corporate responsibility to society.

Ethics

- Respect for the letter and spirit of relevant laws and social norms in execution of business operations.
- Select business partners based on fair and honest evaluation of their compliance with laws and social norms, concern for the environment, and track record in areas such as quality, price, and delivery.
- Maintain appropriate relationships with business partners based on the highest ethical values.

Advanced ideas

- Consistently promote creativity and innovation through advanced ideas, and strive to adopt new products and services.

Relationship with society

- Endeavor to achieve robust communication with business partners, and work together diligently to contribute to society through relationships of mutual trust.

Trustworthy products / services

- Provide JX Group companies with high reliability and satisfaction through fast, accurate, and highly transparent activities.

Harmony with the environment

- Work persistently to create a sustainable society by promoting the purchase of equipment and services with low environmental impact.

Promotion of Green Purchasing

The JX Nippon Mining & Metals Group has drawn up the Green Purchasing Policy, which dictates that the reduction of environmental and social impact is taken into account when making decisions on purchasing materials and equipment necessary to its business operations. Based on this policy, we have also drawn up Green Purchasing Guidelines setting out specific requirements for choosing suppliers.

In addition, we periodically conduct green purchasing surveys of suppliers, encompassing their use of banned substances in the manufacturing process, the presence of banned substances in supplied products, and procurement from companies presenting human rights issues. In fiscal 2014, such surveys were conducted from October 2013 to December 2014 and covered 542 suppliers, accounting for 95% of the value of items purchased and accepted by the Company as well as JX Nippon Environmental Services and Pan Pacific Copper. Responses were received from 490 suppliers, representing a response rate of 90.4%. Survey results are reflected in supplier reviews as necessary.

Green Purchasing Policy

We pursue green purchasing initiatives to contribute to the formation of a recycling-oriented society, prevention of global warming, and the promotion of a "reduce, reuse, and recycle" approach.

This policy applies to all materials and equipment to be purchased. When items being considered for purchase have similar functions, prices, and delivery dates, we evaluate their potential to reduce environmental impact based on mandatory and voluntary conditions, and purchase the item with superior environmental performance.

Confronting the Problem of Conflict Minerals

The Group's Basic Procurement Policy includes a clause on avoidance of conflict minerals, and we have established and operate management systems to appropriately address this issue.

What Are Conflict Minerals?

"Conflict minerals" is the general term for minerals that are mined (illegally, in most cases) in conflict-affected regions, providing a source of funds for local armed groups. The use of these minerals may eventually lead to the prolonging of conflicts and the expansion of human rights abuses and dehumanizing acts.

Global Efforts to Impose Trade Restrictions

Global efforts to restrict trade of conflict minerals began in the late 1990s, and today various organizations have devised rules and programs. In 2011 the Organisation for Economic Co-operation and Development established the Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, advising corporations and others to manage their own operations to avoid involvement in the trade of conflict minerals.

In the United States, from 2013 the Dodd-Frank Wall Street Reform and Consumer Protection Act obligated companies listed on the country's stock exchanges to submit reports on their usage of specific conflict minerals (tin, tantalum, tungsten, and gold) to the Securities and Exchange Commission. The aim of such measures is to stop companies from using conflict minerals through information disclosure and social pressure. The European Union and other organizations are moving to introduce a conflict minerals management and certification system.


LBMA

RESPONSIBLE GOLD CERTIFICATE

Certificate from the LBMA

Group Response to the Issue

In line with these global trends, industry organizations relevant to the Group (such as the LBMA[*1] and EICC[*2]) have established monitoring programs for eliminating conflict minerals. These programs request that companies cooperate with surveys and undergo external audits by an independent organization. Pan Pacific Copper, a producer of gold bullion, has established and operates a management system for supply chain due diligence that calls for the following actions to be taken:

1. Performing supply chain due diligence prior to purchasing of mineral raw materials (confirming the place of origin of the materials, assessing risks, confirming materials after delivery, confirming distribution route, preserving relevant documents, etc.)
2. Notifying suppliers of the policy on exclusion of conflict minerals
3. Conducting in-house education on supply chain due diligence and its background
4. Conducting internal audits and undergoing external audits

The implementation status of supply chain due diligence is audited by an independent organization specified by the LBMA and the results are reported to the LBMA. As a result of following these procedures, the gold bullion produced at Pan Pacific Copper's Saganoseki Smelter & Refinery is included on the LBMA's Good Delivery List. At the same time, the Saganoseki Smelter & Refinery has been included on the Conflict-Free Smelter list compiled by the EICC and GeSI[*2]—recognition that it is taking proper measures to exclude conflict minerals.

*1 LBMA: London Bullion Market Association. An industry association composed of financial institutions and others that deal in gold bullion. Inclusion on this association's Good Delivery List is viewed as a guarantee of high quality and reliability.

*2 EICC: Electronic Industry Citizenship Coalition (Trade association of the electronic industry in the United States)
GeSI: Global e-Sustainability Initiative (Trade association of the information and communications equipment industry in Europe)
The EICC and GeSI together created the Conflict-Free Smelter certification program, based on their relationship with the electronic and communications equipment industries, where the risk of conflict mineral use is especially high.

Commitment to Local Communities

Since the inception of the business in 1905, the JX Nippon Mining & Metals Group has placed strong importance on striving for good relations with local communities in performing its business operations. Keeping alive that spirit today, the Group actively carries out social contribution activities in accordance with its Code of Conduct, seeking coexistence and co-prosperity with society as good corporate citizens.

Based on the Code of Conduct, all Group business sites in Japan and overseas endeavor to build relationships of trust with local communities by engaging in regular communication with municipal governments, neighborhood associations, and other stakeholders, as well as by actively interacting with local residents through a variety of events including plant tours and summer festivals.

Assistance to People Living Near the Caserones Copper Mine Affected by Torrential Rain in Chile

From March 24 to 27, 2015, the Chilean regions of Antofagasta, Atacama, and Coquimbo were hit by record torrential rain, the worst in 80 years. The Atacama Region where the Caserones Copper Mine is located suffered the heaviest losses, with 31 people dead, 23 missing, and about 7,000 houses destroyed or severely damaged (according to a government announcement on April 14).

Immediately after the storms struck the region, the mine went into action, ensuring the safety of mine employees and working with local authorities to begin providing assistance to affected local communities. Such assistance included:

- Offering shelter, at a camp for Caserones workers, to 44 passengers of private vehicles stranded on public roads
- Working to restore the road (using earthmoving equipment to clear the road and create a temporary roadway, etc.) from the Caserones Copper Mine to the Los Loros district (midway to Copiapó, the capital of the region)
- Providing drinking water, food, fuel, and other essentials, as well as medical assistance, to roadside communities (Los Loros, San Antonio, Amolanas, etc.)
- Removing earth and debris from roadside communities; restoring electricity, water, and sewerage; and repairing hospitals, schools, and other facilities
- Restoring the Copiapó riverbed and bridges
- Providing a site for temporary housing

The mine made every effort to maintain close communication, reporting to the mayor and city council of nearby Tierra Amarilla on April 14 and attending a community fellowship meeting hosted by the Los Loros water authority on April 19.

JX Nippon Mining & Metals decided to provide US$500,000 worth of daily goods and other relief materials, presenting these to the Atacama regional government on April 29.

As of the end of August, while there were still a few areas where restoration had not progressed adequately, most of the areas were fully restored. The Company, along with mine operator Minera Lumina Copper Chile, plan to continue providing assistance as needed.

