






Sustainability Report 2013

JX Nippon Mining & Metals Corporation

To Our Readers

Editorial Policy

The JX Nippon Mining & Metals Group ("the Group") is committed to fulfilling its corporate social responsibility (CSR). In every facet of our business activities, we are therefore dedicated to assisting the sustainable development of *society*.

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

Our *Sustainability Report 2013* has been prepared in accordance with the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), the GRI Mining and Metals Sector Supplement, as required by the 10 sustainable development principles of the International Council on Mining and Metals (ICMM) and the ICMM's Assurance Procedures. This Report also describes that the activities introduced in it fall into which of the 10 issues of the Group's Code of Conduct and the JX Group Values "EARTH".

Boundary of the Report

The Report covers JX Nippon Mining & Metals Corporation ("the Company") as well as its 54 major domestic and overseas affiliated companies as of April 1, 2013. Further, the reporting boundaries of respective indicators are as follows.

Boundaries of the Data	Domestic	Overseas	Total
Economic Data*1	13	11	24
Environmental Data	12*2	4*3	16
Social Data*4	37	18	55

*1. This represents the number of reporting companies covered in the "Economic Effects on Stakeholders" section of the *Economic Activities Report*. Consolidated subsidiaries are included except those that do not conduct business activities.
*2. Included are operating sites that engage in production activities and which the Company controls directly and companies that have relatively substantial environmental impacts, specifically companies that operate factories classified as a Type 1 or Type 2 Designated Energy Management Factory or companies for which reporting is required under the laws and regulations pertaining to the Pollutant Release and Transfer Register (PRTR).
*3. The four companies included are Changzhou Jinyuan Copper Co., Ltd., Nippon Mining & Metals (Suzhou) Co., Ltd., JX Nippon Mining & Metals Philippines, Inc., and Gould Electronics GmbH.
*4. This represents the number of reporting companies covered in the "Involvement with Our Employees" section of the Company's *Social Activities Report*.

Group Companies Covered under This Report*1 (Company names as of April 1, 2013)

Resources Development
- Kasuga Mines Co., Ltd.
- JX Nippon Exploration and Development Co., Ltd.
- JX Nippon Drilling Co., Ltd.
- SCM Minera Lumina Copper Chile
- Compania Minera Quechua S.A.*2
- Pan Pacific Copper Exploration Peru S.A.C.*2

Smelting and Refining
- Pan Pacific Copper Co., Ltd.
- Hibi Kyodo Smelting Co., Ltd.
- Hibi Smelting Logistics Co. Ltd.*2
- Nissho Ko-un Co., Ltd.
- PPC Plant Saganoseki Co., Ltd.
- Pan Pacific Copper Shanghai Co., Ltd.
- Japan Copper Casting Co., Ltd.
- Changzhou Jinyuan Copper Co., Ltd.

Recycling and Environmental Services
- JX Nippon Environmental Services Co., Ltd.
- Kamine Clean Service Co., Ltd.
- JX Nippon Tomakomai Chemical Co., Ltd.
- JX Nippon Tsuruga Recycle Co., Ltd.
- JX Nippon Mikkaichi Recycle Co., Ltd.
- JX Nippon Kurobe Galva Co., Ltd.

Electronic Materials
- JX Nippon Mining & Metals USA, Inc.
- JX Nippon Mining & Metals Europe GmbH
- JX Nippon Mining & Metals Philippines, Inc.
- JX Nippon Mining & Metals Singapore Pte. Ltd.
- Gould Electronics GmbH
- Ichinoseki Foil Manufacturing Co., Ltd.
- JX Nippon Mining & Metals Korea Co., Ltd.
- Nikko Metals Hong Kong Ltd.
- JX Nippon Coil Center Co., Ltd.
- Nippon Mining & Metals (Suzhou) Co., Ltd.
- Nikko Fuji Precision (Wuxi) Co., Ltd.
- Nikko Metals Shanghai Co., Ltd.
- JX Metals Precision Technology Co., Ltd.*2
- JX Nippon Foundry Co., Ltd.

Other Business
- JX Metals Trading Co., Ltd.
- Nippon Marine Co., Ltd.
- JX Nippon Mining Ecomanagement, Inc.
- Yoshino Mines Co., Ltd.
- Oya Mines Co., Ltd.
- Hokuriku Mines Co., Ltd.

Publication Date

November 2013 (Publication date of previous report: November 2012)

Reporting Period

In principle, this Report covers our business activities for the period from April 2012 to March 2013 (fiscal 2012). In order to ensure comprehensive disclosure, however, certain information regarding important events that occurred prior to and/or after this period has been included.

☑ The indicators that are externally assured are marked with "☑."

For a more detailed explanation of the underlined text throughout this Report, please refer to the glossary on pp. 98–100.

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.
Shimoda Hot Spring Inc.
Toyoha Mine Co., Ltd.
JX Nikko Art & Craft Co., Ltd.
Nikko Metals Trading & Services (Shanghai) Co., Ltd.
Nikko Metals Taiwan Co., Ltd.
Materials Service Complex Malaysia Sdn. Bhd.

*1. Group companies included within the reporting boundaries of the "Involvement with Our Employees" section of the Social Activities Report.
*2. Companies newly added within the reporting boundary for this report (four companies).

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Message from the President

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

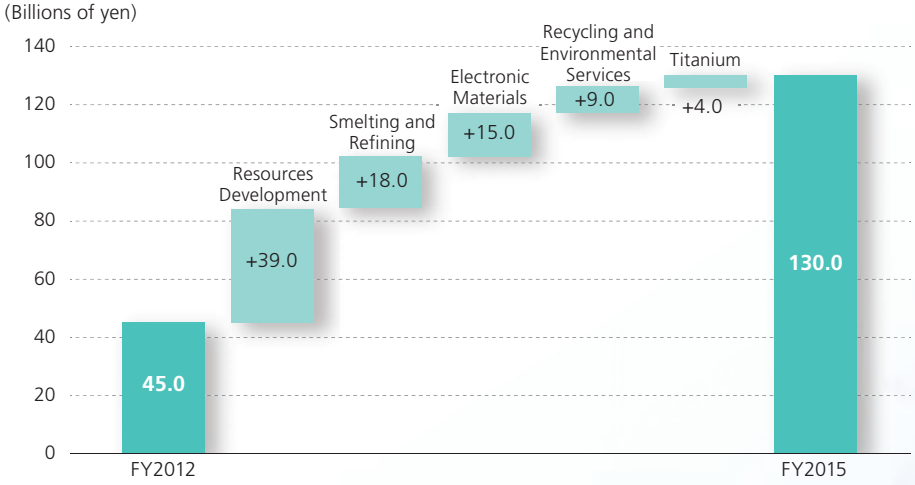
We will contribute to the development of a sustainable economy and society through innovation in the areas of energy, resources and materials

This concept of CSR activities being "nothing more or less than our business activities" applies to each of the JX Nippon Mining & Metals Group main businesses, namely, resources development, smelting and refining, electronic materials, and recycling and environmental services, each of which we regard with pride as contributing to the sustainable growth of the economy and society. As we put into practice our CSR activities, we draw on our JX Group Values (EARTH—Five Values) and our Code of Conduct.

Carrying out Our Medium-Term Management Plan for Fiscal 2013 to 2015 (2nd Medium-Term Management Plan)

Our Group recently drew up our 2nd Medium-Term Management Plan. Centering on the expansion of existing businesses and strategies for new businesses thought to be feasible in the near future, this plan is focused on aggressively increasing earnings. (See pp. 39–41 for details.) By the final year, fiscal 2015, the plan calls for raising our share to approximately one-third of the total earnings of the JX Group, which also include the petroleum refining and marketing business and the oil and natural gas exploration and production business. Achieving this earnings target will not only fulfill our mission as a core operating company of the JX Group, which aims to become one of the largest integrated energy, resources and materials business groups in the world, but will also raise our profile as a leading Japanese nonferrous metals corporation now emerging on the world stage. At the same time, the 2nd plan is the start of greater advances to be made toward meeting the bigger goals of the 3rd Medium-Term Management Plan, and toward achieving our Long-Term Vision by fiscal 2020.

The 2nd Medium-Term Management Plan (Ordinary income)



Core Tasks during the 2nd Medium-Term Management Plan

As we go forward with our 2nd Medium-Term Management Plan, I have asked all involved to keep in mind the following points.

Prioritizing Compliance and Safety

First of all, I am asking each officer and employee of our Group to take this opportunity once again to recognize the importance of compliance with laws and ordinances and of giving priority to safety. Both of these need to be instilled thoroughly in our corporate culture. The embezzlement of corporate funds recently discovered in a Group company, as well as major accidents in the past few years, are matters of deepest regret. These feelings of sadness and regret must not be forgotten. We must always be firm in our resolve that they never be allowed to happen again. We must then act upon that resolve to prevent a recurrence, making Group-wide efforts to strengthening our internal controls and our safety and health management. For people in a managerial position, in particular, it is important that they keep aware of the situation in their own workplace, gain a proper understanding of the workplace mission and responsibilities, and see that these are faithfully carried out. It is this kind of daily diligence that will lead to the achievement of good governance, with careful attention given to risk management and internal control.

Completing the Caserones Copper and Molybdenum Deposit Development Project

The second point is completion of the Caserones Copper and Molybdenum Deposit Development Project in Chile. This project is one in which our Group is playing a central role, and which can be seen as the first copper mining development project carried out solely by Japanese companies. Ever since we obtained the concession in 2006, we have been striving to overcome various difficulties, such as the harsh natural environment of the location which is more than 4,000 meters above sea level, and the rise in the prices of construction materials and labor costs that exceeds initial estimates. We have begun producing copper cathodes using the solvent extraction-electrowinning (SX-EW) process and expect to start copper concentrates production during 2013. Assuming the currently forecast movement in copper prices, we expect to obtain annual earnings from this project in the tens of billions of yen. Completion of this project will be a major contributing factor in achieving the earnings plans of our 2nd Medium-Term Management Plan. While it is still too early for certainty, we are cautiously looking forward to the first shipment of copper concentrates to our Group smelters.

Panoramic view of the Caserones Copper and Molybdenum Deposit (in March 2013)

Further Expanding and Raising Profitability of Midstream and Downstream Businesses

The third point is further expanding, as well as raising the profitability of, businesses other than resources development, namely, midstream and downstream businesses including smelting and refining, electronic materials, and recycling and environmental services. As I noted earlier, a major pillar of the 2nd Medium-Term Management Plan is completion of the Caserones Copper and Molybdenum Deposit Development Project. Without obtaining stronger growth and improved profitability in these midstream and downstream businesses, however, we will not be able to fully achieve the plan. It will be important for us to make good on new strategies, such as the already begun overseas procurement of recycled materials, and provision of electronic materials for automotive components. It will be essential to these ends that we improve our human resources, systems, governance, and other management infrastructure as well as raise the level of our technology development.

Developing Global Human Resources

Taking our business into a future of growth and expanded operations will depend on our ability to develop human resources who can play roles on the global stage. Up to now many of our Group employees have been active on the front lines of the world, in areas that include securing stable supplies of resources, developing electronic materials and markets for them, and ensuring stable procurement of recycled materials for urban mines development. Today we are working to develop human resources who will be able to play even more prominent roles in world markets. In fiscal 2012, we prepared an educational program for global readiness, and launched an overseas language training system (including not only English but also Chinese and Spanish) for all second-year employees who have completed university or graduate school. In addition to staff in sales and in technology development, for whom there have been many opportunities up to now for contributions outside Japan, we are now actively posting human resources abroad in management and indirect divisions, such as accounting, administration, legal affairs, and purchasing. Moreover, we are aggressively recruiting local staff in sites outside Japan, providing them with Japanese language training and OJT at our head office and plants in Japan. We would like to give the opportunity of playing an active role in the global arena to any Group employee who wishes to do so. That is another reason why we are working hard to develop an abundance of global human resources.

Our Group Vision

Material Issues for CSR Activities

For the continuation of our business, it is important that we actively promote CSR, fulfill our responsibility to society, and earn the trust of our stakeholders. In consideration of the core tasks described earlier, the CSR Committee adopted in April 2013 the following five items as material issues for the Group's CSR activities. (See p. 12 for details.)

- Improving and strengthening the internal control system
- Creating a culture of safety
- Enhancing the human resource development program for full utilization of diverse human resources
- Establishing a recycling-oriented society
- Innovating productivity of resources and materials

The Future of Group CSR Activities

To advance Group operations and promote the points I have outlined above, we will need to carry out the kinds of CSR activities that are recognized by the international community. Already we have endorsed the basic principles and the position statements of the International Council on Mining and Metals (ICMM), which is dedicated to developing a sustainable society. We have also stated our support of the Extractive Industries Transparency Initiative (EITI) and the Ten Principles of the United Nations Global Compact. What is more, we are endeavoring to put these into practice. These initiatives are reported in this *Sustainability Report 2013*, in which we have complied with the G3 Sustainability Reporting Guidelines published by the Global Reporting Initiative (GRI) in 2006 and the GRI Mining and Metals Sector Supplement.

Moreover, by effectively implementing the plan-do-check-act (PDCA) cycle, we are putting into practice the notion that "CSR activities are nothing more or less than our business activities." I believe that if we do so thoroughly, this will inevitably lead to deepening and advancing the Group management and operations, with the result that our corporate value will increase.

Yoshimasa Adachi

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

JX Group Mission Statement

JX Group Slogan

The Future of Energy, Resources and Materials

JX Group Symbol

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.

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.

Communication with Stakeholders

Stakeholders of the Group

The business activities of the Group are supported by many stakeholders—individuals, organizations and communities who have a vested interest in the Group. Stakeholders that have close and regular ties with us and the major responsibilities and activities in regard to these stakeholders, as well as our major communication tools, are listed in the table below. We aim to establish and maintain strong relationships of trust with our various stakeholders through close communication.

Stakeholder		Major responsibilities and activities of the Group	Major communication tools
Customers	We consider it crucial to respond to the opinions and wishes of our customers, with whom we have frequent contact through our business activities.	■ Supplying value-bearing products ■ Providing product information from both safety and environmental perspectives ■ Further improving the quality of our products ■ Enhancing services ■ Ensuring a stable supply of our products	■ Introducing and supplying products and services ■ Consulting about newly developed products and other related matters ■ Providing product information from safety, environmental and supply perspectives ■ Exchanging information at exhibitions and other trade-related shows
Suppliers	We strive to foster relationships of mutual trust with our suppliers—one of our key business partners—to ensure the continuity of the Group's business.	■ Carrying out open and fair trade transactions ■ Promoting environmental protection based on the Basic Environmental Policy and the Green Purchase Guideline ■ Collaborating to realize more-efficient logistics and recycling ■ Providing our subcontractors with a comfortable safety and workplace environment	■ Conducting business through the daily transactions of JX Nippon Procurement Corporation ■ Providing environment and safety-related guidelines and others with our subcontractors
Shareholders and investors	As a core operating company of the JX Group, we remain accountable to our shareholders and investors. Accordingly, we make every effort to secure highly transparent corporate management.	■ Undertaking proper and prompt disclosure through the activities of JX Holdings, Inc. ■ Increasing corporate value from economic, environmental and social perspectives	■ Conducting shareholder meetings ■ Holding investor and other meetings hosted by JX Holdings, Inc.
Employees	While also key stakeholders in the Group's overall activities, employees play a central role in our CSR activities. We are building frameworks where each employee can reach his/her maximum capabilities.	■ Ensuring a work environment ■ Providing equal opportunities and securing diversity ■ Improving the Group's education and training program ■ Enhancing the level of employee satisfaction	■ Implementing the Self-Statement System ■ Holding meetings of the Labor–Management Council ■ Holding meetings of the Health and Safety Committee ■ Carrying out a survey regarding CSR issues ■ Conducting CSR Workshops
Industry-government-academia groups	We recognize that these groups are important partners in efforts to build new technologies and nurture the next generation of human resources.	■ Making proposals in a wide range of areas ■ Promoting the advancement of science and technology ■ Collaboration to enhance human resources development in the Group's business field	■ Joining various organizations and attending their regular conferences ■ Implementing joint research and development with universities and research institutions ■ Participating in national projects and other related events ■ Established the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering jointly with the University of Tokyo's Institute of Industrial Science
Local and global communities (Global environment)	Making the most of opportunities for exchange, we listen carefully to a multitude of voices from both local and global communities to efficiently develop our business activities. Also, we have taken steps to clarify our preferred policies and stance for addressing global environmental issues. These policies and our stance are reflected in our business activities.	■ Preserving the local environment by complying with environmental legislation and regulations ■ Preventing accidents and disasters at our domestic and overseas operating sites ■ Respecting cultures and customs in overseas countries	■ Contributing to local communities (participating in cleanup as well as disaster prevention activities) ■ Regularly conducting summer festivals and opinion-exchange meetings ■ Participating in various projects proposed by the ICMM ■ Sharing information and opinions at international conferences and other events
Nonprofit organizations (NPOs) and non-governmental organizations (NGOs)	We promote dialogue and collaborative ties with NPOs and NGOs that undertake distinctive programs and projects. The fruits of these discussions and this cooperation are reflected in the Group's CSR activities.	■ Implementing initiatives to conserve the global environment and assisting the sustainable development of society, as a member of the ICMM ■ Collaborating in social contribution activities across such fields as environmental protection ■ Collaborating in business development	■ Exchanging opinions with NPOs and NGOs ■ Supporting the activities of NPOs and NGOs

Five Material Issues of the JX Nippon Mining & Metals Group

The JX Nippon Mining & Metals Group addresses various economic, environmental and social challenges. From these challenges, five material issues that should be given priority in reporting to stakeholders were selected and consequently introduced in the *Sustainability Report 2013*.

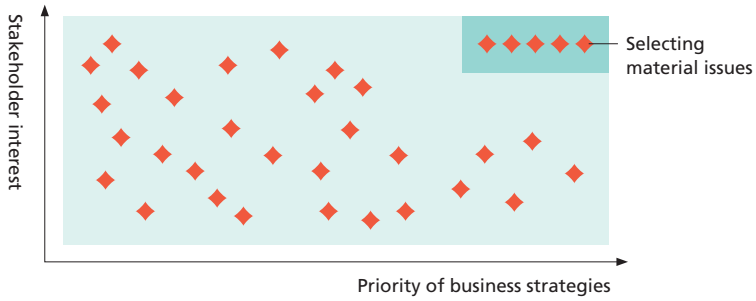
Review of Material Issues

Both external and internal environments of our business are changing constantly. With this in mind, we reviewed the material issues that the Group must prioritize before preparing the 2nd Medium-Term Management Plan. First, we classified the 46 issues that had been selected during the preparation process of the Sustainability Report 2013 into 10 thematic categories, specified in the Group Code of Conduct. Next, we condensed the 46 issues down to 35.

Materiality principle of Global Reporting Initiative (GRI) Guidelines

External factors	Internal factors
Relevant laws and regulations with strategic significance to the organization and its stakeholders	Key organizational values, policies, strategies, operational management systems, goals, and targets
Main topics and future challenges for the sector reported by peers and companies	The core competencies of the organization
Main sustainability interest/topics and indicators raised by stakeholders	The interests/expectations of stakeholders specifically invested in the success of the organization
Reasonably estimable sustainability impacts, risks, or opportunities identified through sound investigation by people with recognized expertise	Significant risks to the organization Critical factors for materializing organizational success

Concerning the 35 issues, based on the materiality principle of the GRI guidelines we decided the order of priority from the viewpoint of both external and internal factors. External factors include stakeholder interest, while internal factors include priority of business strategies.



Results of the Selection of Material Issues

After this process, the following five issues were selected as new material issues at the CSR Promotion Meeting held in April 2013.

Improving and strengthening the internal control system

We will review and improve our internal control system to ensure that we adequately conduct our Group business pursuant to relevant laws and regulations, as well as in-house rules. (See pp. 13–16 and pp. 45–48 for details.)

Creating a culture of safety

Maintaining employees' health and safety is an essential requisite for continuing any business. During fiscal 2012, the JX Group opened the JX Safety Education Center in Hitachi City, Ibaragi Prefecture. In addition, we established a new post, Senior Supervisor for Safety, reporting directly to the president. We will continue our efforts to create a culture of safety, along with a system that will prevent any occurrence of material accidents. (See pp. 17–19 and pp. 63–64 for details.)

Enhancing the human resource development program for full utilization of diverse human resources

In response to advanced globalization of our business, we are urged to develop human resources capable of promoting our business on a global basis. With this in mind, we will reinforce systems to encourage employees, who are expected to play leading roles in both our business and CSR activities, to be active in the international arena. At the same time, we will provide them with many more opportunities to exert their leadership globally. (See p. 20 and p. 66 for details.)

Establishing a recycling-oriented society

Recovering valuable metals from waste materials requires the smelting and refinery technologies that the Group has been developing for years. Accordingly, we believe that the Group must take the initiative in establishing a recycling-oriented society, as part of our efforts to realize sustainable economic and social development. (See pp. 21–24 for details.)

Innovating productivity of resources and materials

The JX Group regards CSR activities are nothing more or less than our business activities, and that through our business activities we can help realize sustainable economic and social development. To ensure a stable supply of resources and materials and thus meet social demands, we will constantly pursue innovation in the productivity of resources and materials. (See pp. 25–32 for details.)

Talk with Top Management

Thoroughgoing Compliance and Internal Control

The JX Nippon Mining & Metals Group, in keeping with the JX Group Values (EARTH) and our Code of Conduct, has consistently implemented thoroughgoing compliance measures and endeavored to enhance its internal control system. In spite of these efforts, however, a deeply regrettable incident occurred recently at one of our Group companies. Learning from this incident, we are making Group-wide efforts to further impress upon our employees the need for compliance, to prevent a recurrence of such incidents, and to strengthen our internal control system. Top management and other key persons behind these endeavors sat down to discuss their thoughts, as well as the tasks ahead, the significance of improvement measures, and future strategy.

Date: Friday, June 7, 2013 Place: Boardroom, Head Office

Compliance and Internal Control Lead to a More Dynamic Workplace

Noda: Our Group has been diligent in promoting compliance, but unfortunately some parts of the reality still falls short of the ideal. I believe that it comes down to a lack of awareness on the part of each individual, as well as inadequate organizational and operational management frameworks. I would like to ask each of you to give your thoughts, from your respective standpoints, and your ideas about what needs to be done to improve the situation.

Adachi: Thinking about the importance of enhancing compliance and internal control while examining the facts behind the recent misconduct, we need to raise the awareness of each officer and employee, and to improve the management structure of our company. At the same time, it is extremely important for those in managerial positions to have an accurate understanding of their own responsibilities and to fulfill them faithfully. With this in mind, I have held face-to-face meetings over the past few months with people in managerial positions—namely, the officers and general managers of our company and the presidents of Group companies—to make them aware once again of their responsibilities and ask them to perform their duties even more faithfully. In another six months, I will meet with them again to ask them to report on how things are going. Managerial personnel are not just expected to raise the performance of their department. I want them to be aware of their important responsibility to create a bright and open organization and workplace, which includes guiding those under them—in other words, I want them to understand their management responsibility more fully. It is also my fervent hope that carrying out these responsibilities will further invigorate the Group as a whole.

Yamaki: As someone responsible for compliance and internal control, I am constantly reminding employees that these are the foundation on which human resources and workplaces are built, that they are part of an aggressive management strategy for carrying out operations smoothly, and that they need to be carried out for your own sake even more than for the company's sake. In each case, the stance is exactly the same as

that by which we need to approach safety, disaster prevention, and environmental protection.

What Are Compliance and Internal Control?
What Is Our Future Vision for the Company?

Kawaguchi: We can think of internal control, compliance, and auditing as each having their respective roles. I understand internal control as a system that enables company officers and employees to perform their work efficiently while observing laws and ordinances as well as the company rules including the Articles of Incorporation. And the most important element of internal control is compliance. Auditing means checking and investigating whether compliance has been achieved. Compliance and auditing are therefore included in internal control.

Adachi: I see compliance as essentially a matter of maintaining common sense. People may tend to see compliance and internal control as clamping down or constraining, but I believe compliance should function quite well even if we think of it in terms of common sense and conscience.

Yoshihama: There are two kinds of auditing, accounting auditing and operational auditing. Basically the first is investigating whether accounting is being done properly in accord with accounting principles, while the latter determines whether the necessary rules and systems have been put in place and are being implemented properly. The Internal Auditing Office in its operational auditing determines the status of internal control and compliance, and if there are inadequacies it points these out and asks that corrections be made.

Kawada: Let me say a word about the relationship of compliance to CSR. From time to time, you hear the argument that compliance is part of CSR. Whatever a company may think, observance of laws and ordinances is our fundamental obligation as members of a state under the rule of law. CSR, on the other hand, I see as a responsibility that a company takes on voluntarily to ensure its business activities are good for society and the environment. CSR therefore goes beyond compliance, representing a responsibility to society that a company should perform. I suppose, in the sense of fulfilling responsibility, compliance and CSR could be considered the same. At the risk of being misconstrued, we could also say that compliance is rules and CSR is manners.

Iseki: I am in charge of human resources and labor affairs. When I think about strengthening internal control, therefore, the first thing that comes to mind is that perhaps the time has come for us to revisit the approach the company has taken up to this time of having a “small but highly skilled workforce” and an organization composed of a compact head office and indirect divisions. This approach has served us reasonably well to date, helping us to deal with a challenging business climate. Nonetheless, considering the need to deploy personnel optimally as we take our company in new directions including globalization, I believe we need to take a completely new course for the sake of rotation as part of human resources development and for dealing with sick leave and other kinds of accidents. In other words, I feel the need to build an organizational structure with more personnel depth, both in quality and quantity. Naturally this includes building up the readiness for strengthening our internal control system and supporting management by those in managerial positions.

Adachi: It’s true that there was a time when our priority was on cutting costs and we were unable to spend money even on things that were necessary. Today, though, our Group has grown under the 2nd Medium-Term Management Plan into an enterprise eyeing the goal of 100 billion yen in ordinary income. Now that we are able to invest in what is necessary, we need to build a structure befitting our business operations, including from a personnel standpoint. We are on the way to becoming the kind of financially sound enterprise that can continue to increase earnings and invest in the next phase of strategy. A major premise for this is making sure that compliance and internal control are implemented throughout every single part of the Group.

● Participants

Yoshimasa Adachi
President & CEO, Chairman of the CSR Committee

Nobuyuki Yamaki
Director, Deputy Chief Executive Officer

Koichi Yoshihama
General Manager,
Internal Auditing Office

Takafumi Katono
General Manager, Internal Control Office, Administration Dept.

Masatoshi Kawada
General Manager,
Public Relations & CSR Dept.

Takao Iseki
Manager, Human Resources and Labor Affairs Section, Human Resources Dept.

Yoshiyuki Kawaguchi
Manager, Legal Affairs Section, Administration Dept.

Mayu Noda (Moderator)
Assistant Manager, Legal Affairs Section, Administration Dept.

Kawaguchi: I am concerned that there is a tendency for the word "compliance" to take on a life of its own in people's minds. We must avoid restricting our activities more than necessary and stopping proper thought and analysis altogether at the very sound of the word "compliance." In fact, compliance is something we should be using to our advantage. Take our relations with customers, for example. Laws and ordinances should be seen not as simply a constraint on our words and deeds, but as tools to be used for asking for fairness also on the part of our customers.

Noda: On May 1, 2013, the Internal Control Office was established in the Administration Department. I would like to ask Mr. Katono, a general manager of the office, how he feels about hisduties.

Katono: Some time ago, I was posted to the Philippines. Thinking back to those days, I remember feeling constant anxiety about the risks associated with being overseas and wondering how to deal with incidents that might occur. I believe that unease may have been because what today we call internal control was inadequate. As someone promoting internal control, I intend to work first of all on guidelines, regulations, and other rules. At the same time, we will be working to create the means and organizational structures for ensuring that these are administered properly. It makes no sense to create rules that no one can observe. I would therefore like to get a handle on the status of legal observance, that is, compliance, in the Group as a whole as soon as possible.

Responsibility and Trust of Managerial Personnel

Noda: Company officers and other managerial personnel are required not only to observe laws and ordinances themselves. Their managerial responsibilities are also called upon when problems arise involving managers or workers in their charge. They need to be aware that they may be held strictly accountable at times.

Kawaguchi: Responsibility is the flip side of authority. Each of us in our respective positions needs to think about our own authority and responsibility in this company. The responsibilities of company officers under the law are based on a relationship of mandate under the Civil Code, and therefore trace their origin to a

Western-style contract society. This is something we need to be well aware of. And as Ms. Noda pointed out, in cases that are not a question of legal responsibility but involve neglect of management or failure to perform duties, we need to understand that our management responsibility or ethical responsibility may be called into question.

Noda: I was hired quite recently as a midcareer professional. What attracted me to this company and what I continue to feel strongly about after joining the company is the way the connections between individuals are valued, so that people carry out their work amid mutual trust. I have heard it said that this kind of mutual trust and close relationship are barriers to preventing misconduct. When I hear that, though, I wonder if that really is the case. I think what is needed is to maintain the connections among people and the warm relations, while at the same time building the necessary checks into the systems.

Yamaki: I believe that is exactly right. A parent's feelings for their child,, for example, start not from doubt but from trust. People working in a company are also like family to each other. The feeling of trust must not be lost. Because I feel internal control is what secures this trust, I would like to strengthen it. Perhaps those in the position of auditor or third-party observer may find this naive, but I would like to value this feeling.

Transforming into a Company with Even Stronger Governance

Noda: I would like to ask you now to talk about what is currently being done to strengthen compliance and internal control.

Kawaguchi: Our focus right now is on reorganizing the company's rules and regulations in collaboration with the Internal Control Office. I'm afraid we will be creating an extra burden for operating sites on top of their regular work. I would like people to understand, however, that in so doing, we will be creating a system in which all of us will gain the peace of mind to be able to concentrate on our work. The head office corporate divisions will be giving all the assistance they can, such as providing rule templates.

Yoshihama: In addition to the main audits carried out periodically by the Internal Auditing Office, we will be instituting simple audits of Group companies from this fiscal year in order to expand the scope and frequency of audits. These will cover 28 domestic and 16 overseas for a total of 44 Group companies, and will include both the accounting auditing and operational auditing I talked about earlier, carried out mainly by auditors sent from the head office.

Iseki: Our human resources staff has also started checking our compliance with labor laws. The main focus is on investigating whether the Labor Standards Act is being observed in areas such as overtime and pay, whether the subcontracting system is proper, and whether there is any power harassment or sexual harassment in the workplace. We also have to think about education so that those who are appointed top executives of Group companies or seconded to management divisions of such companies gain the knowledge necessary for fulfilling their responsibilities. To enable the head office corporate divisions to support operating sites, we will need even more human resources than at present. Changing the definition of "necessary personnel" to "ideal personnel lineup," we are reinforcing the company on the human resources front.

Yamaki: As a leader of the efforts to strengthen compliance and internal control, I came to see the need, first of all, for explaining to all employees the intentions of management and gaining their correct understanding. In addition, we have created opportunities for face-to-face talks to the extent possible so that all members will become engaged not because management wants them to but because they have an awareness of their own stake in the outcome. Recently, I have been visiting operating sites of our Group in and outside Japan. While the main purpose was to impress on people the need for strengthening compliance and internal control, these visits opened my eyes to a number of things for the first time. Especially at our overseas Group companies, I saw and heard firsthand the unease and issues caused by having to work in small organizations, and I strongly felt the need to solve such problems. I hope to continue with these visits to worksites.

Adachi: The recent misconduct is truly unfortunate, but our Group is now reflecting on this with a sense of humility, and we are working together to remake ourselves into a good governance enterprise with an effective internal control system. For my part, I stand in the forefront of these efforts with new resolve.

Noda: As someone involved in legal affairs, I was greatly encouraged by the thoughts you expressed today. Thank you all very much.

Activities to Build Safety Culture

Upholding the Basic Policies on Health and Safety, which stipulates "safety first," the JX Nippon Mining & Metals Group has been committed to various activities aimed at the creation of a safety culture. However, we are aware that we must make further efforts to instill "safety first" in the mind of each employee.
During fiscal 2012, based on the definition of "safety culture" described below, individual operating sites were encouraged to identify safety-related problems and to take appropriate measures. In addition, we established a new post, Senior Supervisor for Safety, reporting directly to the president. In January 2013, the JX Group also opened the JX Safety Education Center.

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." (From a definition by the International Atomic Energy Agency (IAEA))

Establishing a New Post, Senior Supervisor for Safety, with the Aim of Securing Workplace Safety and Reinforcing Related Initiatives

Recognizing that labor safety and legal compliance are the cornerstones of our company, the Group has been committed to safety activities. However, we still need to thoroughly promote the vital importance of workplace safety among employees. To further reinforce the Group-wide health and safety management system, while at the same time improve health and safety initiatives taken at individual operating sites, in December 2012 we established a new post, Senior Supervisor for Safety, reporting directly to the President.

VOICE

Jun Ogata
Senior Supervisor for Safety

Role of the Senior Supervisor for Safety

Although "safety first" is the key concept of our Group management, regretfully, we still need to promote thorough understanding and implementation of this concept. The role of the Senior Supervisor for Safety is to identify specific problems related to safety at individual operating sites and to offer advice/instructions in order to prevent any accident or disaster. To fulfill this role, I seek cooperation from all parties related to safety activities. Sometimes I offer advice regarding safety programs and systems. When I recognize great risks involved in a specific operating process, I give instructions either to improve operating methods or to suspend the operation in question, if this is deemed necessary.

Since I was engaged in safety related tasks, I frequently visited the frontlines even before assuming the post of Senior Supervisor for Safety. After assuming the post, however, I have begun visiting the frontlines much more frequently. If necessary, I repeatedly visit even small operating sites, though I used to visit such sites only once every several years. I can now take my time to observe operating processes thoroughly and to discuss practical solutions with frontline workers. The Group is engaged in various businesses, some involving high-risk operations. I am going to monitor each frontline thoroughly and carefully, and take preventive measures to reduce the risks involved.

My Challenges

The purpose of safety activities is to reduce the number of accidents. In 2013, the number of accidents began to decrease, thanks to untiring efforts of the concerned parties. Despite this favorable trend, we should remain constantly alert. To ensure that this favorable trend will continue, I hope to visit the frontlines as frequently as possible, and hold open and frank discussions with frontline managers and workers about the ideal state of workplace safety. Through these endeavors, I hope to help create safer and livelier workplaces.

Opening of JX Safety Education Center

The JX Group established the JX Safety Education Center, which is operated by JX Nippon Mining & Metals Corporation. The Center provides employees with safety education, highlighted by simulated risk experience programs that are designed to sharpen trainees' five senses. The purpose of the programs is to ensure that trainees learn to observe rules and adopt safe behaviors all the time. Through the safety education at the center, the JX Group intends to enhance employees' risk sensitivity, thereby reducing the number of accidents significantly.

We began construction of the JX Safety Education Center in 2012. Upon completion, an opening ceremony was held on January 23, 2013, attended by 50 people, including President Matsushita of JX Holdings, Inc. and President Adachi of JX Nippon Mining & Metals Corporation.

Opening ceremony

Outline of JX Safety Education Center

Opened: January 23, 2013

Purpose of establishment:
To provide safety education for employees of JX Group companies and its subcontractors

Location: Miyata-cho, Hitachi City, Ibaraki Prefecture

Facilities
- Building: Site area: 5,000 m²
  Total floor area: 1,900 m² (two stories)
- Equipment: Some 40 items of educational equipment installed at the time of opening. The number of such items will be increased.

Exterior of JX Safety Education Center

Panels reporting fatal accidents (JX Safety Education Center)

VOICE

Tokio Takahashi
Director,
JX Safety Education Center

About Safety

Naturally, people tend to pay greater attention to whatever they give the highest priority. Usually, frontline workers give priority to higher output, and so they pay greater attention to output than to safety. Accidents do happen if we continue to pay little attention to safety. I tell this to myself, as well as to other employees.

The JX Safety Education Center is designed to enhance employees' risk sensitivity. To thoroughly prevent accidents, I believe it essential to enhance safety awareness and build a group-wide safety culture.

Programs at the Center

At the center, trainees are divided into small groups (usually six people) and engage in simulated risk experiences throughout the day. This firsthand experience is effective in sharpening their sensitivity toward risk. At present, the center has six instructors (four full-time and two part-time). All instructors have long careers at their respective frontlines, so they provide safety education programs based on their own experiences. During the programs, trainees are encouraged to engage in firsthand risky experiences; so if they desire to take notes, they should do so during breaks.

Achievements and Future Plan

From its opening date until May 15, 2013, we received 278 trainees, and plan to accept 1,200 trainees during fiscal 2013. We hope to increase the number of programs so as to meet the diverse needs of trainees with meticulous care.

Safety Activities of Nissho Ko-un Co., Ltd., Reflecting Its Experience of a Major Accident

In June 2009, three employees of Nissho Ko-un Co., Ltd. (a Group company) died from anoxia while unloading ore cargo from a vessel at a berth attached to the Saganoseki Smelter & Refinery. This section reports safety measures taken by Nissho Ko-un after this fatal accident.

To prevent recurrence of such a serious accident, Nissho Ko-un took measures to improve the monitoring and control of the operating environment, including a review of the oxygen concentration measurement method. Moreover, the company reviewed its ore cargo handling methods, and improved relief equipment/materials. In October 2009, the company began reinforcing safety activities in all three aspects of *shin-gi-tai* (spirit, techniques, and physical strength). As a result of these efforts, the company was able to tremendously improve its safety record of 279 consecutive accident-free days on average after the start of the Safety Bell Campaign in October 2009, compared to 59 such days on average before September 2009. To enable frontline supervisors to concentrate their attention on frontline operations and safety control, the company has also revised the personnel rating system and reduced the number of meetings they must attend. Moreover, the company established a system to detect the risks of accidents by holding periodic discussions with subcontractors of frontline operations. In this way, we are striving to reinforce safety control in joint efforts of company management, frontline workers, and subcontractors.

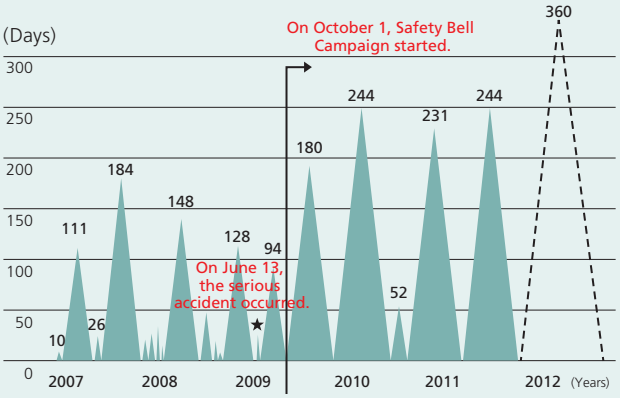
[Major Initiatives from Three Approaches: *Shin-Gi-Tai*]

(1) Activities to promote a safety culture (*Shin*: spirit)
- Ringing the safety bell
- Giving a lecture on safety in the morning
- Setting short-term goals

(2) Fostering techniques to ensure safety operations (*Gi*: techniques)
- Education and practical training

(3) Building basic physical fitness (*Tai:* physical strength)
- Promoting walking and exercises
- Reinforcing BMI (body mass index)-based health guidance

Consecutive accident-free days in past 5 years at Nissho Ko-un Co., Ltd.



VOICE

Toyoshige Kubo
President &
Representative Director
Nissho Ko-un Co., Ltd.

Background of Our Safety Programs

To create safe workplaces across the company and to ensure accident-free operations, it is essential that every employee develop risk awareness through the three approaches of *shin-gi-tai*. At the same time, the company must provide its employees with time allowances and incentives for creating a safety culture.

Safety Bell Campaign

Whenever we hear the safety bell ringing, we exchange the greeting: I wish your safety. The aim of this practice is to constantly remember safety issues when you hear the bell, as well as when you don't hear the bell. In the latter case, you must hear the bell ringing in your heart. This safety bell campaign was initially advocated by Mr. Michio Niwa (former president of Toray Plastic Film Co., Ltd.), but it has now grown into an essential part of our company's safety program.

Exchanging the greeting, "I wish your safety," accompanied by the bell ringing at a lecture on safety in the morning.

Future Tasks

Now that several years have passed since the fatal accident, and that we have had no such accidents since then, we must make efforts to constantly remember the lessons we learned from the accident. By setting short-term goals, we plan to inspire employees to achieve those goals, and feel that their efforts are rewarding. To improve safety-related techniques, we conduct practical drills to rescue workers suffering from anoxia in the hold of a ship.

Rescue drill inside a vessel

Berth at the Saganoseki Smelter & Refinery, where cargo is handled

Expanding the Educational Program for Global Readiness

Starting in fiscal 2012, the JX Nippon Mining & Metals Group has been greatly expanding our educational program for global readiness. The purpose of this program is to develop human resources equipped for carrying out international business and to make the Group as a whole more globally minded.

Overview of the educational program for global readiness

	Intended for	Description
(1) 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.
(2) Short-term language study abroad	Persons considered to need a certain level of language competence for their work (picked by their superior)	Four to 12 weeks of study at overseas language schools, etc., in English, Chinese, Korean, or Spanish.
(3) Second language training	Persons considered to need a certain level of language competence for their work (volunteers approved by their manager)	Persons desiring to study Chinese, Korean, Spanish, or other language for self-development and approved by their manager receive language training outside work hours. (Two-hour weekly classes. Tuition paid by the company.)
(4) In-company TOEIC training	Those interested (mandatory for graduates of university or graduate school by their 10th year of employment)	TOEIC tests are administered annually.
(5) Japan training	Employees of subsidiaries outside Japan with future promise of becoming key personnel (recommended by their division)	Persons selected for the program spend a year in Japan. The purpose is to give employees of overseas subsidiaries a better understanding of the company and Japan while furthering the company's global outreach. They study Japanese for the first six months, followed by six months of on-the-job training in the head office and plants.
(6) Global readiness education geared to job type	Global readiness education is designed and implemented to fit the realities of each job category (number of overseas postings, etc.).	• Overseas OJT: Six months to a year of on-the-job training at an overseas subsidiary, up to the 10th year of employment. • Study abroad: Study at an overseas business school or law school.

The Group prepared an educational program for global readiness, and launched an overseas language training system for all second-year employees who have completed university or graduate school, for the purpose of improving their language skills and facilitating cross-cultural exchanges. In addition to that, the Group newly set the Japan training for employees of subsidiaries outside Japan, in order to strengthen cooperation of operating units in Japan and overseas Group companies.

VOICE

Shintaro Kawashiro
Resources Development Group, Technology Development Center
(studied at a language school in the Philippines for 12 weeks)

Attending nine lessons a day, from 8:00 in the morning to 9:00 at night, I studied a wide variety of subjects for acquiring basic English. With most of the classes being taught one-on-one, I benefited from highly concentrated study. Not only were the lessons enjoyable, but I gained new confidence in my English ability. In the presentation class in particular, I learned to prepare materials in English and was able to experience the gestures, eye contact, and other kinds of expression typical of people in the West.

This language training was my first extended stay outside Japan, and for me it was a special experience being able to immerse myself in a different culture. If I have a chance to work overseas, I look forward to putting this training to good use.

Takahiko Tanigawa
Copper Foil Department, Functional Materials Division, Electronic Materials Group
(studied at a business school in California for 12 weeks)

The classes covered a wide range of topics from marketing and accounting to situational business communication and the entrepreneurial spirit. This being my first concentrated and systematic study of business, I feel I was able to absorb quite a lot of things from it. Right now I have a burning desire to make use of these in my work. My classmates came from many different parts of the world, including Asia, the Middle East, and Europe. They were all easy to get along with, and our being able to exchange ideas frankly with each other was something I had not experienced with my fellow Japanese.

For the Copper Foil Department, collaboration with people at overseas plants is extremely important. Now that I have gained business knowledge and communication skills from this training, I am eager to draw on these for the sake of smoother communication with my overseas colleagues.