Presenting relief materials to the government of the Atacama Region

Restoring roads

Restoring the Copiapó riverbed

Providing drinking water and food

Firefly Watching and Other Contributions to Society at JX Nippon Tsuruga Recycle

JX Nippon Tsuruga Recycle (Tsuruga City, Fukui Prefecture) held a firefly watching event on June 15, 2014, co-hosted by the Environmental Management Association of Ibaraki Prefecture. This was the ninth time the event had been held, and a record 120 persons attended, mostly families with children.

The agricultural water channel on the south side of the company site (known popularly as the Nikkori River) is a firefly habitat. Fireflies are known for living only in clean waterways. The company maintains an environment where fireflies can thrive by regularly weeding the area and planting trees. Each year in March, employees volunteer to collect trash. To enable people from the local area to enjoy the fireflies, the event has been held annually since 2005. At the 2014 event, a craft class was held in the evening to make badges with a firefly motif. Then when darkness fell, the venue changed to the riverside, where the glow of fireflies could be seen. With more fireflies visible than in other years, the participants gasped with wonder at their mysterious luminescence.

Making badges

Participants

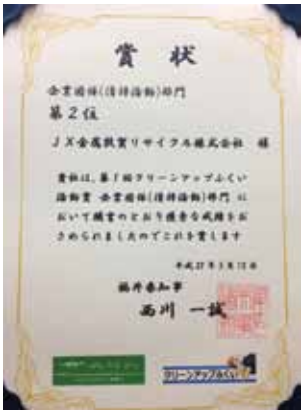
JX Nippon Tsuruga Recycle takes part in other local social contribution activities, including the following:

- Traditional waterway management (dredging and removing plants and soil to improve water flow) at Nakaikemi Wetlands, a Ramsar site in the Echizen-Kaga Kaigan Quasi-National Park (July 26; 16 volunteers)
- Participation in "Operation Cleanup Fukui"
  Cleaning of Kehi no Matsubara Beach (June 1; 34 volunteers)
  Cleaning of Fukagawa River on the plant site (September 9; 14 volunteers)
  Cleaning of Nikkori River (March 17; 20 volunteers)
  Cleaning of city road in front of the plant (June 10; 25 volunteers / December 24; 25 volunteers)
- Mikata Goko lakes cleaning organized by Mikata Goko preservation committee (May 11; 24 volunteers / September 28; 10 volunteers)
- Cleanup program held by Kinome-cho and Wakaizumi-cho neighborhood associations (May 25; 19 volunteers)
- Participation in Tsuruga City Environmental Fair 2015 "Green Picnic" (March 14)

JX Nippon Tsuruga Recycle believes that respecting the environment and working to improve it are important issues for a corporation. Staying true to this belief, the company will continue to value these outreach opportunities, seeing them as part of its efforts to build better relations with the local community.

At the Tsuruga City Environmental Fair

Waterway management at Nakaikemi Wetlands



Thanks to these vigorous efforts, the company was runner-up in the first Cleanup Fukui activity awards (cleanup program division).

Other Local Activities

Group companies take an active part in local cleanup campaigns and other such programs at each business site. Plant tours are also held to encourage communication with local residents and employees' families.

The main activities in fiscal 2014 were as follows:

1 Pan Pacific Copper's Hibi Smelter (July 2014)

Took part in the "Refresh Setouchi" beach cleanup in the nearby Setonaikai National Park. Sponsored by the Setouchi-Uminomichi Network Promotion Council, the event is aimed at preserving the beautiful Seto Inland Sea through activities anyone can participate in readily.

2 JX Metals Precision Technology's Kakegawa Works (August 2014)

Took part in the "Forest of Hope" tree-growing festival at the Shobugaike industrial park where the plant is located. The city of Kakegawa is devoting efforts to nurturing and protecting forests in its Forest of Hope project. The company concluded a partnership agreement with the city to serve as a co-sponsor, cooperating in the activities.

3 JX Nippon Tomakomai Chemical (July 2014)

Invited the public to a presentation to help local residents better understand the company's business, including its low-concentration PCB waste treatment service.

4 Hitachi Works (November 2014; March 2015)

Held plant tours for local residents and families of employees to further their understanding of the operations. A total of 115 persons attended the tour for residents, and 120 persons turned out for the tour for employees' families.

5 JX Nippon Exploration and Development (July 2014)

Provided a company site tour for trainees in the Sustainable Mining Development course of the Japan International Cooperation Agency (JICA) Knowledge Co-Creation Program 2014. The trainees, from countries in Africa, South America, Asia, and other parts of the world, received skills instruction on the company's drilling machines and other equipment.

Donations to Local Communities

The Group actively donates to local communities in many different ways, including reforestation around closed mines, academic assistance to universities and other research institutions, and participation in festivals and other events hosted by local organizations.

Total donations by the Group in fiscal 2014 were ¥0.14 billion* (¥0.09 billion in Japan and ¥0.05 billion outside Japan).

* Total for domestic and overseas Group companies. Note that the amount of donations by overseas Group companies has been converted to yen using the average exchange rates during fiscal 2014.

Respect for Human Rights

The JX Nippon Mining & Metals Code of Conduct states, "In international business operations, we aim to contribute to sustainable development by protecting the fundamental human rights of people in countries and areas where we operate, and by respecting their cultures and customs." Carrying out sound business practices, respecting the human rights of local citizens, employees, customers, business partners, and all others in the supply chain, is seen as a major premise for the continued operation of the Group.

Respect for Human Rights: Principles and Rules

In fiscal 2008, the Company joined the United Nations Global Compact, agreeing to a set of international principles that include protection of human rights and compliance with labor standards. The JX Nippon Mining & Metals Group Compliance Regulation likewise expresses the commitment to instilling in the Group the spirit of respect for human rights, with its clear prohibitions against unjust discrimination, harassment, child labor, forced labor, and other abuses.

Prevention of Child Labor and Forced Labor and Provision of Equal Employment Opportunities and Conditions

Approximately 9,000 employees work in the Group. In accordance with the laws in each country, prohibitions against forced labor and child labor are strictly enforced for every one of these employees. Compliance was confirmed in fiscal 2014 for all 69 of the Group companies conducting business activities in Japan and overseas, including JX Nippon Mining & Metals. Moreover, the Company conducts hiring without regard for age, gender, nationality, or other attributes, and decides subsequent promotions and pay raises by fair assessments based on competency. (See page 45 for details.)

As the Group's business becomes increasingly global, the Company will continue to comply with local labor laws and regulations at all business sites in Japan and abroad, aiming to create an environment where employees can work with peace of mind.

Suppliers and other business partners are also required to eliminate forced labor and child labor, upholding the JX Nippon Mining & Metals Group's Basic Procurement Policy. In fiscal 2014, a written green purchasing survey was made of 490 major business partners, which included questions about procurement from companies suspected of possible forced labor or child labor practices.

Raising Employee Awareness of Human Rights

To create a corporate climate where human rights are respected, the Company makes efforts to raise employee awareness and educate its workers about relevant issues. Education at all levels, including training of newly promoted managers and supervisors, covers issues relating to harassment. In October 2014, Head Office managers attended a presentation on harassment in the workplace, aimed at increasing their understanding of such problems as sexual harassment and power harassment. (See page 41 for details.)

In June 2015, the Company provided training in human rights issues for CSR promotion managers, led by Ernst & Young Sustainability. The Company also plans to launch an e-learning program for general employees in the second half of fiscal 2015, stepping up its efforts to raise employees' human rights awareness.