Establishment of the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering—Listening to Mr. Masafumi Maeda, Executive Vice President of the University of Tokyo—

Toward a Recycling-Oriented Society

The growing global demand for metal resources has prompted a need to build efficient systems for collecting recycled materials and technologies for efficiently recovering metals from the collected materials. One way the JX Nippon Mining & Metals Group has responded to this need is by promoting material stewardship, becoming active in efforts to recover metal resources from so-called urban mines. As part of these efforts, in January 2012 we established the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering jointly with the University of Tokyo's Institute of Industrial Science. The objectives of the Endowed Research Unit are to conduct study and research on smelting, refining, and recycling of nonferrous metals and to contribute to the development of human resources in these areas, through an alliance of industry and academia. We talked with Professor Masafumi Maeda, Executive Vice President of the University of Tokyo who plays a prominent role in the planning and operation of the Endowed Research Unit, asking him about the significance of the Endowed Research Unit, about establishing a recycling-oriented society, and about obtaining and developing human resources.

The key points of the discussion are below. Date: June 5, 2013 Place: JX Group Roppongi Club

Significance of the Endowed Research Unit

Yamaki: To begin, please tell us about your field of study and research themes.

Maeda: I study the sustainable engineering for metals resource recovery. Recent examples of my research include the physical chemistry of metal recycling and the development of recycling methods. When I first started out as a researcher, I studied steel refining. Then when I became involved in environmental issues, my fields of study spread to such areas as nonferrous metal smelting and refining, the thermodynamics of silicon and metals, and securing resources. Today my work includes measuring and analyzing thermodynamic data of various substances, and studying ways to recover precious metals from spent catalysts.

Ono: Am I correct then that your fields of study and research themes intersect with our company mainly regarding the smelting, refining, and recycling of nonferrous metals?

Maeda: That's correct. My original involvement with your company goes back to my student days. My experience at the Saganoseki Smelter & Refinery left a deep impression on me. There, where copper smelting and refining actually takes place, I learned about plant operation rooted in the local community. More recently, I have been able to associate with your company's officers and engineers by serving on government councils and joint research societies of industry

and academia, for example.

Ono: Ever since national universities became incorporated, they have been administered independently. In your field of study, doing fundamental research such as measuring thermodynamic data, I imagine you have had to struggle somewhat to obtain funding.

Maeda: For research themes more directly related to business and industry, it is relatively easy to carry out joint research with corporations, but finding funds for fundamental research is getting harder every year. That's all the more reason I am grateful for your company's Endowed Research Unit. First of all, it is evidence that the industrial world recognizes the need for society to support this field. And second, funding by the Endowed Research Unit enables us to obtain the necessary human resources.

Yamaki: By returning to society part of our profits through this Endowed Research Unit, we are putting into practice our CSR ideals. At the same time, we hope the program will increase the number of students who become interested in our company and wish to work for us.

Maeda: Being a business-to-business materials manufacturer, your company may not generally be very well known to students. With the holding of a symposium commemorating the Endowed Research Unit, and the lectures and presentations given there by people associated with your firm, I do believe that in the future young people will want to be part of your company.

Ono: The University of Tokyo will be holding the Todai Forum 2013 in South America in November 2013. I understand the Endowed Research Unit will be taking part in that event.

Maeda: The Todai Forum is held once every two years, bringing together scholars and students from around the world for dialog and discussions transcending national boundaries. This year it is being held in Chile and Brazil. In Santiago, the Chilean capital, workshops will be held on the topics, "The Current State of Mine Development" and "The Latest Mining, Dressing, Smelting, Refining, and Environmental Technologies." The Endowed Research Unit will take part in these workshops.

Yamaki: Our company is operating the Caserones Copper and Molybdenum Deposit Development Project in Chile. We are already producing copper cathodes using the SX-EW process, and we expect to begin copper concentrates production by the end of 2013. In that sense also, this is a timely plan. I hope our company will be well represented at the event.

Masafumi Maeda
Managing Director, Executive Vice President
Professor, Institute of Industrial Science
Project Professor, Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering
University of Tokyo

● Interviewers

Nobuyuki Yamaki
Director, Deputy Chief Executive Officer
JX Nippon Mining & Metals Corporation

Hiroshi Ono
Senior Executive Officer
(currently Director, Senior Executive Officer)
General Manager, Technology Development Group
JX Nippon Mining & Metals Corporation

Establishing a Recycling-Oriented Society

Yamaki: The history of the copper smelting and refining business has also been one of battling environmental problems. While earnestly addressing the situations of people who have been inconvenienced by our company's operations, we have continually taken facility-level measures for preventing environmental problems in advance. We believe that such an attitude and initiatives are what will help lead to the establishment of a recycling-oriented society.

Maeda: That's exactly right. Having seriously tackled environmental issues ahead of the rest of the world is a strength of your company and the rest of the nonferrous metals industry in Japan. This is an opportunity for you to serve as a model for the rest of the world in this field, such as by passing along your expertise to companies outside Japan.

Yamaki: In job interviews, when we ask job-seekers what kind of work they would like to do in our company, many students say they want to get involved in environmental measures and recycling. While we tell them that the reality is not all that pretty and the work is fraught with difficulty, we are happy that they have this desire. I would very much like to make our business one that will meet their expectations.

Maeda: It is extremely encouraging to know that there are young people with a desire to get into this field. Work that involves the environment and recycling is strictly regulated in the processes from collection and transport to storing and processing. A great deal of care is required especially in moving recycled materials and in locating processing facilities. Yet these are essential steps for ensuring the sustainability of society's activities. JX Nippon Mining & Metals is one of the top companies in the nonferrous metals industry, with a wealth of experience and highly advanced technologies. I hope you will continue to carry out technology innovation in this field while cooperating with us in academia.

Securing and Developing Human Resources

Yamaki: Ultimately, the key to achieving the goals laid out in our 2nd Medium-Term Management Plan for fiscal 2013 to 2015 is people. As you are a leading scholar in the world of academic research, I would like to ask your perspective on securing and developing human resources, including your view of young people today.

Maeda: One thing that can be said first of all is that today there are many forward-looking students. The University of Tokyo started the FLY (Freshers' Leave Year) Program in April 2013. This program allows students to take a year-long leave of absence from their studies immediately after matriculation, so that they can engage in volunteer work, employment, overseas experience, or other activities, enabling them to grow, become more global, and develop personal resilience on their own. For the 2013 academic year, some 30 students applied, of which 11 were selected for the program following interviews. Ten of the students are engaged in individual projects abroad, while the remaining student is helping with earthquake reconstruction as a city employee of Kamaishi in Miyagi Prefecture.

Yamaki: Experiencing adult society and the world before studying in university is highly meaningful for figuring out what you want to study at university and how you want to live. The companies who hire students upon graduation welcome this kind of education.

Maeda: One more thing I would like to talk about is giving full opportunities to women. At the University of Tokyo, women make up 19 percent of the student body, and all of them are outstanding. If a woman chooses to marry, she faces the realities of childbirth and raising children, which are occasions for joy but also present career challenges. Through improvements to institutions and infrastructure, we could turn these struggles into things that make life meaningful.

Yamaki: Our company would like to give serious consideration to ways of expanding opportunities for women.

Maeda: I would also ask you to consider human resources exchanges between industry and academia. Would it be possible, for example, for someone with experience teaching in a university to switch to working in a company with its daily work and management, and then go back to the university to instruct students? I believe this would lower the walls between industry and academia, helping develop versatile human resources.

Yamaki: I see that as a very welcome idea, one definitely worth considering.

I would like to thank you for today's most meaningful discussion. I am inspired to put your ideas and suggestions to use for the development of our Group and the establishment of a recycling-oriented society.

Visit to Hitachi Works by Metal Manufacturing Processes Study Group

On November 16, 2012, a total of 35 people, most of whom are studying metal smelting and refining at the University of Tokyo, visited our Hitachi Works as a part of the Metal Manufacturing Processes Study Group of the Endowed Research Unit. The group toured the Hitachi Works HMC Department, the Technology Development Center, and the Hitachi Refinery of Pan Pacific Copper, learning about our recycling technology and manufacturing processes. Following the tour, Takahiko Okura, then project professor in the university's Institute of Industrial Science, expressed his thanks for the hard work that went into structuring the tour. He praised the tour, describing it as a very solid learning session.

Commemorative Symposium of the Endowed Research Unit

To commemorate the establishment of the Endowed Research Unit, a symposium was held on January 25, 2013, at ENEOS Hall of the University of Tokyo's Research Center for Advanced Science and Technology. The 180 persons in attendance heard lectures and presentations by 12 speakers including Masanori Okada, our company chairman, and Yoshitsugu Miyabayashi, the general manager of the Technology Department, Recycling & Environmental Services Group. Mr. Okada spoke on the theme of rare metal recycling, pointing out the necessity and economic aspects of recycling and noting the importance of, and his hopes for, an all-Japan engagement in this area. Mr. Miyabayashi talked about using our company's smelting and refining technology for recycling rare metals and other materials. He described the recycling flow in our company and recycling technology that make use of copper smelting and refining.

Masanori Okada, Chairman

Yoshitsugu Miyabayashi, General Manager

At the JX Nippon Mining & Metal Group, we are innovating productivity of resources and materials, regarding it as one of our priority tasks. This special feature introduces our commitment to this end in our resources development and electronic materials businesses.

Recent Trends of Resource Development, and Related Business of the Group

—Interview with Mr. Hideyuki Ueda, Executive Director of Japan Oil, Gas and Metals National Corporation (JOGMEC)

Japan imports most of its non-ferrous metal resources, including copper, from overseas. Securing a stable supply of such resources, however, has become increasingly difficult. In addition to conventional challenges, such as the geographical imbalance of resource deposit locations, country risks, and fluctuation in resource prices and exchange rates, there are still more challenges that surfaced recently. These include the increasing scale of development projects, depletion of resources, lower metal content in ores, an increase in refractory ores, and intensifying international competition.
In this report, we are pleased to have an interview with Mr. Hideyuki Ueda, Executive Director of Japan Oil, Gas and Metals National Corporation (JOGMEC), which provides debt guarantee and other support for the Group in its Caserones Copper and Molybdenum Deposit Development Project. We asked Mr. Ueda about the present situation of Japan's metal resource development projects, activities of JOGMEC, and his views about the resources development business of the Group.

Mr. Hideyuki Ueda
Executive Director of Metals Strategy & Exploration
Member of the Board, Japan Oil, Gas and Metals National Corporation

Roles of JOGMEC in Promoting Resource Development

—Given intensifying global competition to gain resources, JOGMEC is expected to play a greater role than ever. Will you please describe the nature of its role?

Ueda: JOGMEC is engaged in activities in line with Japan's national policy on natural resources and energy sources. In the case of base metals, for instance, JOGMEC supports improvement of the ratio of equity entitlement mine production. I believe that JOGMEC must engage in resource exploration projects particularly in high risk regions, including high country risks, since exploration in such regions is difficult for private companies to engage in without government support.

—Regarding recent exploitation activities, what are your concerns?

Ueda: Recently, unexploited deposits have been found only in locations difficult to access, such as deep inland or high mountains. Moreover, we are seeing an increase in the volume of refractory ores. Refractory ores include ores that contain a high volume of impurities, such as arsenic and mercury, regardless of the content of metals such as copper or zinc; and ores of fine grain size that make concentration difficult. To process refractory ores, we need new concentration technologies along with advanced technologies to remove impurities and treat the removed impurities. Accordingly, JOGMEC is supporting private businesses in developing such technologies.

At the Japan Sustainable Mining, Investment & Technology Business Forum (J-Sumit), jointly organized by JOGMEC and the Agency for Natural Resources and Energy in May 2013, JOGMEC worked to promote investments in Africa and introduced various technologies developed by Japanese companies to overseas mines.

Understanding of Local Residents is Essential for Mine Development and Operation

—In developing and operating mines, we need to pay sufficient attention to environmental protection and community relations. Will you tell us about particular issues we need to pay attention to?

Ueda: Japanese companies have bitter experiences in handling domestic pollution problems. So those companies that have cleared rigorous environmental criteria and relevant regulations imposed in Japan are likely to fulfill their tasks abroad if they exploit their own experiences in Japan. It's important, however, that their task is not simply to gain approval from local authorities in the Environment Impact Assessment (EIA). Local residents are concerned about whether or not the locally available water is safe to drink, whether the mine development affects their cattle, the project truly creates job opportunities for local residents, and if it improves their living standard. In South America, there is a problem concerning water rights. Many local people are afraid that they would lose their water rights if a mine is developed in their region. To gain understanding from local residents, companies must fulfill their accountability to local residents, disclosing the long-term plans, including what is planned after the mine is closed.

—Since its founding, the JX Nippon Mining & Metals Group has consistently striven to reduce the impact of its activities on the environment, and to contribute to local communities. We uphold this policy both inside and outside Japan.

Expectations of the JX Nippon Mining & Metals Group's Resources Development Business

—Will you please comment on the Caserones Copper and Molybdenum Deposit Development Project of the Group?

Ueda: I expect that this project will help stabilize copper supply to Japan, since the project is funded exclusively by Japanese companies, and the mine has substantial volume of reserves.

In determining whether or not to support any project, we at JOGMEC investigate the company that actually operates the project. In addition to technological and financial assessments, we survey the company in terms of health, safety, and environment (HSE), as well as legal compliance. In other words, we survey whether or not the company has adequate exploration and development plans to prevent accidents or disasters that might affect HSE. We also survey the company's preparation for accidents or disasters, and emergency plans. JOGMEC is ready to support any Japanese company that has experience in mine development and that has adequate systems in place to prevent accidents and to take remedies should an accident occur.

—What do you expect of our resources development business?

Ueda: In Japanese companies, the number of mining and concentration engineers is decreasing. Since the JX Nippon Mining & Metals Group has the mine in Caserones, I hope the Group will foster Japanese engineers dedicated to mining and concentration. Moreover, since JOGMEC does not have any mines, I hope you will allow JOGMEC engineers to study at the Caserones mine.

—We plan to start full-fledged operation of the Caserones mine in 2014. I hope that we can meet your expectations. Mr. Ueda, thank you very much for your valuable views and comments.

● Interviewer

Tatsuji Ota

Executive Officer in charge of Public Relations and CSR Department
JX Nippon Mining & Metals Corp.

Resources Development

Since Japan has little natural resources, the country imports most of copper and other non-ferrous metals resources. Securing a stable supply of such metals resources, however, has become increasingly difficult. In addition to conventional challenges, such as the geographical imbalance of resource deposit locations, country risks, and fluctuation in resource prices and exchange rates, there are still more challenges that surfaced recently. These include soaring mine development expenses due to the increasing scale of development projects, lower metal content in ores, an increase in refractory ores, and intensifying international competition.
In this environment, the JX Nippon Mining & Metals Group is committed to promising mine development projects from their initial planning stages. We are autonomously promoting the development of overseas mines.

The Caserones Copper and Molybdenum Deposit Development Project

In Chile (South America), the Group takes an initiative in the Caserones Copper and Molybdenum Deposit Development Project, a project funded solely by Japanese capital.

The mine's life is expected to be 28 years (until 2040), with an average annual output of approx. 110,000 tons of copper content as copper concentrate, approx. 10,000 tons of refined copper, and approx. 3,000 tons of molybdenum. The copper smelted and refined from copper concentrate is expected to reach approx. 11.5% of Japan's annual import of the metal. Accordingly, the project is expected to significantly contribute to the stable supply of copper in Japan.

SCM Minera Lumina Copper Chile (MLCC), which manages the project, has set aside a 0.87 km^2 area affected by construction of facilities and others, of the overall owned area of 385 km^2, as a conservation area to protect biodiversity. (See p.81 for details.)

Production of Electrolytic Copper Begins by the SX-EW Process

—The first electrolytic copper in the Caserones Copper and Molybdenum Deposit Development Project—

On March 14, 2013 (local time), the first refined copper in the Caserones Copper and Molybdenum Deposit Development Project was collected by the SX-EW process.

In this project, two types of product will be manufactured: refined copper by the SX-EW process and copper concentrate by flotation and other processes. Following the initiation of refined copper, production of copper concentrate is planned to begin in fiscal 2013.

Electrolytic copper collected and President Pizarro of MLCC

Pan Pacific Copper Co., Ltd. (PPC) Acquires Equity Interest in a Copper/Gold Exploration Project in Chile and Argentina

PPC, a Group company, has acquired from Japan Oil, Gas and Metals National Corporation (JOGMEC) an equity interest in a copper/gold exploration project in the Frontera area, which stretches over the border between Chile and Argentina.

The interest PPC acquired is JOGMEC's 40% interest in a joint venture with NGEx*1 Resources Inc. and its subsidiaries for exploration of the area, in which JOGMEC participated in 2004.

The Frontera area is located in the Chile–Argentina border region, which is known for its abundant copper resources, and is adjacent to PPC's Caserones copper and molybdenum deposit. The Group will participate in the continued exploration campaign to define the mineral reserves in the area, with a view toward implementing studies for its development.

*1 NGEx Resources Inc. is a non-ferrous mineral resources exploration company based in Vancouver, Canada, listed on the Toronto Stock Exchange. It owns exploration assets in South America and Canada.

Outline of the Frontera area

The Frontera area extends from the Region III of Chile to San Juan and La Rioja State of Argentina. Its size is 24,000 ha in total and its northern part borders on the Caserones Project area. Frontera is located 130 km to the southeast of Copiapo, the capital town of the Region III of Chile. In the area, a vigorous exploration campaign is being conducted in Los Helados (located 20 km to the south of Caserones deposit) and Filo del Sol (Argentina).

Establishment of Subsidiary in Australia as a base for exploration

PPC has established a subsidiary in Australia as a base for exploration activities in the Oceania region (Australia, Papua New Guinea, etc.) and commenced business operations.

Since the Oceania region has some of the world's largest reserves of copper and other mineral resources and offers a favorable environment for resource development, PPC regards the region as a key priority alongside South America. The new company joins existing exploration subsidiaries in Chile and Peru to create a triple foundation for PPC's global prospecting activities. This structure will further enhance PPC's resource development initiatives.


Geological survey conducted in Zambia


Electromagnetic exploration conducted in Australia


Survey by helicopter in Chile

Development of Electronic Materials

For the sake of innovation in the productivity of resources and materials, the JX Nippon Mining & Metals Group is continuing to enhance its technology development capability and is promoting the development of electronic materials matched to customer needs.

Development of New Copper Foil and Precision Rolled Materials

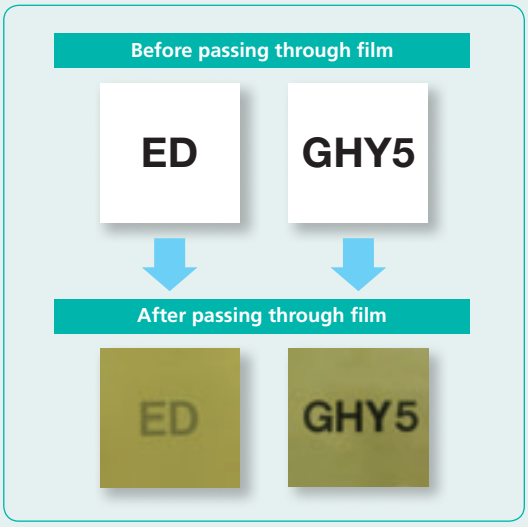
Ultrathin Treated Rolled Copper Foil

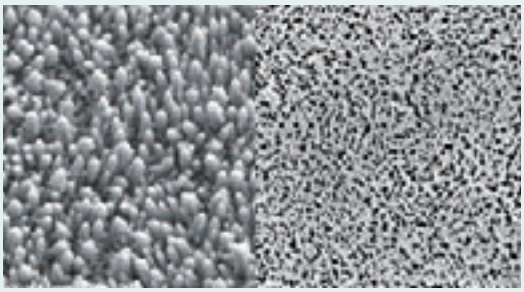
Having established the capacity for mass production of ultrathin treated rolled copper foil with thicknesses of 6 μm and 9 μm and the same quality as earlier treated rolled copper foil of 12 μm and above, we have now begun full-fledged marketing. The availability of ultrathin treated rolled copper foil is expected to lead to the development of new uses thanks to the ability to perform delicate processing not possible with conventional materials.

Ultrasmooth Treated Rolled Copper Foil

The higher resolutions of liquid crystal displays used today on smartphones and tablets require ever finer circuit patterns. Our successfully developed ultrasmooth treated rolled copper foil reduces surface roughness to half that of earlier treated rolled copper foil while greatly improving visibility, making it ideal for the flexible printed circuit boards driving the liquid crystals of flat panel displays.

Visibility of electro-deposited copper foil (ED) and ultrasmooth treated rolled copper foil (GHY5)

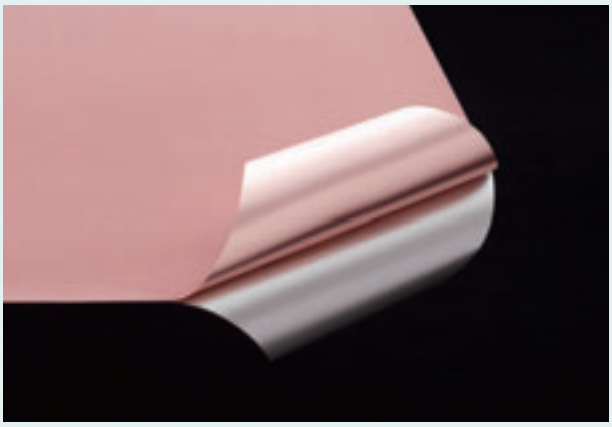




SEM view of copper foil surface that adheres to resin

JXUT Series Ultrathin Copper Foil with Carrier

The newly developed JXUT Series products meet the needs of applications requiring fine circuit patterns. The ultrathin copper foil, from 2 to 5 μm, is available with carrier thicknesses of 18 or 35 μm. The carrier surface is specially treated for its role as a peelable layer, on which the ultrathin copper foil is formed.



JXUT-II ultrathin copper foil with carrier

Highly Conductive, High-Strength Copper Alloys

Drawing on the original precision process control technology our Group has developed and enhanced over the years, we are developing copper alloys boasting both high conductivity and high strength. We recently added four new products to the lineup.

(1) C1990HC High-Conductivity Titanium Copper Alloy (CDA: C19900)

To meet needs for even higher conductivity with further increases in battery capacity, we developed the high-conductivity titanium copper alloy C1990HC, achieving twice the conductivity of previous alloys and producing only a third as much heat while maintaining the same high strength and thermal resistance.

(2) NKC4419 High-Conductivity Corson Alloy (CDA: C64800)

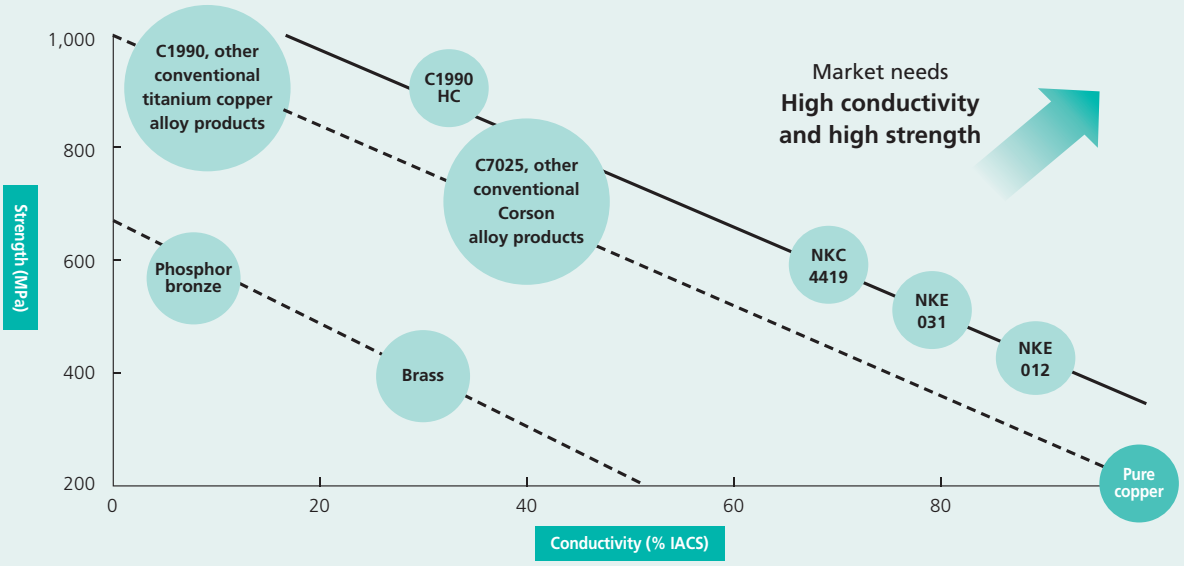
There is demand today for higher-conductivity materials that can be used in the smaller connectors in today's smartphones, tablets, and other mobile devices without significant increases in heat generation or power consumption. The newly developed NKC4419 alloy achieves 1.5 times the conductivity of the popular C7025 Corson alloy with no loss in strength.

(3) NKE031 (SuperKFC®) and NKE012 High-Conductivity Copper Alloys (CDA: C14415)

For use in such fields as hybrid and electric cars with their large current flow and mobile terminals needing superior heat dissipation, NKE031 (SuperKFC®) with 80% the conductivity (and three times the strength) of pure copper, and NKE012 with 90% the conductivity (and twice the strength) of pure copper were newly added to the lineup.

Newly available highly conductive, high-strength copper alloys for use in electronic parts

Distribution of copper alloy conductivity and strength characteristics



VOICE

Junji Miyake

General Manager, Market Development Department, Functional Materials Division, Electronic Materials Group

Establishment of a Market Development Department in the Functional Materials Division, Electronic Materials Group

In our functional materials business, we manufacture and sell such products as copper foil for circuit boards and copper alloys for connectors. The establishment of the Market Development Department in the division on April 1, 2013, was the occasion to integrate marketing that was previously carried out separately for each product. In this way, we are strengthening our market development capability for opening up new markets and new applications, thereby speeding up the development of products that meet customer needs.

Expectations of our customers for functional materials

Our products are used in connectors and other electronic parts, which in turn are used in end products ranging from information technology equipment to vehicle-mounted electronics. Increasingly we are asked directly by the design divisions of customers manufacturing such end products to propose materials, as these products become smaller and demand higher performance. Besides putting our knowledge of electronic materials to use in customers' electronic equipment designs, these are highly valuable occasions for considering the directions we should pursue in future development of electronic materials.

Future issues for the Market Development Department

The Market Development Department is made up of experts in functional materials. Reflecting customer needs in our products will lead to further enhancements of our ability to offer solutions to customers. By maintaining and expanding this positive cycle, we hope to broaden the areas for use of our Group's electronic materials.

New Manufacturing Plant Completed for Cathode Materials Used in In-Vehicle Lithium-Ion Batteries

Bringing about an energy revolution through battery materials

In recent years, the spotlight has been zooming in rapidly on lithium-ion batteries, for use as secondary batteries in hybrid and electric cars and also as backup power supplies in homes. By developing and supplying materials for these batteries, the JX Nippon Mining & Metals Group is contributing to the efficient use and stable storage of energy.

Cathode materials for lithium-ion batteries

Overview of the Cathode Materials Business

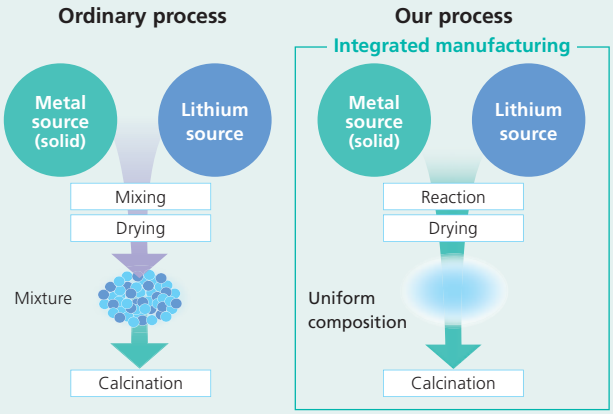
In September 2012, we completed construction of a new manufacturing plant at our Isohara Works (Kitaibaraki, Ibaraki Prefecture) for production of cathode materials used in in-vehicle lithium-ion batteries, with a capacity of 5,000 tons per year.

From left, our president Yoshimasa Adachi, Kitaibaraki Mayor Minoru Toyoda, and Nissan Motor Corporate Vice President Shunichi Toyomasu

Demand is rising for lithium-ion batteries as in-vehicle power sources essential to the next generation of environmentally friendly vehicles, making it necessary to achieve a high order of balance among capacity, safety, and cost. Cathode materials are one of the main materials determining the properties of lithium-ion batteries. By boosting our manufacturing capacity through the new plant, we are positioned for stable provision of these materials.

Tour of facility for wet chemical process

At our Tsuruga Plant (Tsuruga, Fukui Prefecture), meanwhile, we are advancing efforts for efficient recovery of rare metals from spent lithium-ion batteries. When this resource recycling system is completed, it will contribute greatly to stable procurement of cathode raw materials.



Main features of our cathode materials

1. High uniformity and purity using original wet chemical integrated process
2. Highly stable quality achieved by analysis techniques developed in making semiconductor materials
3. Integrated production capability including calcination process

VOICE

Yoshio Kajiya
Senior Engineer
Surface Treatment Department,
Thin Film Materials Division,
Electronic Materials Group

How our Group entered the cathode materials business

In 1997, our company began supplying cathode materials (100 tons/year) to a Group company in the US manufacturing lithium-ion batteries. After the Group stopped manufacturing batteries, we began leveraging our store of cathode materials expertise by selling the materials to outside customers. We also happened to have considerable knowledge of the nickel and cobalt used as raw materials, since these are by-products of the smelting and refining processes.

Main features of our cathode materials

In addition to lithium, our cathode materials are made from a three-element precursor mixing manganese, nickel, and cobalt, using our original wet-chemical integrated production process. The simplicity of the processes makes it easier to build in quality and achieve high cost-competitiveness. We further benefit in that the various metal recycling, smelting, and refining take place within the Group, as does the manufacturing of copper foil for anodes. In addition, the JX Group possesses expertise on anodes and other materials. The extent of our comprehensive strength is a feature of the Group.

Future issues

In order to achieve further advances in capacity, we are making improvements to the three-element precursor in the short term, while considering use of other compositions in the longer term. The world's major automakers are all planning to sell electric vehicles (EV) in 2013. With 2013 poised to be the first year of the EV era, our Group is hoping to contribute from a materials standpoint to higher battery performance, giving a boost to wider use of these batteries in EVs and for home power supplies.

JX Metals Precision Technology Co., Ltd. Born from the Merger of Three Group Precision Processing Companies

Kakegawa Works Equipment Startup and Operating Status

JX Metals Precision Technology Co., Ltd. (JXPT) was established on January 1, 2013, through the merger of three JX Nippon Mining & Metals subsidiaries responsible for precision fabricating. These are Sanyu Electronic Industry, Suzuki Manufacturing, and JX Metals Precision Technology. The new company mainly manufactures precision components and connectors. It will strive to meet the wide-ranging needs of customers drawing on technologies developed over more than half a century in such areas as precision plating and precision stamping.

Then on February 14, the completion ceremony was held for the Kakegawa Works (Kakegawa, Shizuoka Prefecture), newly established in JXPT. Following test runs, the plant went into full operation in April. The plant boasts its integrated process from stamping and plating to assembly, operating as a center for OEM production of automotive connectors. Meanwhile, we are strengthening the Group's integrated production capabilities for information technology products, with the existing Esashi Works (Oshu, Iwate Prefecture), Tatebayashi Works (Tatebayashi, Gunma Prefecture), and Nasu Works (Nasushiobara, Tochigi Prefecture) operating in coordination.

In such ways, our Group is contributing to the development of the electronic components industry, with its bright promise of continued demand growth.

Integrated manufacturing of precision components and connectors by JX Metals Precision Technology

Applications and products / Process	Stamping	Plating	Assembly
Automotive connectors, etc.	Kakegawa Works		
Computer connectors, etc.	Nasu Works	Esashi Works Tatebayashi Works	Nasu Works

Note: Sales and marketing functions are concentrated in JX Nippon Mining & Metals. Precision rolled materials manufactured at the Kurami Works of JX Nippon Mining & Metals are among the materials used.

Kakegawa Works

Completion ceremony for new Kakegawa Works

VOICE

Shinzo Sakagami
General Manager
Kakegawa Works
JX Metals Precision Technology Co., Ltd.

Kakegawa Works equipment startup and operating status

Since the plant went into operation in April 2013, I have been managing both the new equipment startup and everyday plant operation with limited personnel. With the exception of some small delays, we expect the equipment to go into full operation mostly on schedule. Now we are devoting our efforts to receiving approval from customers.

Expectations of our customers for the Kakegawa Works

Customer attention and expectations are high for the business model started at the Kakegawa Works of integrated OEM production of automotive connectors, from stamping and plating to assembly. The connectors manufactured at our plant will be used in automobiles. Automobiles carry human lives, so that customers are very demanding of us when it comes to safety. Seeing these demands as a product of the high expectations for our plant, we are working hard to meet them.

Future issues for the Kakegawa Works

Our aim is to paint a vision matched to customer needs and to put that vision into practice. Specifically, this means achieving high productivity and designing an optimal operational flow. These are the two areas we are focusing on right now. Raising productivity is something we have been engaged in all along, but the emphasis going forward will be on raising personnel productivity, including by making them multiskilled plant workers. In addition, we are planning to redesign the cycle of delivery, inventory, and work-in-process to devise an optimal operational flow.

Business Results in Fiscal 2012 (April 1, 2012 to March 31, 2013)

3 Disclosure of Corporate Information and Protection of Personal Information — Relationship with society

In fiscal 2012, world economic conditions continued to be challenging. Although the US economic recovery strengthened thanks to increased consumer spending, concerns persisted that the debt crisis in Europe might be rekindled. Meanwhile, growth slowed in China, India, and other emerging economies. In Japan, despite the decline in exports due to the prolonged appreciation of the yen, the economy was buoyed by robust consumer spending and demand created by reconstruction following the Great East Japan Earthquake. After the inauguration of the second Abe administration, the weakening yen led to an improved export environment with encouraging signs of economic recovery.

Global demand for copper continued to grow driven by demand in China, which accounts for 40 percent of the world's consumption of copper ingots. Strong demand in the Chinese market was supported primarily by the shift to a monetary easing policy and the promotion of infrastructure building. Copper prices on the London Metal Exchange (LME), which is regarded as a global indicator, averaged around 8,000 dollars per ton in fiscal 2012, trending mainly below the levels of the previous fiscal year, as the global economic outlook remained uncertain.

Given this situation, our Group's net sales declined 7% from the previous fiscal year to 927.5 billion yen, while ordinary income was down 25% to 45.0 billion yen, due to such factors as declining sales volume at the invested mines.

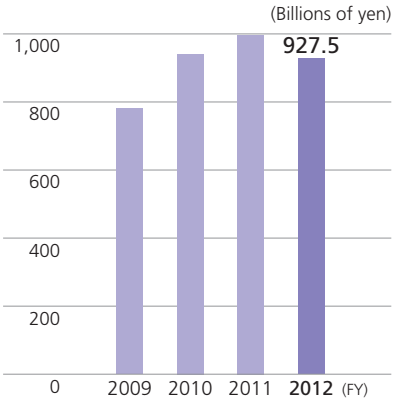
Fiscal 2012 Results (consolidated)

(Billions of yen)

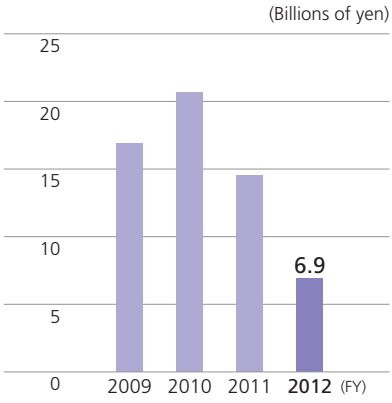
	Fiscal 2012	Year-on-year change
Net sales	927.5	–7%
Operating income	6.9	–52%
Ordinary income	45.0	–25%
Net income	17.1	–28%
Total assets	1,160.2	+27%

Financial Performance (consolidated)

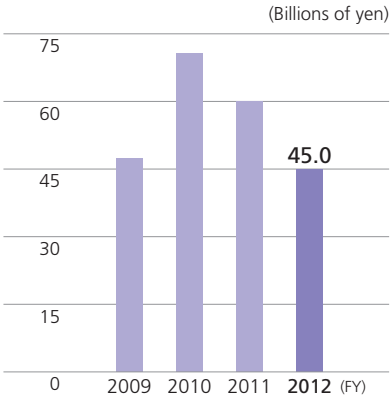
Net sales



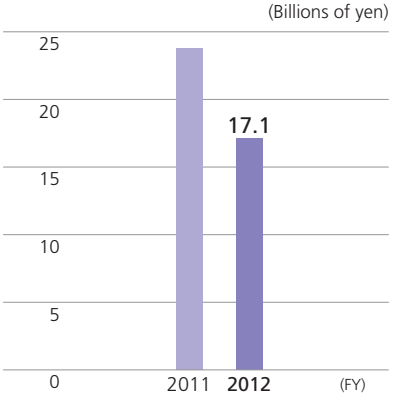
Operating income



Ordinary income



Net income



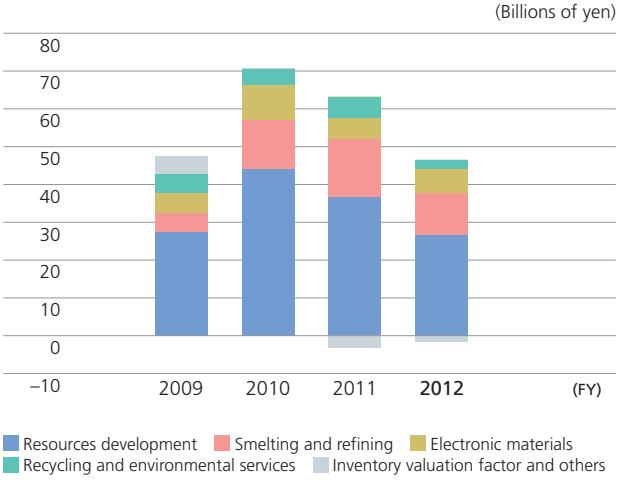
Total assets

Segment Information

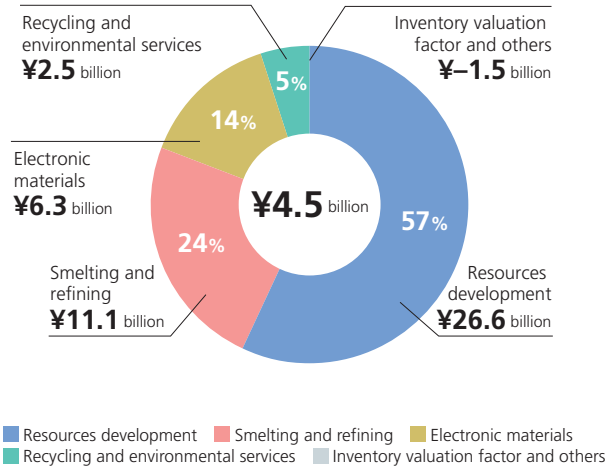
Information about our Group's four main business segments of resources development, smelting and refining, electronic materials, and recycling and environmental services is given below.

Resources Development Business	This segment saw a 10.0 billion yen decline in ordinary income year on year to 26.6 billion yen, resulting from such factors as a drop in dividends income due chiefly to reduced sales of copper concentrates at the three Chilean mines in which we have invested.
Smelting and Refining Business	Ordinary income declined 4.4 billion yen to 11.1 billion yen, due to a variety of factors including a worsening of copper concentrate purchasing conditions.
Electronic Materials Business	Ordinary income in this segment was 6.3 billion yen, an increase of 0.9 billion yen, thanks to increased sales of sputtering targets for semiconductors, titanium copper, compound semiconductors, and other materials with the growth of the smartphone market, along with a weaker yen.
Recycling and Environmental Services Business	Ordinary income fell 3.2 billion yen to 2.5 billion yen due to a decline in margins received resulting from the reduced volume of recycled materials we collected.

Ordinary income trends per segment



Ratio of ordinary income by segment (FY2012)



Business Environment and Business Data

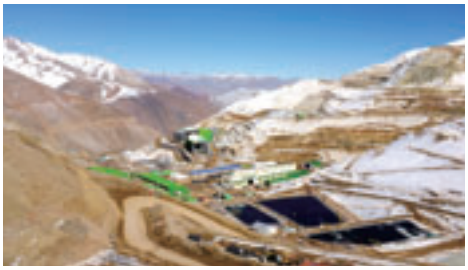
The key factors used in calculating Group performance are as indicated below.

	FY2009	FY2010	FY2011	FY2012
Exchange rate (¥/$)	93	86	79	83
Copper price at LME (Jan. to Dec.; cent/pound)	277	342	400	361
Equity entitled copper mine production (thousand tons/year)	101	111	105	105
Sales volume of refined copper by PPC (thousand tons/year)	605	588	566	551
Sales volume of treated rolled copper foil (thousand kilometers/month)	2.7	3.3	2.6	2.7
Sales volume of precision rolled materials (thousand tons/month)	3.5	3.8	3.5	3.3
Recovered volume of gold by our recycling and environmental services business (ton/year)	6.3	6.5	7	5.8

Business Overview

Resources Development Business

Smelting and Refining Business



We are actively involved in promising mining development projects from the planning stage, and are aggressively carrying out our own mining development. In the midstream copper smelting and refining business, our highly advanced technologies and world-class production capacity enable us to provide stable supplies of copper cathodes from our refineries. Our copper cathode production capacity is 1.17 million tons a year combined for Pan Pacific Copper (PPC) Co. Ltd.'s facilities in Japan and our South Korean joint venture LS-Nikko Copper Inc.

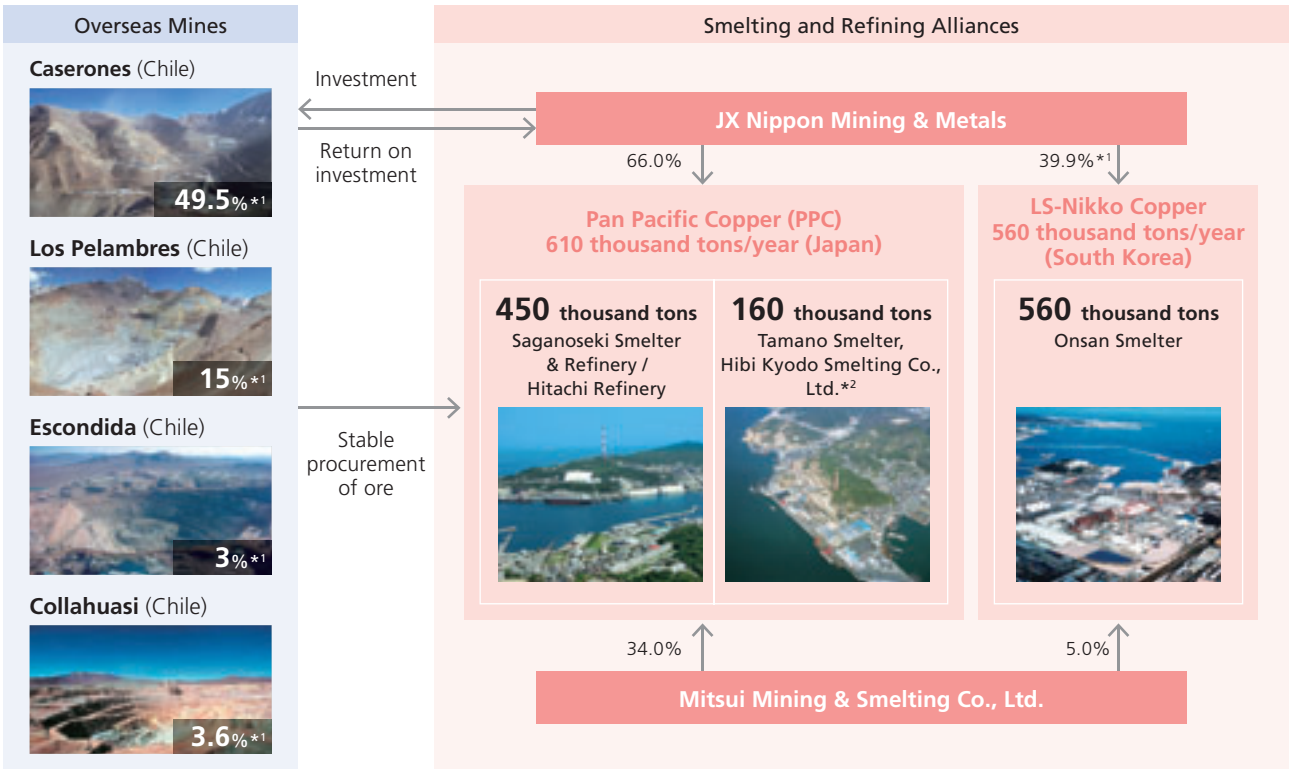
Measures Instituted in Fiscal 2012

In the resources development field, we began production of copper cathodes by the SX-EW process at the Caserones Copper and Molybdenum Deposit in Chile, designed to build up a balanced, highly profitable business structure by improving the ratio of equity entitlement copper mine production. We expect to begin copper concentrates production during the third quarter of fiscal 2013. Our mineral exploration activities include acquisition of copper and gold exploration interests in the Frontera district of Chile and Argentina.