Establishment of Consultation Services

The Group hotline handles reports and consultations from employees by e-mail, telephone, or other means on a wide range of issues, including human rights. Group regulations prohibit whistleblowers from being treated disadvantageously by reason of their having filed a report.

Engagement with Residents Near the Caserones Copper Mine

A mine cannot be operated without gaining a wide range of ongoing support from local communities. It is therefore important to respect the human rights of local residents and build good relations with them.

Minera Lumina Copper Chile, the operator of the Caserones Copper Mine, has adopted a basic three-point policy for supporting local communities: respect for life, respect for the community and environment, and respect for current law. In keeping with this principle, from the project launch in 2007 the operator began holding explanatory meetings and engaging in dialogue with the Collas—indigenous people living in the area around the mine site—endeavoring to build up trust.

The operator also took steps to expand hiring of local people, such as providing training programs for inexperienced operators aimed at young residents.

Other Communications

Communicating Internationally

As a Member Company of the ICMM

As a member company of the ICMM, JX Nippon Mining & Metals formulated its Code of Conduct based on the ICMM's sustainable development principles. The Company is aggressively addressing issues related to the environment, safety and health, management of chemical substances, human rights, and relations with communities, including those issues described by the ICMM Position Statements.

Moreover, the Company strives to ensure that its reports on these activities are transparent. To this end, it submitted *Sustainability Report 2015* for a third-party evaluation to ensure that this report conformed to the standards of the GRI G4 Guidelines and the Mining and Metals Sector Disclosures document, as required by the 10 sustainable development principles of the ICMM and the ICMM's Assurance Procedures.

ICMM Position Statements

- Mining and Protected Areas
- Indigenous Peoples and Mining
- Principles for Climate Change Policy Design
- Transparency of Mineral Revenues
- Mining: Partnerships for Development
- Mercury Risk Management

ICMM Principles

1. Implement and maintain ethical business practices and sound systems of corporate governance.
2. Integrate sustainable development considerations within the corporate decision-making process.
3. Uphold fundamental human rights and respect cultures, customs, and values in dealings with employees and others who are affected by our activities.
4. Implement risk management strategies based on valid data and sound science.
5. Seek continual improvement of our health and safety performance.
6. Seek continual improvement of our environmental performance.
7. Contribute to conservation of biodiversity and integrated approaches to land use planning.
8. Facilitate and encourage responsible product design, use, re-use, recycling, and disposal of our products.
9. Contribute to the social, economic, and institutional development of the communities in which we operate.
10. Implement effective and transparent engagement, communication, and independently verified reporting arrangements with our stakeholders.

Endorsement of and Support for the Extractive Industries Transparency Initiative (EITI)

The EITI is a multinational cooperative framework that calls for the revenues and flows of funds of companies in extractive industries, such as the oil, natural gas, and metals industries, to be made more transparent. In this manner, the initiative aims to contribute to the development of a sustainable society. The ICMM announced that it would continue to offer its support to the EITI. JX Nippon Mining & Metals, as a global company operating upstream resources development, also endorses the EITI principles and offers its own support.

The EITI Principles

1. We share a belief that the prudent use of natural resource wealth should be an important engine for sustainable economic growth that contributes to sustainable development and poverty reduction, but if not managed properly, can create negative economic and social impacts.
2. We affirm that management of natural resource wealth for the benefit of a country's citizens is in the domain of sovereign governments to be exercised in the interests of their national development.
3. We recognise that the benefits of resource extraction occur as revenue streams over many years and can be highly price dependent.
4. We recognise that a public understanding of government revenues and expenditure over time could help public debate and inform choice of appropriate and realistic options for sustainable development.
5. We underline the importance of transparency by governments and companies in the extractive industries and the need to enhance public financial management and accountability.
6. We recognise that achievement of greater transparency must be set in the context of respect for contracts and laws.
7. We recognise the enhanced environment for domestic and foreign direct investment that financial transparency may bring.
8. We believe in the principle and practice of accountability by government to all citizens for the stewardship of revenue streams and public expenditure.
9. We are committed to encouraging high standards of transparency and accountability in public life, government operations, and in business.
10. We believe that a broadly consistent and workable approach to the disclosure of payments and revenues is required, which is simple to undertake and to use.
11. We believe that payments' disclosure in a given country should involve all extractive industry companies operating in that country.
12. In seeking solutions, we believe that all stakeholders have important and relevant contributions to make—including governments and their agencies, extractive industry companies, service companies, multilateral organizations, financial organizations, investors, and non-governmental organizations.

Participation in the United Nations Global Compact

The Company joined the United Nations Global Compact in August 2008. It supports the 10 principles on human rights, labour, the environment, and anti-corruption, and is working to realize these ideals.

Ten Principles of the United Nations Global Compact

Human Rights	
Principle 1:	Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2:	make sure that they are not complicit in human rights abuses.
Labour	
Principle 3:	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4:	the elimination of all forms of forced and compulsory labour;
Principle 5:	the effective abolition of child labour; and
Principle 6:	the elimination of discrimination in respect of employment and occupation.
Environment	
Principle 7:	Businesses should support a precautionary approach to environmental challenges;
Principle 8:	undertake initiatives to promote greater environmental responsibility; and
Principle 9:	encourage the development and diffusion of environmentally friendly technologies.
Anti-Corruption	
Principle 10:	Businesses should work against corruption in all its forms, including extortion and bribery.

Communication with Industry Organizations

Organization	Role within the organization	Overview and activities of the organization
Japan Mining Industry Association (JMIA)	Chairman, Director	JMIA represents companies engaged in the resource development and/or smelting and refining of nonferrous metals. With a view to the sound growth of the industry, it conducts surveys and other research on improving technologies, disseminates and publicizes knowledge, and proposes policies to government agencies, with respect to resource development, smelting and refining, and recycling. JX Nippon Mining & Metals is a governing member, serves on various committees, and participates in running the association. The Company president is serving as chairman for fiscal 2015.
The Sulphuric Acid Association of Japan	Director	The association works toward the growth of the sulfuric acid industry and promotes friendly relations and mutual benefits for sulfuric acid manufacturers. The Company serves on the Operations Committee and the General Affairs Committee, is involved in surveys and reports on sulfuric acid supply and demand conditions, and takes part in governance of the association.
Japan Copper and Brass Association (JCBA)	Vice chairman	JCBA is an industry association of companies manufacturing copper alloy products, namely plates, strips, pipes, and wires made by melting and rolling copper and copper alloys. By encouraging contacts and cooperation among members, it promotes the progress and growth of the industry as a whole. The Company serves on the Road Map Committee, is involved in developing new demand and improving quality, and as a member of the Statistics Subcommittee, is involved in surveys and reports on market size.
Japan Society of Newer Metals	Director	The society focuses on new metals that are supporting the advance of high-tech industries. By conducting surveys and research, collecting and providing information, and promoting fellowship and cooperation among relevant organizations in Japan and overseas, it aims for the sound growth of the new metals industry and related industries. As a member of the Compound Semiconductors Subcommittee and the Target Subcommittee, the Company is involved mainly in market size surveys and reports, improving health and safety, and making proposals to government agencies.
Japan Catalyst Recovering Association	Chairman	The association is made up of companies engaged in the reuse of catalysts and aims to promote the recycling of precious metals, rare metals, and other metal resources through the proper treatment of spent catalysts, etc. It conducts surveys and compiles statistics on recycling, and holds regular training sessions to improve technologies and promote friendship among members. A Company representative is the chairman of the association and serves on the Public Relations Committee, and is involved in the issuance of survey reports and the organization of general meetings.