In the smelting and refining field, we took measures to boost profitability, such as improving copper concentrate purchasing conditions, and reducing costs and raising the recovery rates at the Saganoseki Smelter & Refinery, the Tamano Smelter, and the Onsan Smelter of LS-Nikko Copper Inc. in South Korea.

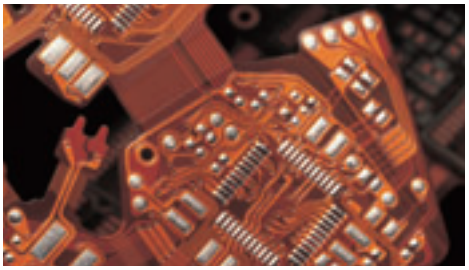
Ordinary income

Outline of Resources Development and Smelting and Refining Businesses



*1 Indirect ownership portion of JX Nippon Mining & Metals
*2 PPC owns 63.51% of the total production capacity of 260 thousand tons/year.

Electronic Materials Business

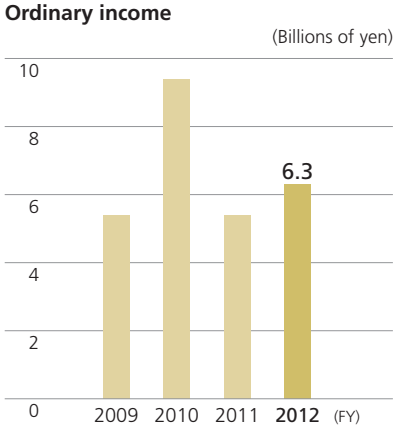


The electronic materials segment consists of the functional materials business and the thin film materials business. We have the top share globally in many different products, from treated rolled copper foil to sputtering targets for semiconductors and titanium copper. We are also engaged in the development and manufacture of materials for next-generation uses, among them cathode materials for in-vehicle lithium-ion batteries.

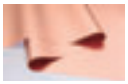
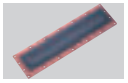
Measures Instituted in Fiscal 2012

In addition to expanding overseas production as corporate customers shift their operations outside of Japan, we went ahead with development and sales promotion of new materials and took steps to lower the manufacturing costs of existing products. To strengthen our position in the field of in-vehicle electronic materials with its promise of stable demand, in February 2013 we completed the Kakegawa Works of JX Metals Precision Technology, which began production in April, with the aim of pursuing the cost advantages of full-process OEM production from pressing and plating to assembly. At our Isohara Works, we boosted our manufacturing facilities for cathode materials used in in-vehicle lithium-ion batteries, building up capacity for the stable supply of high-purity, uniform-quality products.

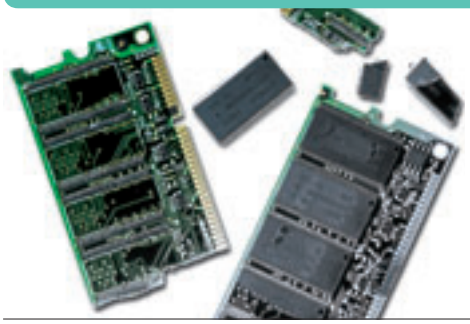
Ordinary income



Main Products Handled in Electronic Materials Business

Principal IT-related materials	Global market share (in 2012)	Primary applications	End-use applications: PCs	Mobile phones, smartphones	Digital appliances, AV	Communications infrastructures	Automobiles
 **Treated rolled copper foil**	75% No.1	Flexible printed circuit boards	○	◎	◎		
 **Sputtering targets for semiconductors**	60% No.1	Memory chips, etc.	◎	○	◎	○	○
 **Sputtering targets for FPDs**	30% No.1	Transparent conductive films	◎	○	◎		
 **Sputtering targets for magnetic media**	30% No.2	Hard discs, etc.	◎	○			
 **Phosphor bronze**	20% No.1	Connectors, Springs for electronic parts	◎	○	○		○
 **Corson alloy (C7025)**	45% No.1	Lead frames, Connectors	◎	○	○		○
 **Titanium copper**	70% No.1	High-class connectors, etc.	○	◎	○		
 **In-P Compound semiconductors**	50% No.1	Optical communication devices, Ultrafast ICs			○	◎	○

Recycling and Environmental Services Business

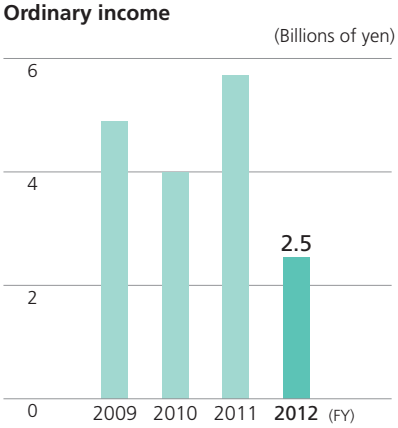


We built a nationwide network for environmental recycling and are carrying out a comprehensive recycling and environmental services business. The recycling business involves recovery of copper and precious metals from recycled materials, while the environmental services business processes industrial waste materials to render them harmless without producing any secondary waste materials.

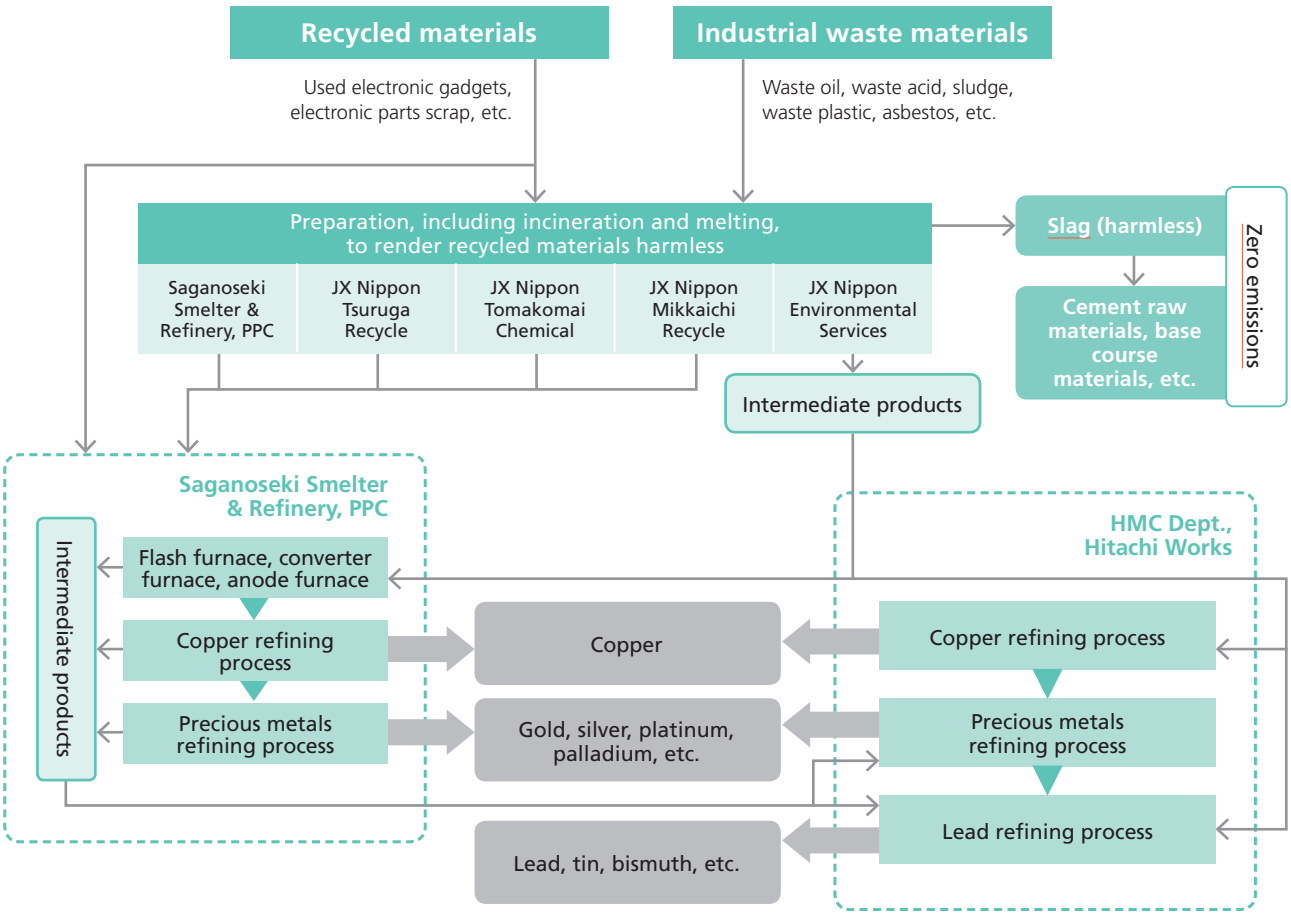
Measures Instituted in Fiscal 2012

We took measures to improve the operational efficiency and raise the recovery rate at the HMC (Hitachi Metal recycling Complex) Department of our Hitachi Works, which collects a wide range of nonferrous metals from various recycled materials, and at each Group company involved in the industrial waste treatment and recycling businesses. We also strengthened our collection network outside Japan in order to increase our recycled materials collection capacity. At our Tsuruga Works, meanwhile, we were working to commercialize our technology for recycling rare metals from spent lithium-ion batteries.

Ordinary income



Outline of Recycling and Environmental Services Business



Economic Effects on Stakeholders ☑

3 Disclosure of Corporate Information and Protection of Personal Information — Relationship with society

The JX Nippon Mining & Metals Group develops its business activities by getting involved in the business of various stakeholders. The economic effects can be identified by stakeholders in the form of financial flows that represent how much the economic value, which is created through such operations as sales of products to customers, will be distributed to each stakeholder.

Economic Effects

The economic effects of specific items pertinent to stakeholders are shown in the table below. The economic effects are identified by stakeholders and by the geographical areas in which companies of the Group operate.

Sales revenue from customers was ¥927.5 billion, 77% of which was recognized as from sales in Japan, while 98% was the sum of sales in Japan and other Asian countries.

Other revenue totaled ¥45.7 billion. The breakdown of this included dividends received from investments and interest received from financial institutions.

We paid ¥872.0 billion for the materials procured and services rendered by suppliers and contractors.

Personnel expenses, including legal welfare expenses, totaled ¥40.9 billion.

The postretirement benefit plan, which JX Nippon Mining & Metals and its domestic Group companies have adopted, includes an approved retirement annuity system, a contract-type corporate pension and a corporate pension plan under the severance indemnity plan as defined benefit plans. Also, JX Nippon Mining & Metals and some domestic Group companies employ a defined contribution corporate pension plan. Furthermore, under certain circumstances, premium severance payments are provided to employees.

Additionally, some overseas Group companies have defined benefit plans and defined contribution plans.

The projected benefit obligation was ¥18.7 billion for the severance indemnity plans and ¥2.4 billion for the defined benefit plans (turned over by different funds from the Group). Of the total of ¥21.1 billion, ¥3.0 billion was contributed to funds outside the Group as pension assets. As a result of deducting ¥1.3 billion in an unrecognized actuarial gain or loss, the remaining ¥16.8 billion was recognized as accrued retirement benefits for employees. The projected benefit obligation is calculated as of the end of the fiscal year, and the estimated pension benefit was allocated over the period of the pension plan with a discount rate of 2.0% for the most part.

Dividends paid to shareholders totaled ¥7.1 billion. In addition, ¥3.6 billion was interest on loans paid to creditors.

The Group recorded income taxes of ¥1.2 billion in fiscal 2012 on the financial statements. Additionally, we posted ¥3.2 billion as other taxes and public charges, which we included as an expense. In total, we recognized ¥4.4 billion as distributions to government administrations.

An amount totaling ¥0.33 billion was donated to society as a part of our social contribution program.

Revenues from national and local governments (in the form of subsidies, tax deductions, etc.) amounted to 2.8 billion yen. From the Ministry of Economy, Trade and Industry, for instance, the Group received subsidies for capital investments in facilities to produce positive-electrode materials for lithium batteries (Isohara Works) and in recycling facilities to conduct sampling, analyses, and treatment of materials collected from after-service-life small consumer electronics (Saganoseki Smelter and Refinery, Pan Pacific Copper). These subsidies were granted under the system to promote construction of low-carbon industrial facilities and the system to promote construction of industrial facilities that use rare earth metals, respectively.

Financial Flows by Geographical Areas and Stakeholders (Value Added through Operations)

(Billions of yen)

	IN		OUT						Value Retained (IN-OUT)
Item	Sales revenue	Other revenue	Operating costs and expenses	Personnel expenses	Dividends	Interest paid	Taxes	Donations	
Stakeholders	Customers	Investments / Borrowers / Public institutions	Suppliers	Employees	Shareholders	Creditors	National and regional governments	Society	
Items used to calculate the amounts	Net sales*1	Dividends received, interest received, gain on sales of fixed assets and marketable securities, etc.	Cost of goods sold, selling, general and administrative expenses (excluding personnel expenses, taxes and public charges and donations)	Labor costs (including wages and salaries, welfare expenses and postretirement benefit expenses)			Income tax and other tax and public charges borne as an expense and posted on the income statement		
Japan	713.4	45.5	665.0	35.5	6.9	2.1	3.4	0.07	45.8
Asia (excl. Japan)	195.9	0.1	190.8	2.0	0.2	1.4	0.7		0.9
North America	12.6	0	11.8	0.4			0.2		0.2
Europe	5.6	0	4.6	1.0		0.1	0		(0.1)
South America		0.1	(0.3)	2.0			0.1	0.27	(2.0)
Total	927.5	45.7	872.0	40.9	7.1	3.6	4.4	0.33	44.8

*1 Figures in the table above are calculated by the geographical areas in which companies of the Group operate.

The Medium-Term Management Plan for Fiscal 2013 to 2015

The JX Nippon Mining & Metals Group drew up the 2nd Medium-Term Management Plan (fiscal 2013–2015) aimed at maximizing corporate value, premised on the furtherance of appropriate governance based on strict compliance and on the creation of a CSR promotion framework.

Looking Back at the 1st Medium-Term Management Plan (Fiscal 2010 to 2012)

The 1st Medium-Term Management Plan laid out the road map for a period of great advancement, toward making the JX Group into one of the largest integrated energy, resources and materials business groups in the world. We then steered Group operations along the two key policy directions of (1) building a high-profit structure balanced between resources on the one hand and smelting and refining on the other, and (2) raising earning power by gearing our business development to market needs. Key to achieving (1) was carrying out the Caserones Copper and Molybdenum Deposit Development Project. We started producing copper cathodes on schedule in fiscal 2012 by means of the SX-EW process. With regard to (2), we greatly expanded our capacity for producing cathode materials for in-vehicle lithium-ion batteries, installed equipment for recycling rare metals from spent lithium-ion batteries, and completed construction of the Kakegawa Works of JX Metals Precision Technology in order to start full-process OEM production of automobile connectors.

CSR activities, which we began carrying out in earnest in fiscal 2006, were seen as having become a fully established part of our Group operations by fiscal 2011. Our goal starting in fiscal 2012 is therefore to raise our corporate value through CSR activities closely tied to our business operations.

Carrying out the 2nd Medium-Term Management Plan (Fiscal 2013 to 2015)

Following up on the 1st Medium-Term Management Plan, we are now at the start of a new period of advancement where we will strive to become one of the largest integrated energy, resources and materials business groups in the world. We are determined to move forward as a Group toward the goal of our Long-Term Vision for fiscal 2020, of becoming a global resources and materials company centering on copper.

Core Tasks during the 2nd Medium-Term Management Plan (see pp. 3–8 for details)

Prioritizing compliance and safety

Each officer and employee of our Group recognizes anew the importance of compliance with laws and ordinances and of giving priority to safety, and endeavors to thoroughly instill this recognition in our corporate culture.

Completing the Caserones Copper and Molybdenum Deposit Development Project

We have begun producing copper cathodes using the SX-EW process and expect to start copper concentrates production during 2013. Assuming the currently forecasted movement in copper prices, we expect to obtain annual earnings from this project in the tens of billions of yen. Completion of this project will be a major contributing factor in achieving the ambitious earnings plans of our 2nd Medium-Term Management Plan.

Further expanding and raising profitability of midstream and downstream businesses

We are aiming toward further expanding, as well as raising the profitability of, midstream and downstream businesses including smelting and refining, electronic materials, and recycling and environmental services. We are working to implement new strategies, such as the provision of electronic materials for automotive components and the overseas procurement of recycled materials which we have already begun.

Developing global human resources

In order to take our business into a future of growth and expanded operations, we will strive to develop human resources able to succeed in the global arena.

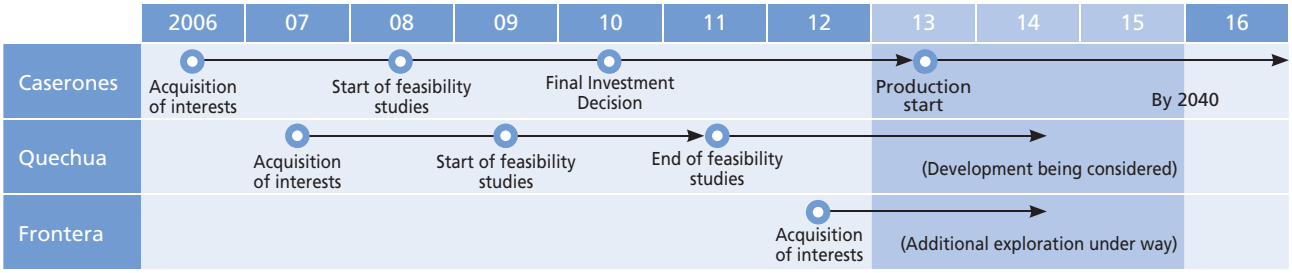
Strategies Specific to Each Business

Resources Development Business

Basic strategy: Establish a highly profitable structure by expanding mining interests

Grow business aimed at equity entitled copper mine production of 350,000 tons/year

- Launch Caserones Copper and Molybdenum Deposit Development Project
  - → Plan to start producing copper concentrates during fiscal 2013
- Consider starting development of Quechua Copper Deposit Project (Peru)
- Carry out mineral exploration activities in the Frontera district (Chile and Argentina)

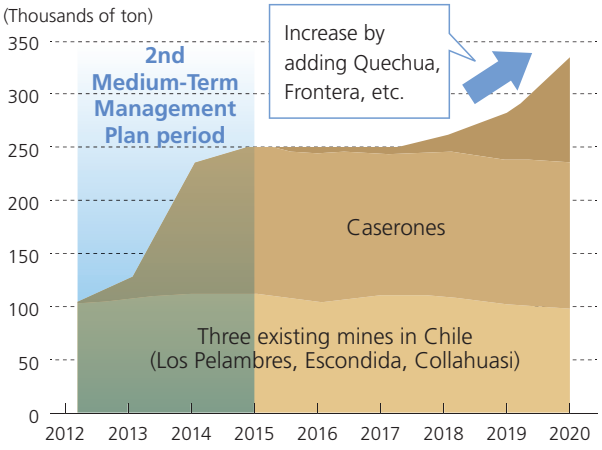


Basic strategy: Acquire mining interests for utilization of our proprietary technologies

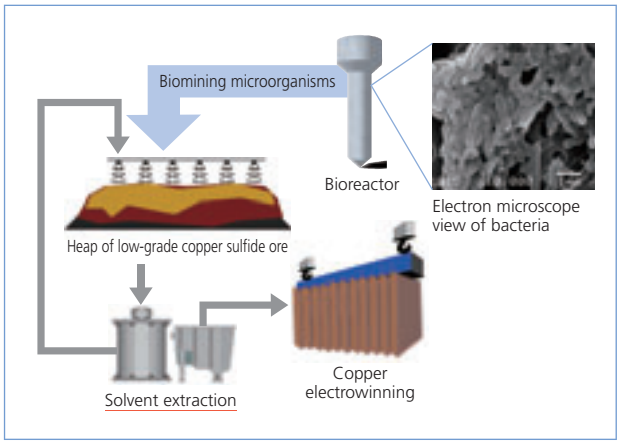
Promote commercialization of new smelting technology

- N-Chlo Process
  - → Consider applying results of Australian pilot plant to gold concentrates
- Biomining
  - → Continue commercial feasibility trial in Radomiro Tomic copper mine (Chile)

Equity entitled copper mine production



Copper recovery process using biomining technology



Smelting and Refining Business

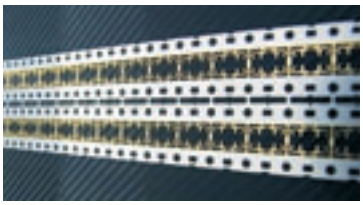
Basic strategy: Build up the business structure to become one of the world's most cost-competitive suppliers

- Achieve safe, stable operations
- Improve smelting margin
  - → Raise production efficiency at Group smelters by using copper concentrates from Caserones
  - → Use high-margin raw materials
  - → Start using two copper concentrate and sulfuric acid carriers

Electronic Materials Business

Basic strategy: Maintain and expand top-class share globally in each product market

- Promote full-process OEM production of connectors (Kakegawa Works in operation from April 2013)
- Achieve profitability of cathode materials business as early as possible



- Improve profitability by developing new fields and materials
  - → Ultra-thin electro-deposited copper foil
  - → High-performance copper alloy sputtering targets
  - → Sputtering targets for organic EL displays
  - → Sputtering targets for next-generation semiconductors
  - → Radiation sensor materials
- Expand network of overseas sites

Recycling and Environmental Services Business

Basic strategy: Create a global, environmentally viable resource recycling business designed for zero emissions

- Expand collection outside Japan
  - → Make aggressive push into North American markets
- Roll out and expand new businesses
  - → Lithium-ion battery recycling
  - → Low-concentration PCB treatment
- Consolidate metal production sites for efficiency and cost reduction

Goals of the 2nd Medium-Term Management Plan (Ordinary Income Plan)

(Billions of yen)

	FY2012	FY2015 (Planned)
Resources development	28	67
Smelting and refining	9	27
Electronic materials	6	21
Recycling and environmental services	2	11
Titanium (shifted to our Group in FY2013)		4
Total	45	130

Key Factors

	FY2012	FY2015 (Planned)
Yen/dollar exchange rate	81	90
Copper price at LME (Jan. to Dec.; cent/pound)	361	360
Equity entitled copper mine production (thousand tons/year)	94	250
Sales volume of refined copper by PPC (thousand tons/year)	545	610
Sales volume of treated rolled copper foil (thousand kilometers/month)	2.7	3.7
Sales volume of precision rolled materials (thousand tons/month)	3.3	4.0
Recovered volume of gold by our recycling and environmental services business (ton/year)	5.8	7.4

Corporate Structure

Corporate Data

Company Name	: JX Nippon Mining & Metals Corporation
Paid-in Capital	: ¥40 billion (as of April 1, 2013)
Representative	: Yoshimasa Adachi President and Chief Executive Officer
Net Sales	: ¥927.5 billion (consolidated result for fiscal 2012)
Ordinary Income	: ¥45.0 billion (consolidated result for fiscal 2012)
Head Office	: 6-3, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-8164, Japan
Business Lines	: Resources Development
	: Smelting and Refining
	: Manufacturing and Marketing of Electronic Materials
	: Recycling and Environmental Services
Total number of employees (Non-consolidated)	
	: 1,363 (As of March 31, 2013)
Total number of employees (Consolidated)	
	: 5,444 (As of March 31, 2013)

Domestic Operating Sites

: Hitachi Works (Ibaraki Prefecture)
: Isohara Works (Ibaraki Prefecture)
: Technology Development Center (Ibaraki Prefecture)
: Kurami Works (Kanagawa Prefecture)
: Kawasaki Plant, Kurami Works (Kanagawa Prefecture)
: Tsuruga Plant (Fukui Prefecture)

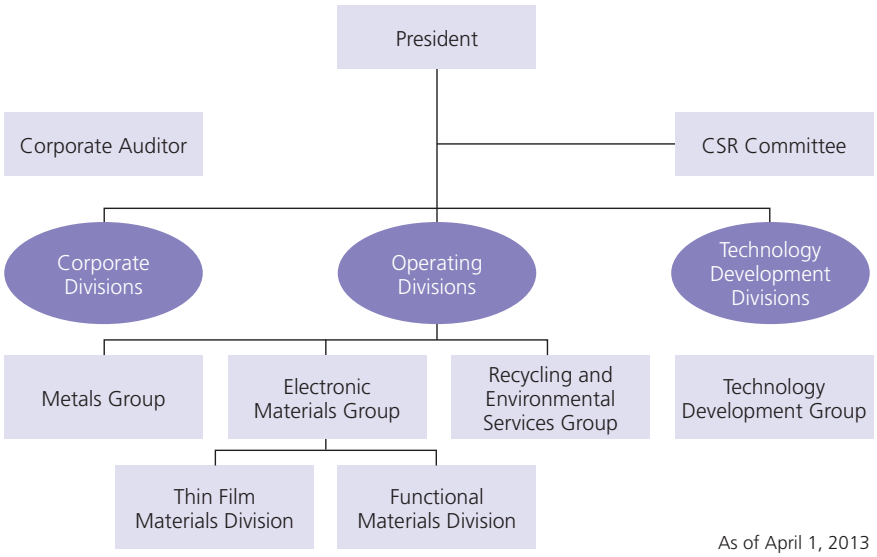
Overseas Operating Sites*1

: Chile Office

*1. The JX Nippon Mining & Metals Group conducts business in 10 countries worldwide.

Management Structure and Organization

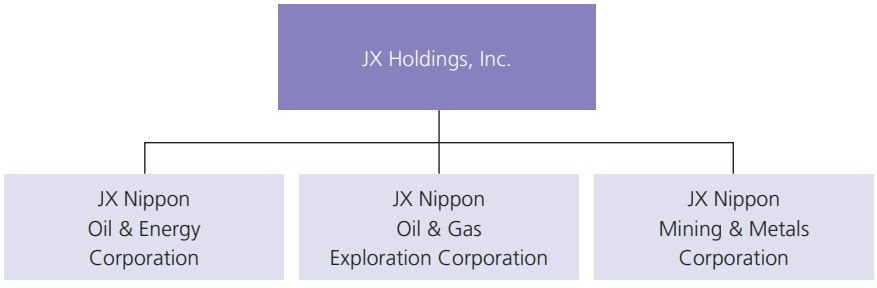
JX Nippon Mining & Metals Corporation employs an organizational structure that is comprised of operating divisions, which engage in the Company's operating activities; corporate divisions, which are responsible for the planning, accounting, administrative, environmental safety and related support functions; and technology development divisions, which are active in research and development pursuits. The operating divisions are conducted through the Metals Group, the Recycling and Environmental Services Group, and the Electronic Materials Group.



As of April 1, 2013

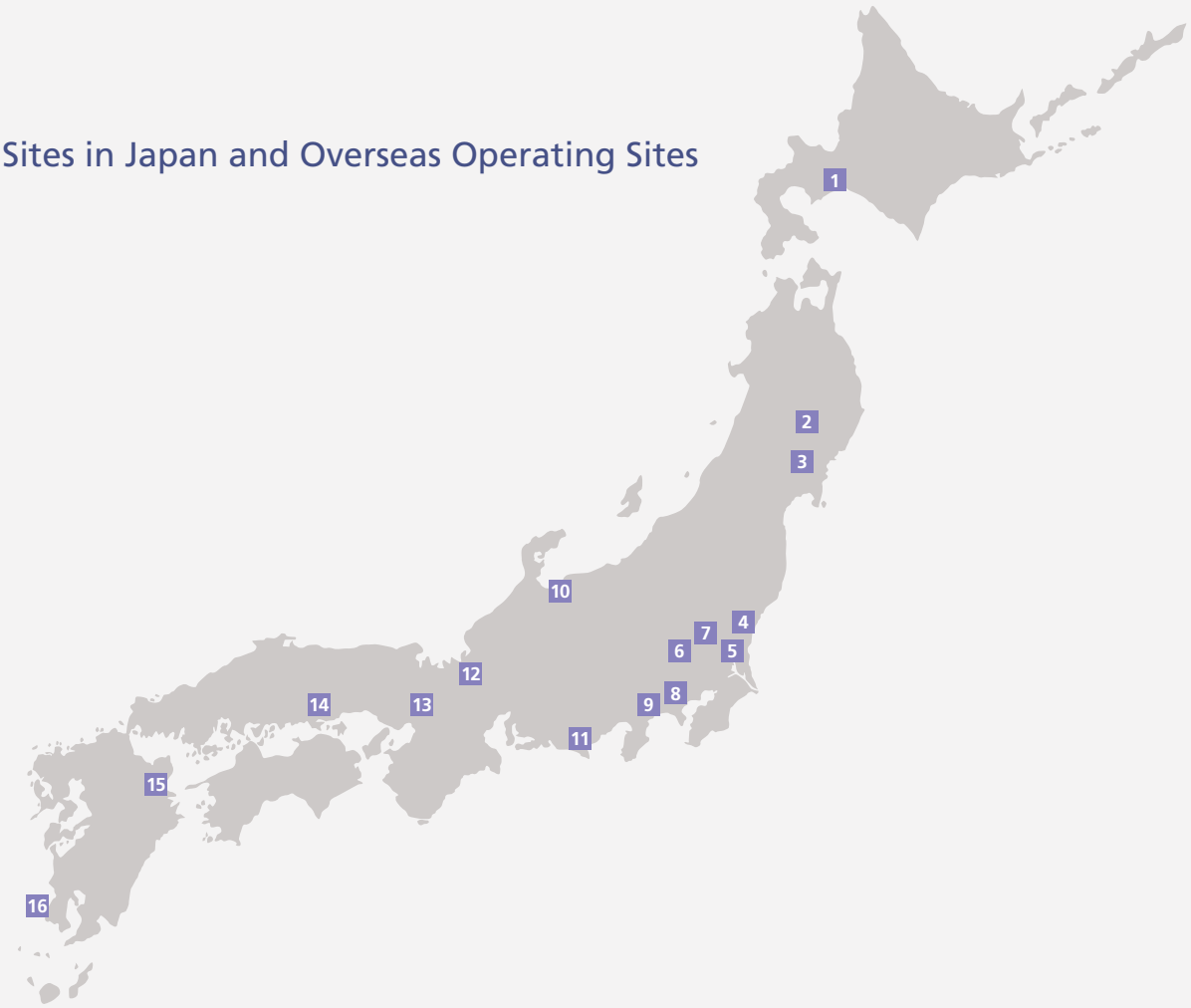
About the JX Group

Through the joint transfer of shares, Nippon Mining Holdings, Inc., and Nippon Oil Corporation established the holding company, JX Holdings, Inc., in April 2010. The newly integrated JX Group will provide a stable and efficient supply of energy, resources and materials both in Japan and overseas. The JX Nippon Mining & Metals Group is the metal business group company that plays a central role in the JX Group.



Production Sites in Japan and Overseas Operating Sites

As of October 1, 2013



Domestic

1 JX Nippon Tomakomai Chemical Co., Ltd.

2 Esashi Works, JX Metals Precision Technology Co., Ltd.

3 Ichinoseki Foil Manufacturing Co., Ltd.

4 Isohara Works

JX Nippon Foundry Co., Ltd.

5 Hitachi Works

Hitachi Refinery, Pan Pacific Copper Co., Ltd.

JX Nippon Environmental Services Co., Ltd.

Kamine Clean Service Co., Ltd.

6 Tatebayashi Works, JX Metals Precision Technology Co., Ltd.

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

8 Kurami Works, Kawasaki Plant

Kawasaki Office, JX Nippon Coil Center Co., Ltd.

9 Kurami Works

Kurami Office, JX Nippon Coil Center Co., Ltd.

10 JX Nippon Kurobe Galva Co., Ltd.

JX Nippon Mikkaichi Recycle Co., Ltd.

11 Kakegawa Works, JX Metals Precision Technology Co., Ltd.

12 Tsuruga Plant

JX Nippon Tsuruga Recycle Co., Ltd

13 Takatsuki Plant, JX Metals Trading Co., Ltd.

14 Tamano Smelter, Hibi Kyodo Smelting Co., Ltd.

Hibi Smelting Logistics Co., Ltd.

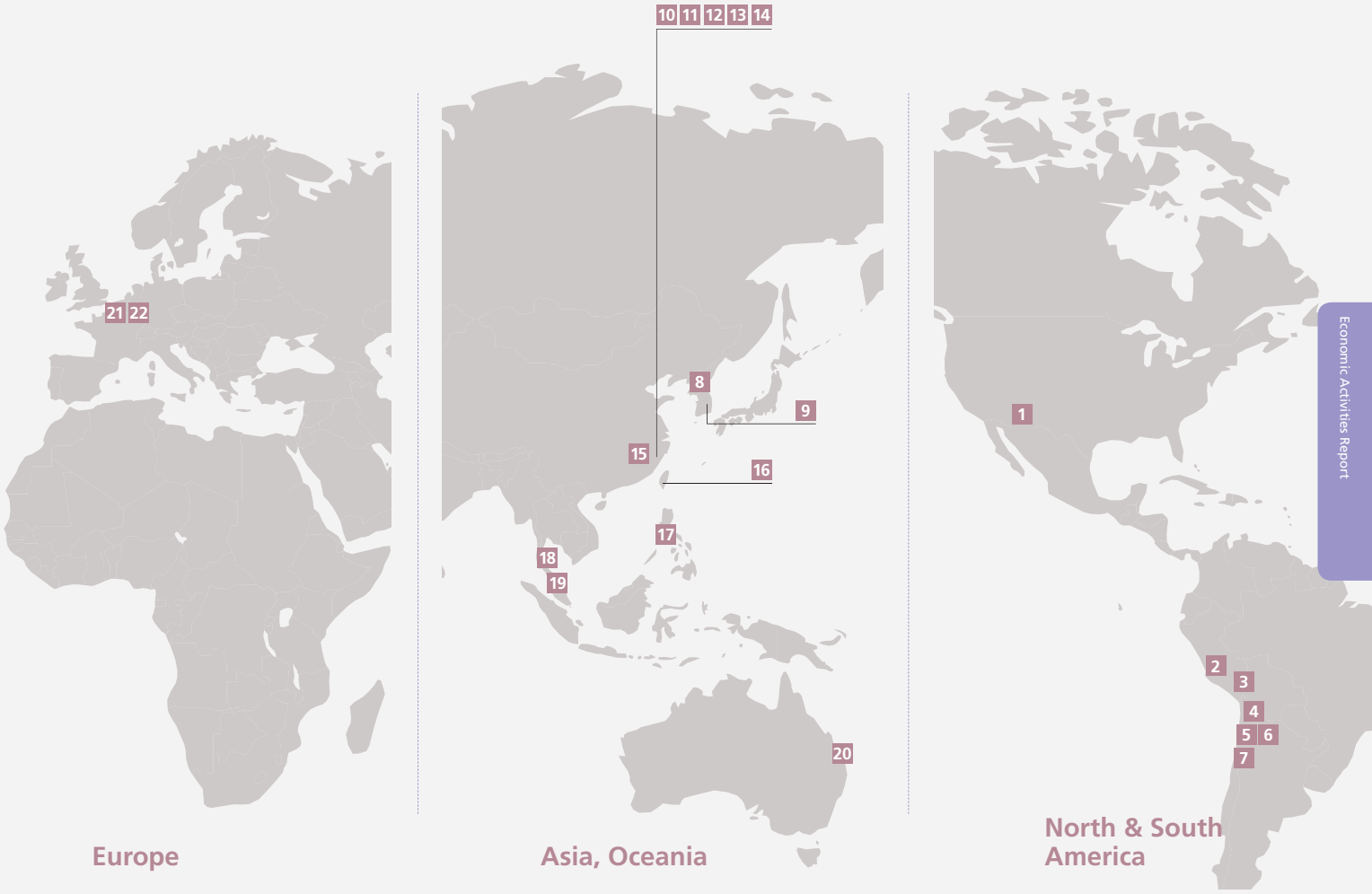
15 Saganoseki Smelter & Refinery, Pan Pacific Copper

Saganoseki Works, Japan Copper Casting Co., Ltd.

Nissyo Ko-un Co., Ltd.

PPC Plant Saganoseki Co., Ltd.

16 Kasuga Mines Co., Ltd.



1 JX Nippon Mining & Metals USA, Inc.

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

3 Collahuasi Mine

4 Escondida Mine

5 Caserones Copper and Molybdenum Deposit

6 Los Pelambres Mine

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

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

9 LS-Nikko Copper Co., Ltd.
Poongsan-Nikko Tin Plating Corp.

10 Nikko Metals Trading & Services (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 Changzhou Jinyuan Coppe Co., Ltd.

16 Nikko Metals Taiwan Co., Ltd.

17 JX Nippon Mining & Metals Philippines, Inc.

18 Materials Service Complex Malaysia Sdn. Bhd.

19 JX Nippon Mining & Metals Singapore Pte. Ltd.

20 Pan Pacific Copper Exploration Australia Pty. Ltd.

21 Gould Electronics GmbH

22 JX Nippon Mining & Metals Europe GmbH

Corporate Governance

2 Compliance with Laws and Regulations and Engagement in Fair Trade — Ethics

Corporate Governance System of the Group

The Group's basic aim in corporate governance is to enable us to go forward as a Group in implementing growth strategies and meeting the challenges of a changing business environment. The keys to these ends include being prompt and agile in making decisions and in carrying out operations, along with ensuring sound and transparent business management that earns the trust of stakeholders.

Board of Directors

The Company has a Board of Directors to discuss issues stipulated in laws, regulations, and our Articles of Incorporation, as well as other important management issues. The board is composed of the chairman, the president, and eight other directors*1 along with three auditors.

*1 All ten directors are inside directors, and the nine directors other than the chairman serve concurrently as executive officers.

Executive Meeting

The Company has established the Executive Meeting as an advisory body to the president. The Executive Meeting has consultations regarding important issues related to the management of the Company. The status of operational implementation is also reported to it. The Executive Meeting consists of the president and executive officers designated by the president. Full-time auditors can also attend the Executive Meeting and offer their opinions.

Corporate Auditors

Corporate auditors attend Board of Directors meetings, Executive Meeting sessions, and other major councils and committees, offering their views as necessary for raising the effectiveness of audits. They also read important documents and meet with officers and employees of the Company and each Group company, with the aim of staying abreast of the status of the officers and employees performance of their duties. In addition, they receive regular reports from the Internal Auditing Office and independent auditors regarding auditing plans and their implementation status and results, while exchanging views and information with them.

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. Retirement benefits and stock options are not offered.

Internal Control System

The Group has drawn up a Basic Policy for the Establishment and Operation of Internal Control Systems, laying out rules on such matters as corporate governance, risk management, compliance, and internal auditing. Based on this basic policy, we are setting up internal control systems that will ensure operations are carried out properly.

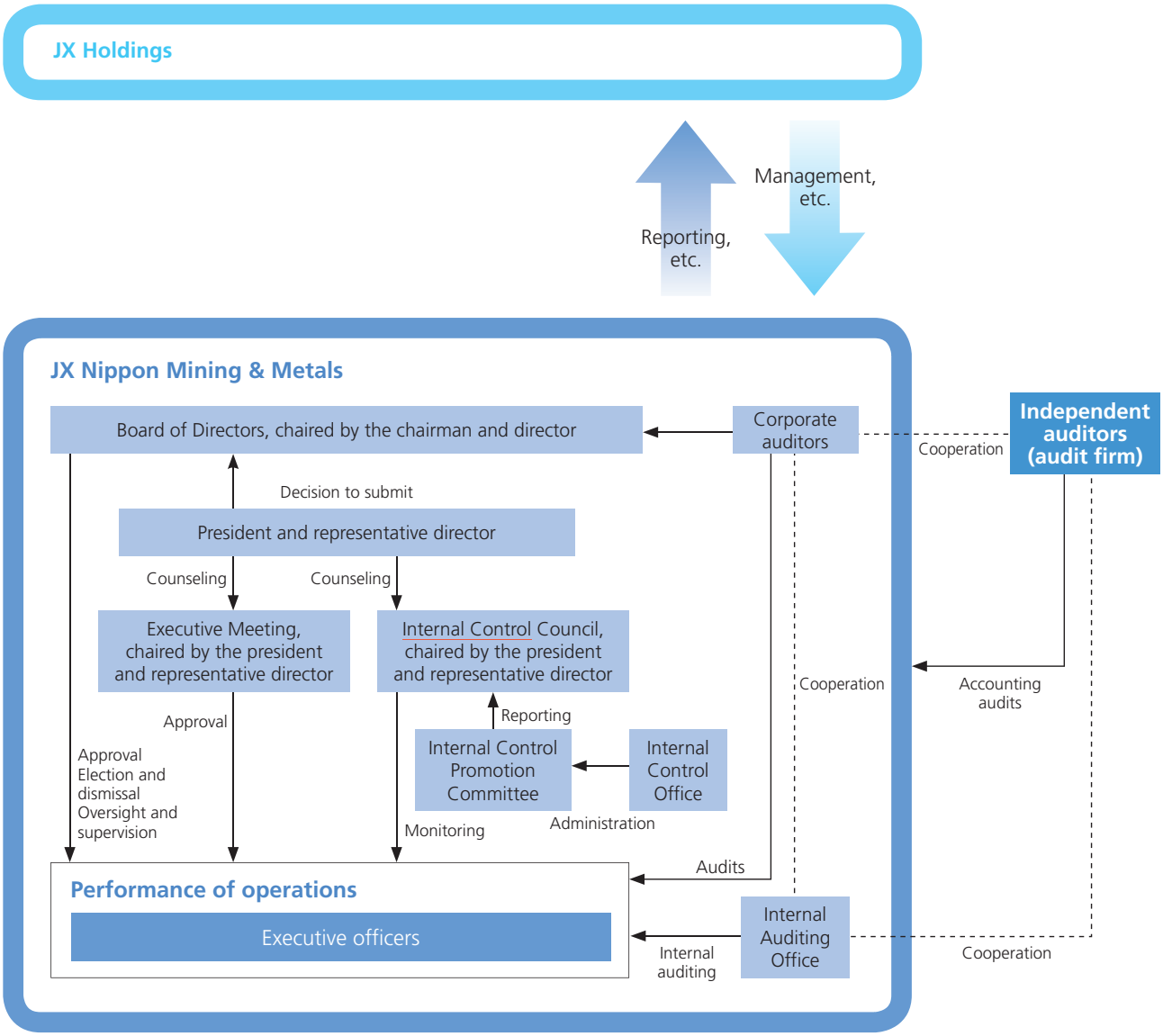
Internal Control Council

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 confirming the status of internal controls and holding discussions to address issues as necessary. As a rule, the council meets once a year at the same time as the Executive Meeting in March.

Internal Control Promotion Committee

The Internal Control Promotion Committee has been set up for advising, and assisting with the duties of, the Internal Control Council chair. As a rule, the committee meets twice each fiscal year, once in the first half and once in the second half.