Corporate Governance

Obtaining the trust of stakeholders is essential for carrying out the business of the JX Nippon Mining & Metals Group. To earn that trust, we endeavor to achieve full compliance and ensure the integrity and transparency of management. To make sure these efforts are effective, we have established and implement an internal control system, carry out periodic checks, and take appropriate measures as needed.

Related Material Issues

- Insisting on full compliance

Corporate Governance

Corporate Governance System

Board of Directors

The Company has established the Board of Directors to discuss matters stipulated in laws, regulations, and the Articles of Incorporation, as well as other important management issues. The Board is composed of the president and nine other directors (all male).* Corporate auditors also attend Board of Directors meetings and can offer their opinions.

* All 10 directors are internal directors and serve concurrently as executive officers.

Executive Council

The Company has established the Executive Council as an advisory body to the president. The Executive Council consults on matters important for the management of the Company. The status of execution of operations and other issues are also reported and communicated to it. The Executive Council consists of the president and executive officers designated by the president. Full-time corporate auditors also attend the Executive Council and can offer their opinions.

Corporate Auditors

Corporate auditors attend Board of Directors meetings, Executive Council meetings, and other important meetings, offering their views as necessary for raising the effectiveness of audits. They also review important documents and meet with officers and employees of the Company and each Group company, with the aim of understanding the status of execution of duties by officers and employees.

In addition, corporate auditors receive regular reports from the Internal Audit Department and independent auditors regarding auditing plans and their implementation status and results, while coordinating with these parties by exchanging views and information.

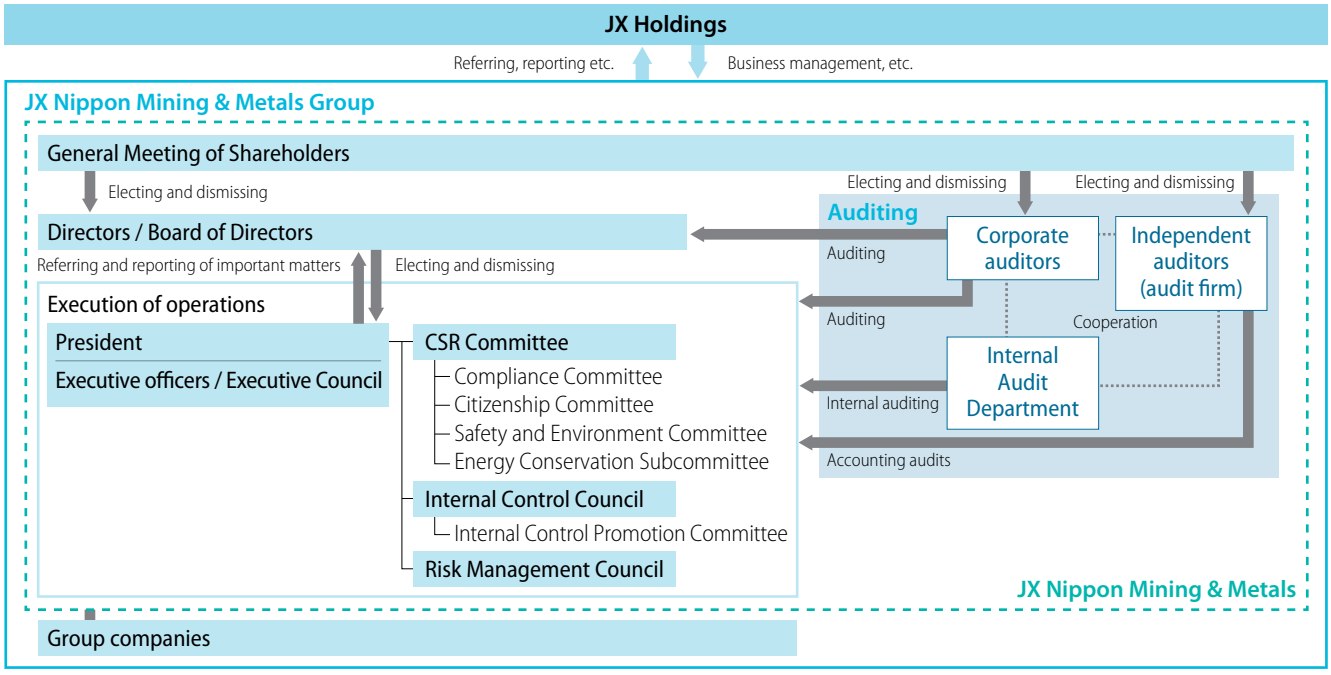
Compensation for Directors

Bonuses for the directors of JX Nippon Mining & Metals are determined on the basis of the consolidated business results of the Company as well as JX Holdings. We have neither a retirement benefit program nor a stock option program.

Management of Group Companies

Each Group company is placed under the jurisdiction of the appropriate operating or corporate department of the Company based on its business line, and the execution of its operations is managed and supervised by that department. Important matters pertaining to the management of individual Group companies are communicated to the Company via the supervisory department, and these matters are referred and reported to the Board of Directors, the Executive Council, and other important meetings as necessary.

Corporate Governance Structure of the JX Nippon Mining & Metals Group



Internal Control System

The JX Nippon Mining & Metals Group has drawn up a basic policy for the establishment and operation of an internal control system, laying out rules on such matters as corporate governance, compliance, internal auditing, and risk management. Based on this policy, we are establishing an internal control system that ensures operations are carried out efficiently and properly.

Internal Control Council

To develop and operate the Group's internal control system, we set up the Internal Control Council as an advisory body to the president, with the role of monitoring the status of internal controls and holding discussions to address issues as necessary.

As a rule, the council meets once a year.

Internal Control Promotion Committee

The Internal Control Promotion Committee was set up for advising and assisting with the duties of the Internal Control Council. The committee's responsibilities include monitoring internal control activities.

As a rule, the committee meets twice each fiscal year, once in the first half and once in the second half of the year.

Compliance Initiatives

We make sure that the officers and employees of the Group comply with laws, regulations, and other rules.

We are building an organizational structure for compliance, aimed at ensuring corporate activities are conducted fairly, and at increasing public trust in the Group. To those ends, we are implementing a multi-layered system of checks, providing relevant rules and regulations, and enhancing education to raise awareness, among other initiatives.

Compliance Committee

Measures related to compliance in the Group, including basic policy, priority issues for the fiscal year, and education, are determined at meetings of the Compliance Committee (held twice a year as a rule). The committee consists mainly of the officers in charge of compliance at each department of the Company and at major Group companies in Japan and overseas. It receives reports on the status of compliance from each department of the Company and from Group companies. Based on these reports, the committee evaluates the risk of fraudulent acts, legal violations, and other misconduct related to business operations and reflects its conclusions primarily in setting priority issues and formulating educational plans.

Whistleblower Program

To increase the reliability of the whistleblower program in the Group, we asked an external organization to take over responsibility for accepting reports under the program and adopted a policy of accepting anonymous reports.

To spread awareness of the program throughout the Group, we have taken a range of measures, such as displaying posters to publicize the program at operating sites, handing out pocket editions of the JX Group Mission Statement to all employees, creating a section on the Company intranet dedicated to the program, and including the program in compliance education sessions.

Matters reported under the program are all treated appropriately in accordance with relevant rules and regulations.

In fiscal 2014, multiple reports were confirmed. Necessary measures were carried out for all incidents, while due care was taken to protect the whistleblowers.

Performance regarding Key Compliance Goals in Fiscal 2014

1. Provision of compliance rules and ensuring full compliance

(1) Checking and improving the implementation of compliance rules

We determined the extent to which compliance rules were being implemented at each Group company, and took steps to rectify organizational or operational issues that were identified.