Corporate Governance Structure of the JX Nippon Mining & Metals Group



Compliance

We make sure that officers and employees of Group companies comply with laws and regulations. We establish rules to ensure full compliance by all Group companies, and adopt a firm policy of observance of laws, the Articles of Incorporation, and other rules and regulations in every aspect of work, in order to conduct corporate activities fairly and increase public trust in our Group.

Compliance Committee

Basic policy, priority issues for the year, education, and other measures related to the JX Nippon Mining & Metals Group are determined at meetings of the Compliance Committee (held twice a year as a rule), consisting of the officer in charge of compliance at each department of the Company and major Group companies. The Compliance Committee receives reports on the current status of compliance from each department of the Company and each Group company. Based on these reports, the committee evaluates business management-related risks of fraudulent acts and legal violations and reflects them in designating priority issues and formulating educational plans.

Performance regarding Key Compliance Goals in Fiscal 2012

1. Survey of compliance status

We ask each department and operating site of the Group to fill out a questionnaire every six months in order to keep track of their compliance status, including the existence of compliance issues and concerns. In fiscal 2012, these surveys took place in September 2012 and from March to April 2013. Corrective measures have already been taken, or response policies drawn up, regarding all issues and concerns identified in these surveys.

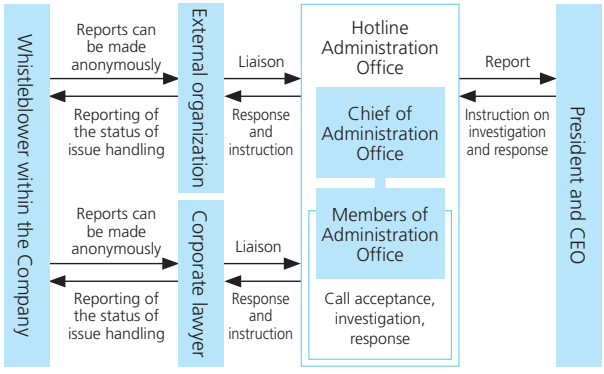
2. Effective response to matters identified in the Inspection on Environment and Safety-Related Compliance

From October to December 2011, we conducted an Inspection on Environment and Safety-Related Compliance, with the cooperation of attorneys and consultants, for the purpose of determining the status of compliance with laws on the environment and safety, and the institutional climate of each workplace in these areas. Based on the results, we have been working to implement effective measures in line with plans drawn up for each operating site. For each of the matters identified in the overall inspection of legal observance, we have completed response measures or drawn up response policies. As for the overall awareness inspection, measures are being carried out at each operating site in consideration of workplace circumstances.

Inspection on Environment and Safety-Related Compliance conducted in fiscal 2012

From November 2012 to January 2013, we reviewed compliance with applicable laws and regulations at seven of the Group's operating sites. During fiscal 2013, we expect to complete our response to the matters identified as a result of these reviews. Overall, laws and regulations on the environment and on workers' safety and health are generally thoroughly understood at these sites, and the reviews have not found awareness lacking on any key rules.

3. Revised whistleblower program and measures to spread awareness of it



In order to increase the reliability of the whistleblower program, we asked an external organization to take over responsibility for accepting reports under the program, replacing the Administration Department, and allowed the filing of anonymous reports. We spread awareness of the revised program throughout the Group by putting up informational posters at operating sites, handing out pocket editions of the Mission Statement to all employees, and including the program in compliance training sessions. All matters reported under the program in fiscal 2012 were handled appropriately. No matters concerned with racial and gender discrimination were reported.

4. Interviews on compliance with laws

In individual and group interviews and by other means, employees were asked to report frankly any concerns they had about matters that might lead to legal infractions, accidents, or quality problems, so that compliance issues and concerns could be identified and addressed at an early stage. The fiscal 2012 interviews took place in March 2013. While preserving anonymity, necessary measures were studied and taken to address the concerns raised.

5. On-premise informal gatherings with Group companies

On September 21, 2012, we visited Nissho Ko-un Co., Ltd. to go over the Group company subcontracting agreements in such areas as manufacturing and transport, and held an informal session with work supervisors for the purpose of education on subcontracting. The session was attended by 14 persons from four Group companies.

6. Labor compliance inspections

Labor compliance inspections were conducted during the period from November 2012 to February 2013, at the Company's head office and operating sites, and some Group companies. The purpose was to investigate the status and legal compliance of subcontracting, outsourcing, seconding, worker dispatching, as well as various programs related to working conditions. The inspections took the form of interviews conducted by a public consultant corporation specializing in social and labor insurance with appropriate persons at each site, including administration department personnel, employees, subcontracted workers, and dispatched workers.

The results were reported at a meeting of administration department managers in April 2013, and it was decided to complete countermeasures for all issues by the end of fiscal 2013. We further decided to conduct similar inspections throughout the Group as a whole over the next three years.

7. Enhancement of compliance education

The Group carries out systematic educational programs on a broad range of compliance issues, at all levels including officers. In fiscal 2012, we added the following programs to those already offered.

- Compliance education at main operating sites
  (summary report of the Inspection on Environment and Safety-Related Compliance Results, and description of the new whistleblower program and Compliance Guidebook)
- Compliance education for officers
- Compliance education for general managers

We also provide education on compliance tailored to the needs of each department and operating site, as necessary.

The following compliance education was carried out in fiscal 2012.

- Compliance education in level-based training
- Education on security trade control and on the Authorized Exporters' Program (for head office and Isohara Works)
- Compliance-related education on specific themes
  Stamp tax: for marketing and accounting personnel in head office
  Conflict minerals (for marketing department personnel, etc. in head office)
  Waste Management and Public Cleansing Act (for Recycling & Environmental Services Group personnel, etc., as well as for personnel of the Hitachi Works, JX Nippon Tomakomai Chemical, JX Nippon Tsuruga Recycle, and JX Nippon Mikkaichi Recycle)
- Compliance workshops at operating sites (see p. 52 for details)

Embezzlement of Corporate Funds by a Former Employee of a Group Company

On April 22, 2013, our wholly owned subsidiary JX Nippon Exploration and Development filed a criminal complaint alleging computer fraud against a former employee engaged in accounting work. The complaint was filed at the Atago Police Station of the Metropolitan Police Department. Recognizing the seriousness of this wrongdoing, we as a Group intend to devote every effort to preventing recurrence.

Nature of the embezzlement

The former employee of said subsidiary is accused of manipulating a computer terminal used for accounting processing to make fraudulent remittances to a bank account in the former employee's name, under the pretense of making payments to a client account. The amount of damages given in the criminal complaint is approximately 129 million yen.

Measures to prevent recurrence

This incident has made us keenly aware of our responsibilities, and we are further strengthening the internal control systems in the accounting, finance, and other departments in the Group, as well as taking other necessary measures; and the entire Group is committed to redoubling its efforts to prevent recurrence.

* See pp. 13–16, "Talk with Top Management: Thoroughgoing Compliance and Internal Control."

Internal Auditing

The Internal Auditing Office is responsible for supervision of the internal control systems necessary for ensuring that internal auditing and financial reporting are carried out properly. Internal auditing is performed of the Group as a whole. Regular auditing, conducted each fiscal year based on the internal auditing plan, consists of accounting audits (investigating whether accounting is being done properly in accord with accounting principles) and operational audits (determining whether the necessary rules and systems have been put in place and are being implemented properly). In addition, there are extraordinary audits conducted by special order of the president. The results of internal audits are reported periodically to the president and Executive Meeting.

In addition to these audits, from fiscal 2013 we are instituting simple audits of 44 Group companies, 28 in Japan and 16 overseas, in order to expand the scope and frequency of audits. Accounting audits and operational audits will be administered by temporary auditors sent from the head office.

Risk Management

We endeavor to enhance and strengthen risk management by establishing a risk management system based on substantial data.

Response to Emergencies

Our crisis management rules describe our response when a crisis or emergency threatens to have a major impact on Group management.

Based on the disaster response guidelines in these rules, employees are provided with helmets and other disaster-prevention equipment and emergency kits; and emergency provisions are stocked, including food, drinking water, and materials for overnight stays on company premises.

Standard rules are also drawn up for reporting in case of natural disasters, environmental pollution, fires, explosions, or other emergencies, so that the necessary information can be gathered in a timely manner to enable a prompt and smooth response to all emergencies.

Protection of Personal Information

The Group strives to properly manage personal information by setting forth the Personal Information Protection Rules based on the Personal Information Protection Policy.

Information Security

We are working to bolster our management system for information security. As one part of these efforts, Information Security Rules and Information Security Standards have been established in the Company and its principal Group companies to enhance its management systems and standards. Furthermore, we are systematically strengthening our IT-related security, management, and use of computers, intra-company networks, and USB memory devices.

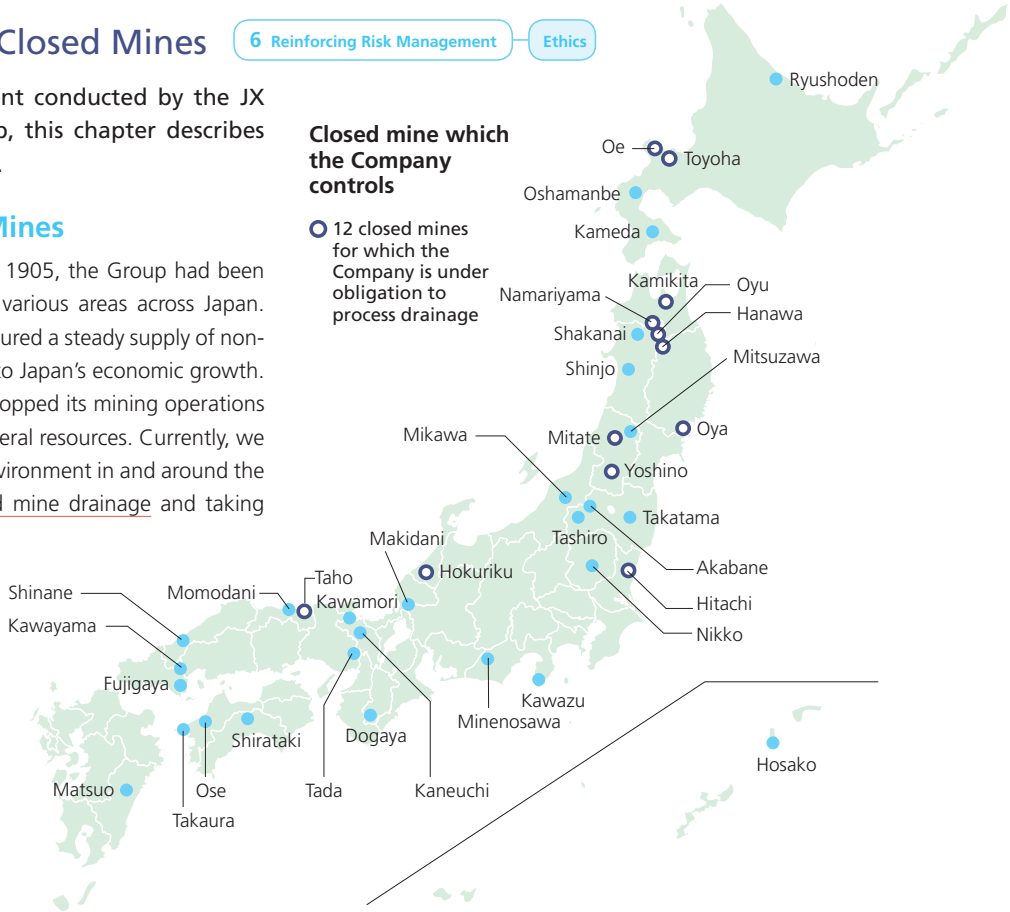
In April 2012, we revised our Information Security Standards in order to strengthen management of recording media.

Risk Management at Closed Mines

As examples of risk management conducted by the JX Nippon Mining & Metals Group, this chapter describes initiatives taken at closed mines.

Management of Closed Mines

Since the initiation of its business in 1905, the Group had been engaged in the mining business in various areas across Japan. Through our mining business, we ensured a steady supply of non-ferrous resources, thus contributing to Japan's economic growth. Subsequently, however, the Group stopped its mining operations due primarily to the depletion of mineral resources. Currently, we are working to restore the natural environment in and around the closed mines by processing the acid mine drainage and taking other treatment methods.



Damage to Closed Mines by the Great East Japan Earthquake, Restoration Projects, and Permanent Measures

At the Oya and Takatama mines, impoundments were damaged by the Great East Japan Earthquake that occurred in March 2011. Although impoundments at both mines were capable of the seismic resistance required by Japan's construction criteria, the seismic scale of the earthquake far surpassed the level assumed in the criteria.

The Oya Mine Impoundment

Part of the tailings became liquefied and was discharged from the impoundment into a nearby river, rice paddies, agricultural fields, and housing areas. In response, the Company promptly restored its water treatment facilities and collected the discharged tailings to recover the water quality in the river and paddies. As a result, restoration of the paddies and fields was completed by May 2012. Moreover, in June 2012, the Company began constructing new weirs as a permanent measure. This project is scheduled to be completed in January 2014; 80% of the project had already been completed as of July 2013.

The Takatama Mine Impoundment

Because of the earthquake, the upper slope of the impoundment collapsed, causing an outflow of tailings into a nearby river and forest road. The Company swiftly collected the discharged tailings and restored the forest road. Moreover, as a permanent measure, the slope inclination of the impoundment was diminished. As a result of this project, which was completed in November 2012, the impoundment now has a seismic-proof structure, ready for an earthquake equivalent to, or even greater than, the Great East Japan Earthquake. Four communities in Atami Town, Koriyama City, Fukushima Prefecture, awarded a certificate of gratitude to the Takatama Mine and the construction company in recognition of their excellent technology and the teamwork of the project members, which led to the prompt completion of the restoration project.

Ceremony to pray for the safety of the project (June 2012)

Restoration project of the impoundment (July 2013)

The impoundment after completion of the project (November 2012)

Mr. Kato, Janitor of the Takatama Mine, with the certificate of appreciation

Reinforcing Risk Management

Emerging Risks and Initiatives Taken

After the Great East Japan Earthquake, the Japanese government formed a study group of specialists to prepare impoundment management programs. As a result of the group's activities to identify causes of impoundment collapse and to study prevention measures, in November 2012 the government revised the construction criteria (technological guidelines) for impoundments. The new criteria stipulate that low-enclosing-bund type impoundments must be designed by taking into account their stability against level 2 earthquake motion (the greatest conceivable earthquake motion in a target area).

Risk Assessment and Prevention Measures

In fiscal 2012, the Group voluntarily began risk assessment for level 2 earthquake motion at all its impoundments. Moreover, the Group is also assessing risks of torrential rains, the occurrence of which has increased recently across the country. The risk assessment is scheduled to be completed by the end of fiscal 2013. For impoundments that need improvement, in fiscal 2013 we began soil improvement works to improve seismic resistance of the ground and construction of new drainages to improve drainage capacity at the time of a downpour.

Preliminary assessment of an impoundment

Construction site of an impoundment

VOICE

Seishi Yamada
Senior Engineer, Facilities Engineering Department

Engagement in the Management of Closed Mines

"As a civil engineer, I was engaged in the management of closed mines even before the Great East Japan Earthquake. To tell the truth, I was inspecting a closed mine in the Tohoku region on the very day of the disaster. Despite the crippled traffic and communication networks, I was able to arrive at the Oya Mine, located in the most severely devastated area, two days after the disaster. I still vividly remember the moment I saw tailings flowing out of the impoundment, a scene that utterly shocked me."

Measures Taken at the Oya Mine

"Fortunately, the outflow of tailings did not cause any human casualties. However, it caused tremendous damage to the environment and daily lives of local residents. Seeking cooperation from related parties, we worked to restore the environment as quickly as possible. Regarding the preparation of permanent measures, in the absence of any technological criteria, we had to seek instructions from the authorities, local governments, and specialists. Thanks to their support, I am pleased that we were able to take the best possible measures."

Future Tasks

"In the first place, we will concentrate our efforts in the ongoing project at the Oya Mine. This project, however, is only the first step, or the first few steps, toward achieving our goal: to reinforce the risk management of closed mines by setting our own original criteria, which are even more rigorous than the new criteria from the national government. We will also exploit the experience and expertise we gain in Japan in developing other mines of the JX Group, including the Caserones Deposit."

Town meeting held in the vicinity of the Oya Mine

CSR Promotion System

10 Management Responsibilities — Ethics

The CSR Committee, an advisory body to the president, is responsible for determining basic policies for the Group's CSR activities, assessing progress toward CSR-related goals, and evaluating CSR performance from economic, environmental, and social perspectives. The JX Nippon Mining & Metals Group makes a concerted effort to promote CSR activities throughout the Group.

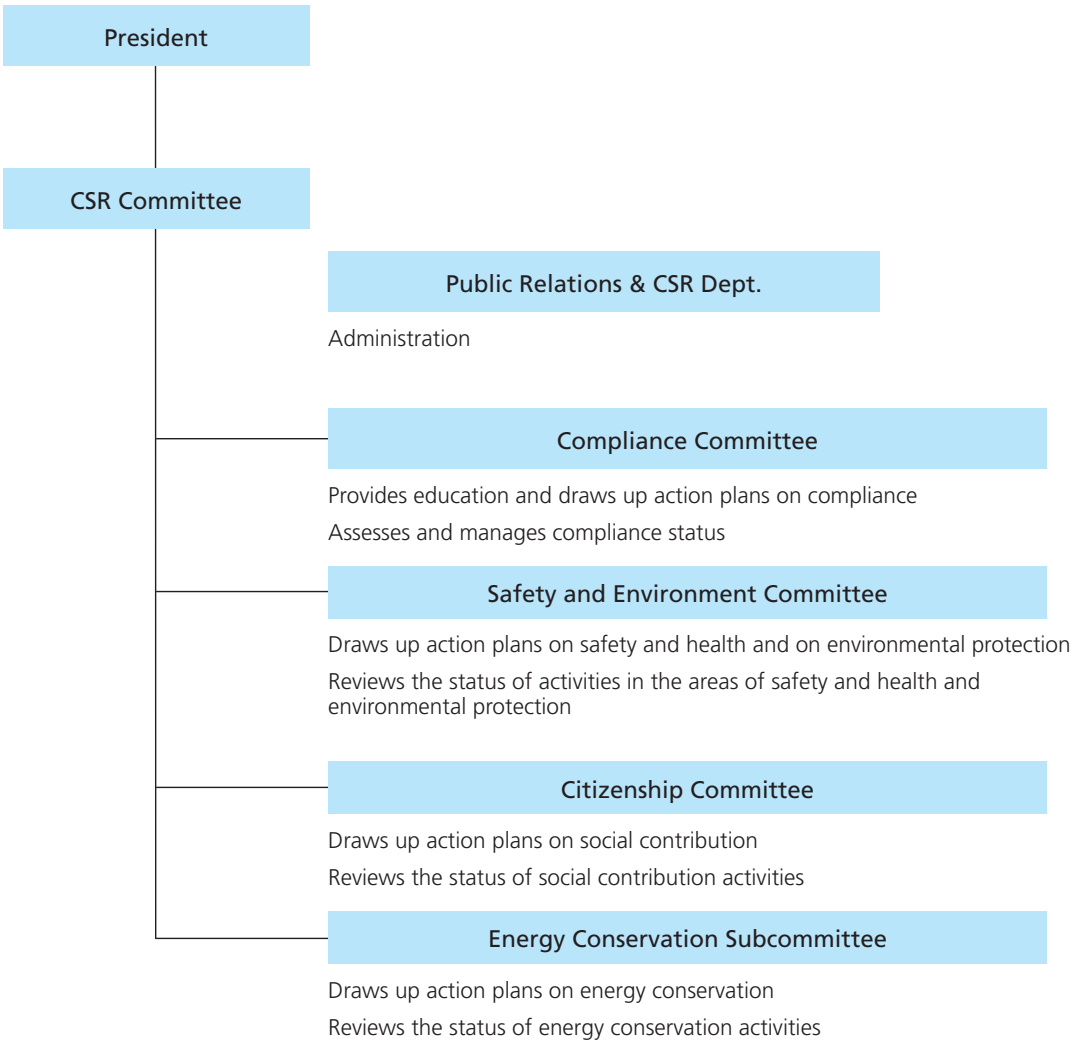
CSR Committee

The JX Nippon Mining & Metals Group has formed a CSR Committee as an advisory body to the president to set basic CSR activities policies, organizational structure, and action plans, and to assess and manage the status and progress of the planned actions. The CSR Committee is headed by the president and consists of the directors and executive officers of the Company and Group companies who are appointed by the president. In fiscal 2012, the committee met three times, on April 23 and July 23, 2012, and January 21, 2013.

Under the CSR Committee are a Compliance Committee, a Citizenship Committee, a Safety and Environment Committee, and an Energy Conservation Subcommittee, whose main responsibilities are to draw up plans for each area and assess the status of activities.

CSR Committee

CSR Promotion System



Spreading Awareness of CSR Activities in Fiscal 2012

During fiscal 2012, we carried out the kinds of activities described here in order to spread awareness of our approach to CSR throughout the Group and to put into practice more effective CSR activities.

Publishing Sustainability Report 2012

Sustainability Report 2012 was published in Japanese and English. The Japanese and English reports attained the Application Level A+ as defined in the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI).

CSR Workshops

Starting in fiscal 2012, we decided to hold CSR and compliance workshops concurrently, once every two to three years. In fiscal 2012, the workshops were held in three operating sites in Japan and three outside Japan, for a total of around 340 persons.

Training Event for JX Group CSR Promotion Managers

A training session for people responsible for promoting CSR activities was held on November 2, 2012. We invited Mr. Keisuke Takegahara, general manager of the Development Bank of Japan Inc.'s Environmental Initiative & Corporate Social Responsibility-Support Department, to deliver at the session a lecture entitled "CSR Activities and Increasing Corporate Value." The session was attended by around 100 persons.

Employee Survey on Our CSR Activities

An employee survey was conducted to find out how the Sustainability Report was received by the employees for whom it is mainly intended, and to gather their views in order to reflect them in future enhancements to the report and to our CSR activities.

1. Outline of the survey

Survey period: November 26, 2012 to January 10, 2013
Survey method: Questionnaires were all submitted anonymously, either on the Internet or on paper.