(2) Implementing anti-bribery measures in Japan and overseas

We drew up anti-bribery rules, and after a trial period, put them into effect in October 2014. Before the rules went into operation, explanatory meetings on the rules were held 16 times for approximately 350 employees in Japan and at overseas Group companies, in the latter case including Japanese and local staff. The extent to which rules were being implemented was audited at the end of the fiscal year.

(3) Taking steps to eliminate association with antisocial forces

In July 2014, we put into operation a program for dealing with "antisocial forces" (the term used to refer to organized crime groups in Japan). The measures the program requires of business partners include signing a memorandum of understanding on the elimination of antisocial forces and undergoing screening by an external specialist organization. Progress in implementing the program was audited at the end of the fiscal year.

2. Effective response to matters identified in inspections of environment and safety-related compliance and labor compliance

In fiscal 2014, we conducted inspections of environment and safety-related compliance at six of the Group's operating sites to confirm their compliance with laws and regulations relating to the environment and safety. Overall, laws and regulations on the environment and on occupational health and safety were well understood at these sites, and the inspections did not find any significant deficiencies in comprehension.

Inspections of labor compliance were also conducted at five Group operating sites during fiscal 2014, for the main purpose of checking various systems related to working conditions and how they were being implemented. Appropriate measures were taken to address matters identified in these inspections.

3. Enhancing compliance knowledge and awareness among officers and employees

A total of 41 compliance education sessions were held, as part of training geared to each level and operating site, or as training on laws and legal affairs (security trade control, the Waste Management and Public Cleansing Act, the Stamp Tax Act, etc.). These sessions were attended by around 1,300 people in total.

4. Matters identified in compliance inspections: Implementation and effective response

Besides addressing matters identified in the compliance inspections conducted in fiscal 2013, we carried out inspections in fiscal 2014 aimed at determining the status of legal compliance in each department, operating site, and affiliated company. These included investigations, questionnaires, interviews, self-statements, environment and safety audits, reports of close calls, and the abovementioned inspections of environment and safety-related compliance and labor compliance.

Compliance training for officers

Information Management

1. Protection of personal information

The Group strives to properly handle personal information by setting forth Personal Information Protection Rules and taking other necessary measures based on the situation at each Group company.

2. Information security

We have drawn up the JX Metals Group Information Security Regulations and accompanying Information Security Guidelines, and we implement security measures governing the use of computers, networks, and USB memory devices in the Company.

Strengthening Institutional Measures for Compliance with Anti-bribery and Competition Laws

The JX Nippon Mining & Metals Code of Conduct calls for "Compliance with laws and regulations and engagement in fair trade." In line with this requirement, we take measures to ensure not only that laws, regulations, rules, and guidelines are observed but also that social norms are followed to engage in fair, transparent, and free competition and transactions, both in Japan and overseas. Given the growing trend in countries around the world to make anti-bribery and competition laws more rigorous, we have devised internal rules promoting the observance of these laws, strengthening our institutional approach for ensuring fair, transparent, and free transactions.

As specific measures, we are taking the initiatives on the right regarding each of the rules, and we held explanatory meetings prior to putting the rules into operation aimed at making the Group's employees thoroughly familiar with them.

JX Metals Group Regulation for Preventing Bribery

Summary of initiative

Carry out the required checks prior to business entertainment for public officials, transactions with agents, and similar events.

Explanatory meetings

Held 16 times, at the Head Office, operating sites (Kurami, Isohara, Hitachi), domestic Group companies, Group companies in China, and Nikko Metals Taiwan.

JX Metals Group Regulation for Compliance with Competition Laws

Summary of initiative

Carry out the required checks prior to attending gatherings of competing firms or engaging in transactions that may violate competition laws.

Explanatory meetings

Held at the Head Office and for domestic and overseas Group companies.

VOICE

Kayoko Senda
Assistant Manager,
Administration Department
(Legal)

Our efforts to ensure compliance with anti-bribery and competition laws

Having adopted as a tenet of our Code of Conduct "Compliance with laws and regulations and engagement in fair trade," the Group considers a major premise of its business activities to be the observance of anti-bribery and competition laws, engaging in fair, transparent, and free competition and transactions. With various countries moving to strengthen these laws in recent years, it is all the more important for us, as a global group, to take measures for preventing illegal actions in our business activities.

Since fiscal 2014, the Group has been strengthening its organizational approach to ensure anti-bribery and competition laws are observed. For preventing illegal acts, however, nothing is more important than getting each officer and employee to be aware of the risks present in their daily work, and to behave with full understanding of the rules. We plan to continue making strong efforts to educate officers and employees, and through regular checks of implementation, we will work hard to prevent behavior in violation of anti-bribery and competition laws.

Risk Management

Starting in fiscal 2015, the JX Nippon Mining & Metals Group is creating and putting into operation an organizational structure for further enhancing risk management from a Groupwide perspective.

Risk Management Council

A Risk Management Council was established in July 2015 as an advisory body to the president. Besides the comprehensive identification of risks for the Group, the council selects material risks that need to be addressed individually, and deliberates ways of responding to them. Given the diverse risks that exist in operating a business, we have engaged the services of Attorney Hideaki Kubori, founding partner of Hibiya Park Law Offices and leading authority on corporate governance, as an advisor to the council, which is expected to help to energize the discussions.

The council meets twice a year as well as at other times when necessary.

Establishment of a Risk Management Office

As part of efforts to enhance the approach to risk management in the Group, we established a Risk Management Office on July 1, 2015. The office serves as the secretariat to the Risk Management Council, while also carrying out risk surveys in the Group as a whole and implementing educational programs for enhancing the risk sensitivity of employees, among other duties.

Activities in Fiscal 2015

Through the following activities in fiscal 2015 and in other ways, we will endeavor to build a foundation for strengthening risk management in the JX Nippon Mining & Metals Group.

1. **Selecting material risks (risk surveys)**
   We are conducting risk surveys using questionnaires to identify hidden risks of the Group and selecting those of highest materiality.
2. **Proactively addressing material risks (improvement of investment control processes)**
   Prior to the selection of material risks, a working group is being launched to address improvement of investment control processes, an issue that is of particular importance to Group administration.
3. **Raising risk awareness**
   Through risk surveys and training, we will seek to raise risk awareness.

Initial meeting of the Risk Management Council, with Mr. Kubori attending

Internal Auditing

Internal auditing is carried out to investigate, study, and assess the status of business administration, operations, and assets preservation throughout the Group from the standpoints of their legality, efficiency, and effectiveness. The Internal Audit Department is responsible for these functions.

The Internal Audit Department draws up a medium-term policy at about three-year intervals and drafts auditing plans for each fiscal year, carrying out internal auditing on a fixed schedule. In addition, we have expanded the coverage and frequency (to annual) of audits by collaborating and cooperating with corporate auditors sent from the Company to Group companies.

The JX Nippon Mining & Metals Group's CSR Issues and GRI G4 Guidelines' Categories and Aspects

CSR Issues	Description	Material Issues	Corresponding Categories or Subcategories: Aspect	Main Boundaries
Establishing a global organizational governance system	1 Establish internal control systems for ensuring operations are carried out effectively and properly 2 In assessing the "propriety of operations," adopt a broad viewpoint including ethics, global trends, and the views of stakeholders 3 Establish mechanisms for checking progress in implementing 1 and making corrections 4 Include overseas operating sites as well as domestic ones in 1 to 3		—	Inside the organization
Promoting communication	1 Maintain close communication with each stakeholder to keep track of developments and problem areas regarding each CSR issue		—	Inside and outside the organization (all stakeholders)
Creating sustained economic value and providing stakeholders with fair returns	1 Continually create an appropriate level of economic value (profit) through the conduct of business 2 Use the economic value thus created to provide stakeholders with fair returns		Economic: Economic Performance Economic: Market Presence Economic: Indirect Economic Impacts Economic: Procurement Practices	Inside and outside the organization (shareholders, investors, local communities, employees)
Respecting human rights	1 Keep the business free of discrimination, child labor or forced labor, violations of indigenous rights, and violations of employee rights 2 Establish mechanisms for checking progress in implementing 1 and making corrections 3 Establish a system for educating employees regarding 1		Human Rights: Investment Human Rights: Non-Discrimination Human Rights: Freedom of Association and Collective Bargaining Human Rights: Child Labor Human Rights: Forced or Compulsory Labor Human Rights: Security Practices Human Rights: Indigenous Rights Human Rights: Supplier Human Rights Assessment Human Rights: Human Rights Grievance Mechanisms	Inside and outside the organization (local communities, employees)
Developing and utilizing human resources	1 Promote the use of diverse human resources (including foreign nationals, women, and people with disabilities) 2 Promote worker training and skills improvement 3 Provide a favorable working environment	○	Labor Practices and Decent Work: Diversity and Equal Opportunity Labor Practices and Decent Work: Training and Education	Inside the organization (employees)
Ensuring occupational health and safety	1 Ensure health and safety in the workplace	○	Labor Practices and Decent Work: Occupational Health and Safety	Inside the organization (employees)
Providing fair and equitable conditions of work	1 Provide appropriate labor agreements and conditions of work 2 Provide equal employment opportunities regardless of gender, nationality, or place of origin 3 Maintain ongoing dialogue with workers and institute necessary corrective measures		Labor Practices and Decent Work: Employment Labor Practices and Decent Work: Labor/Management Relations Labor Practices and Decent Work: Equal Remuneration for Women and Men Labor Practices and Decent Work: Labor Practices Grievance Mechanisms	Inside the organization (employees)
Using resources effectively	1 Endeavor to reduce the use of raw materials, energy, and water by reducing consumption intensity and promoting recycling and reuse	○	Environmental: Materials Environmental: Energy Environmental: Water	Inside and outside the organization (local communities, global society, global environment)
Protecting the environment	1 Promote reduction in emissions (including GHG), discharged effluent, and wastes, while carrying out proper management 2 Endeavor to protect ecosystems 3 Establish mechanisms for checking progress in implementing 1 and 2 and making corrections 4 When choosing suppliers, take into account their implementation of 1, 2, and 3	○	Environmental: Biodiversity Environmental: Emissions Environmental: Effluents and Waste Environmental: Transport Society: Closure Planning*	Inside and outside the organization (local communities, global society, global environment)
Insisting on full compliance	1 Comply with laws (on the environment, labor, competition, anti-bribery) in conducting business 2 Establish mechanisms for checking progress in implementing 1 and making corrections 3 Establish a system for educating employees regarding 1	○	Society: Anti-corruption Society: Anti-competitive Behavior Society: Compliance Environmental: Compliance	Inside the organization (employees, customers, consumers)
Promoting social responsibility in the entire supply chain	1 Address each CSR issue, focusing not just within the Company, but broadening the boundary to encompass suppliers and employees, etc.		Human Rights: Supplier Human Rights Assessment Labor Practices and Decent Work: Supplier Assessment for Labor Practices Environmental: Supplier Environmental Assessment Society: Supplier Assessment for Impacts on Society	Inside and outside the organization (employees, customers, consumers)
Promoting innovation in technology and productivity	1 Through innovation in products and production technology, contribute to the sustainable development of society in such areas as greater convenience, effective use of resources, and preventing environmental pollution		—	Inside the organization (all stakeholders)
Raising customer satisfaction	1 Achieve timely and stable supply of products and services needed by customers 2 In providing products and services, take all due measures to ensure customer health and safety 3 Take steps to protect customer information 4 Always listen to customer views and respond to them as needed		Product Responsibility: Customer Health and Safety Product Responsibility: Marketing Communications Product Responsibility: Customer Privacy Product Responsibility: Compliance Product Responsibility: Materials Stewardship*	Inside and outside the organization (employees, customers, consumers)
Promoting community involvement and development	1 Promote coexistence and coprosperity with local communities by preventing harmful impacts and providing benefits 2 Maintain ongoing dialogue and take necessary corrective measures		Society: Local Communities Society: Grievance Mechanisms for Impacts on Society Society: Emergency Preparedness* Society: Artisanal and Small-scale Mining (ASM)* Society: Resettlement* Environmental: Environmental Grievance Mechanisms	Outside the organization (local communities)

* Sector-specific aspects

GRI Content Index

This report is in accordance with the Core option defined by the GRI G4 Guidelines.

General Standard Disclosures

GRI indicator	Description of indicator	Page(s)	Relevant contents
Strategy and Analysis			
G4-1	A statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability.	P.3-6	Message from the President
Organizational Profile			
G4-3	Name of the organization.	P.37	Corporate Data (Company Name)
G4-4	Primary brands, products, and services.	P.31-37	Segment Overview and Progress in Meeting 2nd Medium-Term Management Plan (Resources Development Business, Smelting and Refining Business, Electronic Materials Business, Recycling and Environmental Services Business, Titanium Business), Corporate Data (Business Lines)
G4-5	Location of the organization's headquarters.	P.37	Corporate Data (Head Office)
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	P.37	Production Sites in Japan and Overseas Operating Sites Corporate Data (Domestic, Overseas)
G4-7	Nature of ownership and legal form.	P.37	Corporate Data (Company Name, Paid-in Capital)
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	P.30	Segment Information, Net sales by region
G4-9	Scale of the organization, including: • Total number of employees • Total number of operations • Net sales • Total capitalization broken down in terms of debt and equity • Quantity of products or services provided	P.47	Employees Active in Japan and Overseas (No. of employees <by employment status and employment contract type; as of March 31, 2015>)
		P.37	Production Sites in Japan and Overseas Operating Sites
		P.37	Corporate Data (Net Sales, Total Number of Employees)
		P.29	Financial Performance (consolidated) (Net sales, Total assets and total liabilities)
		P.60	Our Business Activities and the Environment (Mass Balance Table for the Group <Principal products>)
G4-10	Total number of employees by employment contract and gender, etc.	P.47	Employees Active in Japan and Overseas
G4-11	Percentage of total employees covered by collective bargaining agreements.	P.46	Maintaining Good Labor-Management Relations (Membership in labor unions)
G4-12	Organization's supply chain.	P.11-12	Supply Chain and Stakeholders
G4-13	Reporting of any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	—	Not applicable
G4-14	Reporting of whether and how the precautionary approach or principle is addressed by the organization.	P.59	Compliance with the REACH Regulation
		P.75	Participation in the United Nations Global Compact
G4-15	List of externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	P.74-75	Communicating Internationally (Endorsement of and Support for the Extractive Industries Transparency Initiative <EITI>, Participation in the United Nations Global Compact)
G4-16	List of memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization: • Holds a position on the governance body • Participates in projects or committees • Provides substantive funding beyond routine membership dues • Views membership as strategic	P.74-75	Communicating Internationally (As a Member Company of the ICMM), Communication with Industry Organizations
Identified Material Aspects and Boundaries			
G4-17	List of all entities included in the organization's consolidated financial statements or equivalent documents, etc.	P.2	Group Companies Covered by This Report
G4-18	Process for defining the report content and the Aspect Boundaries, etc.	P.9-10	Our Six Material Issues
G4-19	List of all the material Aspects identified in the process for defining report content.	P.9-10, 81	Our Six Material Issues, The JX Nippon Mining & Metals Group's CSR Issues and GRI G4 Guidelines Categories and Aspects
G4-20	For each material Aspect, reporting of the Aspect Boundary within the organization.	P.2, 81	Group Companies Covered by This Report, The JX Nippon Mining & Metals Group's CSR Issues and GRI G4 Guidelines Categories and Aspects
G4-21	For each material Aspect, reporting of the Aspect Boundary outside the organization.	P.81	The JX Nippon Mining & Metals Group's CSR Issues and GRI G4 Guidelines Categories and Aspects

GRI indicator	Description of indicator	Page(s)	Relevant contents
G4-22	Reporting of the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	P.55	Initiatives for Effective Resource Use and Waste Reduction (Discharge Volumes)
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries.	P.2	Group Companies Covered by This Report * With the start of production at the Caserones Copper Mine, the actual performance of SCM Minera Lumina Copper Chile on the environmental area from the second half of fiscal 2014 has been added.
Stakeholder Engagement			
G4-24	List of stakeholder groups engaged by the organization.	P.11-12	Supply Chain and Stakeholders
G4-25	Basis for identification and selection of stakeholders with whom to engage.	P.11-12	Supply Chain and Stakeholders
G4-26	Organization's approach to stakeholder engagement.	P.11-12, 14	Supply Chain and Stakeholders CSR Survey
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns.	P.11-12, 14	Supply Chain and Stakeholders CSR Survey
Report Profile			
G4-28	Reporting period for information provided.	P.2	Reporting Period
G4-29	Date of most recent previous report.	P.2	Publication Date
G4-30	Reporting cycle.	P.2	Publication Date
G4-31	Contact point for questions regarding the report or its contents.	Back cover	"Send your views on this report to:"
G4-32	The 'in accordance' option the organization has chosen, the GRI Content Index for the chosen option, and the reference to the External Assurance Report.	P.82-85	GRI Content Index
G4-33	Organization's policy and current practice with regard to seeking external assurance for the report, etc.	P.86	Independent Assurance Report
Governance			
G4-34	Governance structure of the organization.	P.13, 77	CSR Committee and Its Subcommittees, Corporate Governance System
Ethics and Integrity			
G4-56	Organization's values, principles, standards, and norms of behavior.	P.7, 8	JX Group Mission Statement, JX Nippon Mining & Metals Code of Conduct

Specific Standard Disclosures

GRI indicator	Description of indicator	Page(s)	Relevant contents
Category: Environmental			
Aspect: Materials			
DMA	Management approach.	P.9-10, 49, 51, 52, 55	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Environmental Management System (Environmental Auditing), Initiatives for Effective Resource Use and Waste Reduction (Fundamental Policy)
EN1	Materials used by weight or volume.	P.56, 60	Activity Results in Fiscal 2014 (Usage of Recycled Resources as Raw Materials), Our Business Activities and the Environment (Mass Balance Table for the Group <Raw materials>)
EN2	Percentage of materials used that are recycled input materials.	P.56	Activity Results in Fiscal 2014 (Usage of Recycled Resources as Raw Materials)
Aspect: Energy			
DMA	Management approach.	P.9-10, 49, 51, 52	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Numerical Goals of 3rd Medium-Term Action Plan (fiscal 2013 to 2015), Environmental Management System (Environmental Auditing), Initiatives to Address Global Warming (Fundamental Policy)
EN3	Energy consumption within the organization.	P.53, 60	Activity Results in Fiscal 2014 (Energy Consumption and Energy Consumption Intensity in Manufacturing Activities), Our Business Activities and the Environment (Mass Balance Table for the Group <Energy>)
EN4	Energy consumption outside of the organization.	P.54	Activity Results in Fiscal 2014 (Energy Consumption and CO_2 Emissions in the Logistics Stage)
EN5	Energy intensity.	P.53	Activity Results in Fiscal 2014 (Energy Consumption and Energy Consumption Intensity in Manufacturing Activities)
EN6	Reduction of energy consumption.	P.53	Activity Results in Fiscal 2014 (Energy Consumption and Energy Consumption Intensity in Manufacturing Activities)

GRI indicator	Description of indicator	Page(s)	Relevant contents
Aspect: Water			
DMA	Management approach.	P.9-10, 49, 51, 52, 55	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Environmental Management System (Environmental Auditing), Initiatives for Effective Resource Use and Waste Reduction (Fundamental Policy)
EN8	Total water withdrawal by source.	P.55, 60	Activity Results in Fiscal 2014 (Effective Use of Water Resources <Water Usage>), Our Business Activities and the Environment (Mass Balance Table for the Group <Water>)
Aspect: Biodiversity			
DMA	Management approach.	P.9-10, 49, 51, 52, 61	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Environmental Management System (Environmental Auditing), Initiatives for Biodiversity (Fundamental Policy)
EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	P.61	Activities at the Caserones Copper Mine
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	P.61	Activities at the Caserones Copper Mine, Activities in Japan
EN13	Habitats protected or restored.	P.61	Activities at the Caserones Copper Mine, Activities in Japan
MM1	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated.	P.61	Activities at the Caserones Copper Mine
MM2	Number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place.	P.61	Activities at the Caserones Copper Mine
Aspect: Emissions			
DMA	Management approach.	P.9-10, 49, 51, 52	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Numerical Goals of 3rd Medium-Term Action Plan (fiscal 2013 to 2015), Environmental Management System (Environmental Auditing), Initiatives to Address Global Warming (Fundamental Policy)
EN15	Direct greenhouse gas (GHG) emissions (Scope 1).	P.53-54, 60	Activity Results in Fiscal 2014 (CO_2 Emissions from Energy Consumption for Manufacturing Activities <CO_2 Emissions from Energy Consumption>, CO_2 Emissions Other Than from Energy Consumption, and Other Greenhouse Gas Emissions from Manufacturing Activities, Our Business Activities and the Environment (Mass Balance Table for the Group <Emissions>)
EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2).	P.53-54, 60	Activity Results in Fiscal 2014 (CO_2 Emissions from Energy Consumption for Manufacturing Activities <CO_2 Emissions from Energy Consumption>), Our Business Activities and the Environment (Mass Balance Table for the Group <Emissions>)
EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3).	P.54	Activity Results in Fiscal 2014 (Energy Consumption and CO_2 Emissions in the Logistics Stage)
EN18	Greenhouse gas (GHG) emissions intensity.	P.53-54	Activity Results in Fiscal 2014 (CO_2 Emissions from Energy Consumption for Manufacturing Activities <CO_2 Emission Intensity at Smelters and Refineries>)
EN21	NOx, SOx, and other significant air emissions.	P.57, 60	Activity Results in Fiscal 2014 (Preventing Air Pollution <SOx Emissions Volume, NOx Emissions Volume>), Our Business Activities and the Environment (Mass Balance Table for the Group <Emissions>)
Aspect: Effluents and Waste			
DMA	Management approach.	P.9-10, 49, 51, 52, 55, 57	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Numerical Goals of 3rd Medium-Term Action Plan (fiscal 2013 to 2015), Environmental Management System (Environmental Auditing), Initiatives for Effective Resource Use and Waste Reduction (Fundamental Policy), Environmental Risk Management (Fundamental Policy)
EN22	Total water discharge by quality and destination.	P.55, 57	Activity Results in Fiscal 2014 (Effective Use of Water Resources <Discharge Volumes>, Preventing Water Pollution <COD, BOD>)
EN23	Total weight of waste by type and disposal method.	P.56	Activity Results in Fiscal 2014 (Reuse and Reduction of Waste <Volume of Final Disposal>)
EN24	Total number and volume of significant spills.	P.52	Environmental Accidents
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks.	P.62-63	Management of Closed Mines
Aspect: Compliance			
DMA	Management approach.	P.9-10, 49, 51, 52	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Environmental Management System (Compliance with Environmental Laws and Regulations, Environmental Auditing)
EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	—	In March 2015, SCM Minera Lumina Copper Chile was fined 76.2 billion Pesos (about US$11.8 million) by an environmental regulator for a breach on the environmental permit at the Caserones Copper Mine during construction in 2013 and paid it. SCM Minera Lumina Copper Chile has completed the appropriate response for this breach.

GRI indicator	Description of indicator	Page(s)	Relevant contents
Aspect: Transport			
DMA	Management approach.	P.9-10, 49, 51, 52	Our Six Material Issues, Title page for "The Environment", Voluntary Action Plan for Environmental Protection, Environmental Management System (Environmental Auditing)
EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce.	P.54	Activity Results in Fiscal 2014 (Energy Consumption and CO_2 Emissions in the Logistics Stage) * No significant environmental impacts from transporting the employees were identified in the results of the estimation.
Category: Social Sub-Category: Labor Practices and Decent Work			
Aspect: Labor/Management Relations			
DMA	Management approach.	P.9-10, 23-26, 38, 39, 40-41	Our Six Material Issues, Special Feature 2 Safety Initiatives of the JX Nippon Mining & Metals Group, Title page for "Employees", JX Nippon Mining & Metals Basic Policy on Health and Safety, Management Policy on Health and Safety, Organization for Occupational Health and Safety Management, Health and Safety Performance in 2014, Promoting Physical and Mental Health, Other Activities
LA5	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs.	P.39	Organization for Occupational Health and Safety Management (Meetings Related to Health and Safety)
LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.	P.40	Health and Safety Performance in 2014 (Occupational Accidents, Etc., Fatal Accident Occurrence)
LA8	Health and safety topics covered in formal agreements with trade unions.	P.46	Maintaining Good Labor-Management Relations
MM4	Number of strikes and lock-outs exceeding one week's duration, by country.	P.46	Maintaining Good Labor-Management Relations
Aspect: Training and Education			
DMA	Management approach.	P.9-10, 38, 43-44	Our Six Material Issues, Title page for "Employees", Education Programs for Human Resources Development (Enhancing Education Programs by Job Category)
LA9	Average hours of training per year per employee by gender, and by employee category.	P.44	Education Programs for Human Resources Development (Content of Level-Specific Education at JX Nippon Mining & Metals <Training programs implemented in fiscal 2014>)
LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	P.43-46	Education Programs for Human Resources Development, Initiatives Targeting Diversity
Aspect: Diversity and Equal Opportunity			
DMA	Management approach.	P.9-10, 38, 45	Our Six Material Issues, Title page for "Employees", Initiatives Targeting Diversity
LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	P.47, 77	No. of employees (by employment category; as of March 31, 2015), Corporate Governance System (Board of Directors)
Category: Society Sub-Category: Society			
Aspect: Anti-corruption			
DMA	Management approach.	P.9-10, 76-78, 80	Our Six Material Issues, Title page for "Corporate Governance", Corporate Governance System, Internal Control System, Compliance Initiatives (Compliance Committee, Whistleblower Program), Risk Management, Internal Auditing
SO4	Communication and training on anti-corruption policies and procedures.	P.78-79	Compliance Initiatives (Performance regarding Key Compliance Goals in Fiscal 2014)
SO5	Confirmed incidents of corruption and actions taken.	—	Not applicable
Aspect: Anti-competitive Behavior			
DMA	Management approach.	P.9-10, 76, 78-79	Our Six Material Issues, Title page for "Corporate Governance", Compliance Initiatives
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	—	Not applicable
Aspect: Compliance			
DMA	Management approach.	P.9-10, 76-80	Our Six Material Issues, Title page for "Corporate Governance", Corporate Governance System, Internal Control System, Compliance Initiatives (Compliance Committee, Whistleblower Program), Risk Management, Internal Auditing
SO8	Monetary value of significant fines and total number of nonmonetary sanctions for noncompliance with laws and regulations.	—	Not applicable
Aspect: Closure Planning			
MM10	Number and percentage of operations with closure plans.	—	At the Caserones Copper Mine, the production of copper concentrate was started in May 2014. It will close in 2040 due to the depletion of mineral resources.

Independent Assurance Report

Independent Assurance Report

To the President and Chief Executive Officer of JX Nippon Mining & Metals Corporation

We were engaged by JX Nippon Mining & Metals Corporation (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with ☑ for the period from April 1, 2014 to March 31, 2015 (the "Indicators") included in its Sustainability Report 2015 (the "Report") for the fiscal year ended March 31, 2015; the Company's self-declaration that the Report is prepared in accordance with the Global Reporting Initiative's G4 Sustainability Reporting Guidelines (the "G4 Guidelines") at a core level; the alignment of the Company's policies to the International Council on Mining and Metals ("ICMM")'s 10 Sustainable Development ("SD") Principles and the applicable mandatory requirements set out in ICMM position statements; the Company's identification and prioritization of material issues; and the Company's approach and management of its material issues.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report, which are derived, among others, from the G4 Guidelines; self-declaring that the Report is prepared in accordance with the criteria stipulated in the G4 Guidelines; reporting on the alignment of the Company's policies to the ICMM's 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements; reporting on the Company's identification and prioritization of material issues; and reporting on the Company's approach and management of its material issues.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information', 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines for the Assurance of Sustainability Information' of J-SUS. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also recalculating the Indicators.
- Visiting to the Company's domestic factory selected on the basis of a risk analysis.
- Evaluating the overall statement in which the Indicators are expressed.
- Evaluating the Company's self-declaration that the Report is prepared in accordance with the G4 Guidelines at a core level against the criteria stipulated in the G4 Guidelines.
- Assessing the alignment of the Company's policies to the ICMM's 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements through documentation reviews and interviews.
- Interviewing with the Company's responsible personnel and reviewing documents with respect to the Company's process of identifying and prioritizing its material issues.
- Interviewing with the Company's responsible personnel and reviewing documents with respect to the Company's approach to and management of its material issues.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that:

- the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report;
- the Company's self-declaration that the Report is prepared in accordance with the G4 Guidelines at a core level does not conform to the criteria stipulated in the G4 Guidelines;
- the Company's policies are not aligned to the ICMM's 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements as described on page 74;
- the Company has not identified and prioritized its material issues as described on pages 9 and 10; and
- the Company has not approached and managed its material issues as described on pages 23-26, 31-36, 39-46, 50-51, 53-56, and 77-80.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
October 26, 2015

The Future of Energy, Resources and Materials

JX Nippon Mining & Metals Corporation

We welcome your views regarding *Sustainability Report 2015* and your suggestions on how to make the next report even better.

Send your views on this report to:

Public Relations and CSR Department
JX Nippon Mining & Metals Corporation
6-3, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-8164, Japan

Our address will change to the following from January 2016:
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THE GLOBAL COMPACT
COMMUNICATION ON PROGRESS

This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

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