2. Survey results

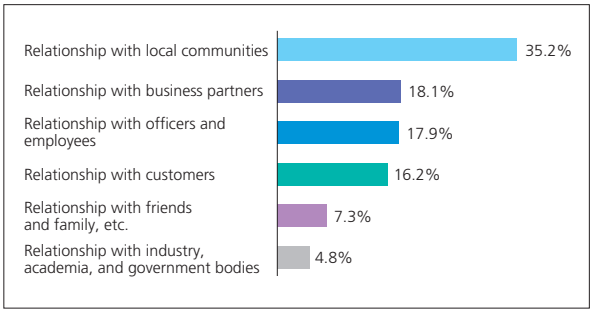
	Number eligible	Responses	Response rate
FY2012 survey	4,595	3,937	85.7%
FY2011 survey	3,462	3,109	89.8%

Respondents were asked to select three of the 22 topics in Sustainability Report 2012 as topics that they found to be of particular interest and then to rank them by giving three points for their first choice, two points for their second choice, and one point for their third choice. The top 10 topics of interest were as follows:

Rank	Topic	Score
1st	Special Report: Our Reponses to the Great East Japan Earthquake	3,446
2nd	Message from the Management	2,050
3rd	Special Feature 1: Developing Environment-Friendly Technologies	2,025
4th	Employees Roundtable Meeting	1,855
5th	Material Issues of the JX Nippon Mining & Metals Group	1,591
6th	Special Feature 3: Establishing a Recycling-Oriented Society	1,508
7th	JX Group Mission Statement and JX Nippon Mining & Metals Group's Code of Conduct	1,452
8th	Economic Activities Report	1,225
9th	Roots of the Group's CSR	1,217
10th	Social Activities Report	1,202

Consciousness about CSR (multiple answers possible)

On the situations where they were most conscious of CSR activities, "Relationship with local communities" was the most common response. Many of the write-in responses also mentioned interaction with local citizens, consideration for residents of the surrounding area, or similar matters. Others noted relationship with business partners and customers, and that with other employees, showing that awareness of CSR extends over a wide range.



CSR Goals, Performance, and Evaluation for Fiscal 2012

Evaluation Attained goals = A Partially attained goals = B Did not attain goals = C

PLAN	DO	CHECK	ACT*1
Goals of Fiscal 2012	Performance in Fiscal 2012	Evaluation	
Innovation in the productivity of resources and materials			
1. Promote innovation in productivity			
Awards from presidents, Works general managers, and others	● Main recipients of awards for innovation in productivity ● JX Nippon Mining & Metals President's Award: Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd. ● President Award (encouragement award): Isohara Works ● Best Inventor Award: Isohara Works	A	
2. Promote innovation in productivity regarding environmental issues			
Reduce energy consumption intensity by 2% from the average of the period between fiscal 2008 and fiscal 2010	● No change from the average for fiscal 2008 to 2010 (see p. 56 for details)	C	
Reduce CO_2 emission intensity by 2% from the average of the period between fiscal 2008 and fiscal 2010	● Increased by 0.2% from the average of the period between fiscal 2008 and fiscal 2010 (see p. 56 for details)	C	
Maintain the ratio of non-value-bearing waste volume*2 at less than 1%	● Achieved 0.4% (see p. 56 for details)	A	
Harmonious relationships with our stakeholders			
Eradicate misconduct	● A former employee of JX Nippon Exploration and Development found to have committed misconduct (alleged computer fraud; see p. 48 for details)	C	
Secure safety and prevent disaster	● Accidents with lost working days and fatal accidents: 33 in Japan ● Fires or explosions: 2	C	
Organize educational programs to raise awareness about CSR	● Held CSR workshops at three operating sites in Japan and three outside Japan, for 340 persons ● Conducted an employee survey ● Held a training event for CSR promotion managers (see p. 52 for details)	B	
Comply with laws and regulations	● Surveyed compliance status ● Responded to matters identified in the Inspection on Environment and Safety-Related Compliance ● Revised the whistleblower program and took measures to spread awareness of it ● Conducted interviews on compliance with laws ● Hosted on-premise informal gatherings with Group companies ● Implemented labor compliance inspections ● Provided education on various kinds of compliance (see p. 47 for details)	A	
Engage in communication with local communities	● Conducted cleanup activities ● Promoted communication with local communities and other groups ● Held summer festivals and other events (see pp. 67–73 and 88–93 for details)	A	
Obtain certifications	● Subjected each operating site to periodic reviews for renewal of OHSAS or ISO certification and each was found to be run properly overall (see pp. 60 and 82 for details)	A	

*1: Goals of fiscal 2013 are drawn up based on newly set CSR action plans.

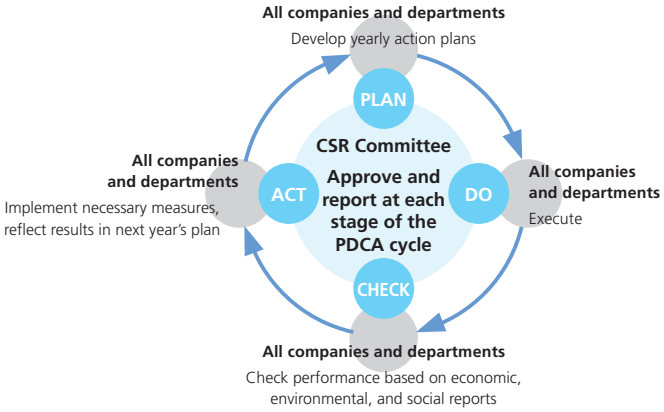
Examples of ACT (Goals in fiscal 2013)

2. Promote innovation in productivity regarding environmental issues
Reduce energy consumption intensity (1% reduction year-on-year)
Reduce actual CO_2 emissions (cumulative emissions of less than 3.17 million tons for fiscal 2013 to 2015)
Reduce the ratio of non-value-bearing waste volume (less than 0.7%)

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

Drawing up CSR Action Plans

Starting in fiscal 2013, we are asking each Group operating site to draw up their own policies for CSR activities tailored to their business operations, using the format below, in addition to the Group-wide CSR activities policies. The objective is to put into practice the JX Group Values (EARTH—Five Values) and our Code of Conduct. Based on these policies, we are implementing the PDCA cycle to further increase our corporate value.



1. Our social mission
   - **Advanced ideas**
   - **Relationship with society**
   - **Trustworthy products/services**
   - **Harmony with the environment**
   - A. Develop products with an eye to innovation (e.g., quality and unique features)
   - B. Conduct improvement activities for innovation in productivity
   - C. Obtain certifications
   - D. Obtain the satisfaction and trust of our customers
   - E. Obtain the trust of society
   - F. Prevent global warming
   - G. Recycle resources and reduce waste volume
   - H. Other
2. Compliance with laws and regulations and engagement in fair trade
   - **Ethics**
   - **Relationship with society**
   - A. Comply with laws and regulations
   - B. Eradicate misconduct
   - C. Engage in fair, transparent, and free competition and trade
   - D. Other
3. Disclosure of corporate information and protection of personal information
   - **Ethics**
   - A. Disclose corporate information in active and equitable manner
   - B. Protect personal information
   - C. Other
4. Creation of an optimal working environment
   - **Ethics**
   - **Relationship with society**
   - A. Create a safety culture
   - B. Thoroughly conduct accident prevention activities
   - C. Create a comfortable workplace environment
   - D. Other
5. Environmental conservation
   - **Ethics**
   - **Harmony with the environment**
   - A. Prevent pollution
   - B. Conserve the global environment, including biodiversity
   - C. Control chemicals
   - D. Other
6. Enhancement and strengthening of risk management
   - **Ethics**
   - **Relationship with society**
   - A. Establish a risk management system based on scientific data
   - B. Enhance and strengthen risk management
   - C. Other
7. Harmonious relationship with society
   - **Relationship with society**
   - A. Actively promote social contribution activities
   - B. Other
8. International business operations
   - **Ethics**
   - **Relationship with society**
   - A. Protect the fundamental human rights of people in the countries and areas where we operate
   - B. Respect cultures and customs of people in the countries and areas where we operate
   - C. Other
9. Elimination of antisocial activities
   - **Ethics**
   - **Relationship with society**
   - A. Stand firm against all antisocial forces and groups
   - B. Other
10. Management responsibilities
    - **Ethics**
    - **Advanced ideas**
    - **Relationship with society**
    - **Trustworthy products/services**
    - **Harmony with the environment**
    - A. Familiarize employees with the Code of Conduct
    - B. Familiarize employees with the CSR Activity Plan
    - C. Other

See pp. 9–10 for the JX Group Values (EARTH) and our Code of Conduct.

In the following section, we report on the Group's efforts to create a clean and comfortable planet and a recycling-oriented society, in light of the structure of its environmental management system and its development of environment-friendly technologies.

Basic Environmental Policy

5 Environmental conservation — Harmony with the environment

As a global manufacturer of nonferrous metal resources and materials, the Group will drive forward the following activities based on the basic policy that it will contribute to environmental conservation on a global scale through innovation in the productivity of resources and materials.

1 Promotion of technology development that will improve productivity of resources and materials

We will work to utilize resources effectively by developing technologies that will enable higher yield and extraction percentage, quality improvement, shorter process steps, recycling and energy saving, as well as by developing environment friendly materials and products.

2 Active engagement in environmental conservation

Not to mention compliance with environmental regulations, we will strive to further reduce impact of our operations on the environment. To this end, we will work to develop technologies for environmental conservation and work actively and continuously for environmental conservation.

3 Elimination of waste in operations

We will work to eliminate waste and save resources and energy at every stage of our operations.

4 Enhancement of employees' awareness of environmental conservation

We will work to raise each employee's awareness of environmental conservation through provision of environmental management education.

5 Disclosure of information

We will disclose the state of our environmental conservation related operations in an active and fair manner in order to further enhance communication with stakeholders.

Numerical Data of the Environmental Activities Report

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

Medium-Term Plan for Environmental Conservation

5 Environmental conservation — Harmony with the environment

Major Issues and Measures

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 Group-wide 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.

Numerical Goals

We define the prevention of global warming and the reduction of waste materials as key issues to be tackled under our Basic Environmental Policy and set numerical goals related to these issues. We set the goals for reducing energy consumption intensity and CO_2 emission intensity by 1% each year for fiscal 2011 and 2012. The goal for the reduction of waste was also set to maintain the newly defined ratio of non-value-bearing waste volume at less than 1%.

Fiscal 2012 was the final year for attaining these goals. The goals relating to global warming prevention were not achieved. Major causes were equipment trouble and the reduction in processing volume in our recycling and environmental services business, which led to a substantial deterioration in our intensity figures. We were, however, successful in achieving our waste reduction goals. This was the result of expanding to more operating sites the practice of separating waste materials for reuse and thermal recovery rather than simply burning them or committing them to final disposal.

		Medium-term action plan for fiscal 2006–2010 (The ratio of reduction is measured against the average value for the fiscal 2003–2005 period.)			Medium-term action plan for fiscal 2011–2012*4 (The ratio of reduction is measured against the average value for the fiscal 2008–2010 period.)	
		2008	2009	2010	2011	2012
Reduction in energy consumption intensity*2	Goal	3.0%	4.0%	5.0%	1.0%	2.0%
	Achievement	2.7%	3.0%	5.4%	–5.3%	0.0%
Reduction in CO_2 emission intensity*2	Goal	4.5%	6.0%	7.5%	1.0%	2.0%
	Achievement	5.4%	6.1%	8.1%	–5.9%	–0.2%
The ratio of non-value-bearing waste volume*3	Goal	–	–	–	less than 1%	less than 1%
	Achievement	1.0%	0.8%	0.8%	0.8%	0.4%

Boundary

Domestic: All domestic operating sites under the Company's direct control and domestic affiliated companies that are classified as a Type 2 Designated Energy Management Factory or a higher level under the Energy Saving Act, as listed below, are covered under the medium-term action plan for the fiscal 2011–2012 period.
Hitachi Works (HMC Dept., Copper Foil Dept., Precision Plating 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)

Overseas: Changzhou Jinyuan Copper Co., Ltd.; JX Nippon Mining & Metals Philippines, Inc.; Gould Electronics GmbH; Nippon Mining & Metals (Suzhou) Co., Ltd. (its precision rolling business)

*1. The most recent numerical goals assume that fiscal 2012 is the final target year because the governmental policy for prevention of global warming was not yet clear when the goals were set at the beginning of fiscal 2011. The final year of the Kyoto Protocol's first commitment period is 2012 and it was required to set appropriate goals that build on the current goals.

*2. Due to differences in operations between operating sites, performance is evaluated by comparing intensities of the entire Group with the respective goals. The intensities of the entire Group are calculated as weighted averages of an indexed intensity for each operating site in a particular year on the basis of the average values for the period between fiscal 2008 and fiscal 2010.

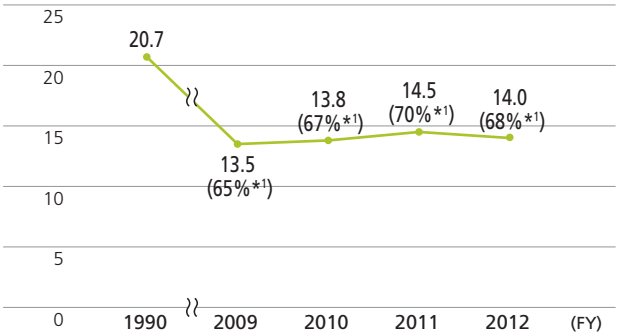
*3. Ratio of non-value-bearing waste volume: (Volume incinerated + Volume of final disposal) / Volume of waste and sellable materials generated

*4. For calculation of the CO_2 emission intensity for the fiscal 2011–2012 medium-term action plan, the emission coefficient for electric power of 0.436 tons of CO_2/MWh—the average value of the Federation of Electric Power Companies of Japan for the three years from fiscal 2007 to fiscal 2009—is applied.

Trends of Key Performance Indicators under the Medium-Term Action Plan

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

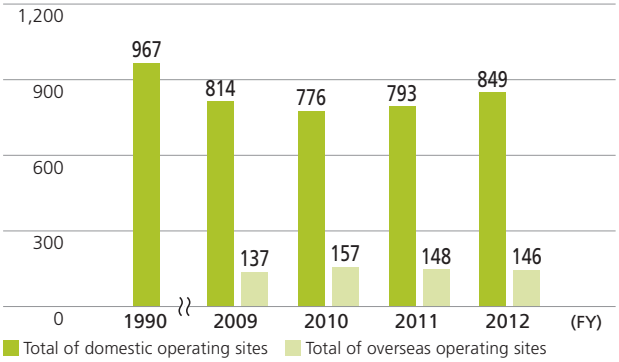
(GJ per ton of refined copper produced)



*1 These percentage figures are calculated in comparison with the intensity of fiscal 1990.

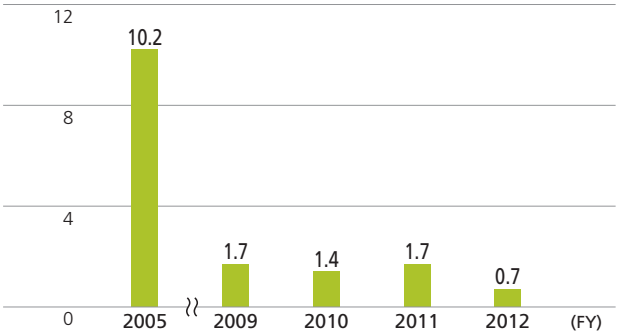
CO_2 Emissions from Energy Consumption

(Thousand tons of CO_2)



Volume of Final Landfill Disposal

(Thousand tons)



Environmental Management System

5 Environmental Conservation — Harmony with the environment

The Group has established a groupwide environmental management system in line with the basic environmental policy of contributing to global environmental conservation, and our Autonomous Action Plan for Environmental Protection, which takes future environmental risks into account.
By developing an environmental management system based on the ISO 14001 standards, everyone within the Group is working together to continually improve environmental conservation activities and reduce environmental risks.

Environmental Audit

The Group conducts internal audits at each operating site at least once a year. At the same time, the environment and safety audit team of the Environment & Safety Department undertakes periodic environmental audits. Through these efforts, we are working to continually improve pollution prevention and environmental conservation activities.

Environmental Education

The Group conducts periodic environmental education, training, and drills for all levels of employees at each operating site in order to spread awareness regarding the Basic Environmental Policy and the Autonomous Action Plan for Environmental Protection. Further, several employees have acquired qualifications regarding the environment. (See pp. 82 for details of the numbers of employees holding qualifications regarding the environment.)

Compliance with Environmental Laws and Regulations

Through the sound operation of environmental management systems at each operating site, the Group is enhancing compliance with environmental laws and regulations.

The Environment & Safety Department at the corporate head office is the umbrella administration for compliance, working with supervisory departments at each operating site.

In fiscal 2012, there were no administrative penalties such as the revocation of licenses, orders to suspend operations, orders to suspend the use of facilities, orders to improve operations, or fines incurred from regulatory bodies due to violations of environmental laws or regulations.

Environmental Accidents

In July 2012, there was an accident at the Saganoseki Smelter and Refinery, Pan Pacific Copper. Sulfuric acid leaked from a ball valve in the pit of the sulfuric acid shipping facility and reached the area around the quay. We immediately remedied the situation, and completed improvement of the facility in question by December, to prevent recurrence of such accidents.

Our Business Activities and the Environment

5 Environmental conservation — Harmony with the environment

The Group strives to reduce the environmental impact arising from its business activities by precisely identifying and analyzing the impact.

Mass Balance Table for the Group

Raw materials (thousand tons)

PRIMARY MATERIALS

Total of domestic operating sites	2,299
Total of overseas operating sites	270

RECYCLED RESOURCES

Total of domestic operating sites	237
Total of overseas operating sites	18

Energy (TJ)

ELECTRIC POWER

Total of domestic operating sites	9,998
Total of overseas operating sites	1,632

FUEL

Total of domestic operating sites	4,048
Total of overseas operating sites	964

Water (thousand m^3)

FRESH WATER

Total of domestic operating sites	19,192
Total of overseas operating sites	1,672

SEA WATER

Total of domestic operating sites	119,475
Total of overseas operating sites	0

INPUT

JX Nippon Mining & Metals Group

OUTPUT

Principal products

Refined copper	617	thousand tons
Sulfuric acid	1,692	thousand tons
Gold	34	tons
Silver	328	tons
Platinum	916	kg
Palladium	4,463	kg
Other metals such as selenium and tellurium	248	tons
Electro-deposited and treated rolled copper foils	20	thousand tons
Copper alloy and special steel strips and other related products	30	thousand tons

Emissions

CO_2 (thousand tons)

Total of domestic operating sites	849
Direct emissions	287
Indirect emissions	562
Total of overseas operating sites	146
Direct emissions	59
Indirect emissions	88

SOx (tons)

Total of domestic operating sites	4,461
Total of overseas operating sites	318

NOx (tons)

Total of domestic operating sites	674
Total of overseas operating sites	388

CHEMICAL SUBSTANCES (release and transfer) (tons)

Total of domestic operating sites (domestic only)	1,477

FINAL LANDFILL DISPOSAL (tons)

Total of domestic operating sites	472
Total of overseas operating sites	277

WASTE WATER (thousand m^3)

Total of domestic operating sites	162,821
Total of overseas operating sites	1,035

Earning the Trust of Our Customers

1 Our Social Mission — Trustworthy products / services

The JX Nippon Mining & Metals Group is dedicated to being the best partner to its customers. Accordingly, it works to supply high-quality, safe products that are worthy of the trust of its customers. At the same time, we are striving to develop win-win relationships with our suppliers. We place the greatest importance on building trusting relationships with our customers and suppliers by reflecting their opinions on improving the quality of our products and services.

Promoting Groupwide Quality Management

Customer demand for better quality has been becoming increasingly sophisticated and diverse each year. To address such demand quickly and effectively, the Group has a Basic Quality Policy and Quality Management Rules in place. At the same time, we are streamlining a quality management structure by holding quality assurance staff meetings to share and effectively use quality-related knowledge and experience in the Group.

Establishment of a Companywide Quality Management System

1 Established the Basic Quality Policy on October 1, 2009
2 Established the Quality Management Rules on October 1, 2009

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 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 both Japan and overseas countries, and offer to customers and society transparency with regard to quality.

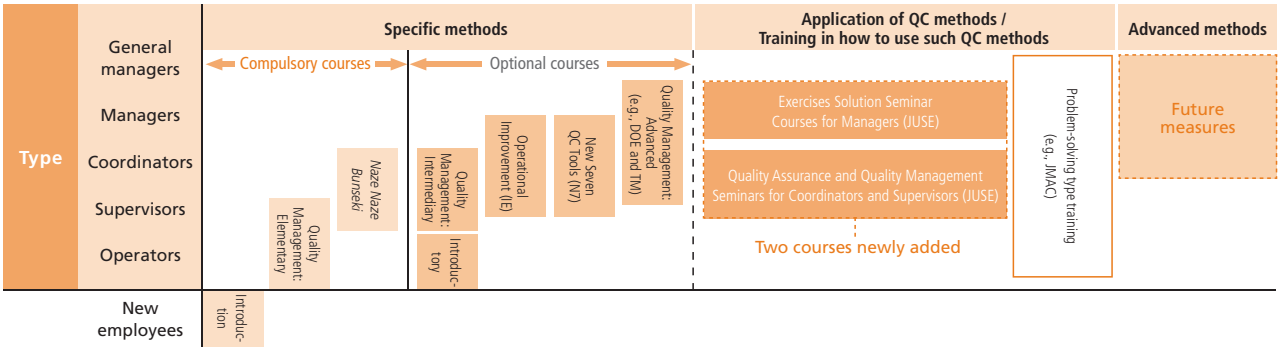
* The Nippon Mining & Metals Co., Ltd. Basic Quality Policy, which was established in October 2009, was reestablished as the JX Nippon Mining & Metals Corporation Basic Quality Policy, in line with the change of the Company's name to JX Nippon Mining & Metals Corporation in July 2010.

The Group's Quality-Related Education Programs

In fiscal 2011, we reviewed our quality management education primarily to standardize and raise companywide quality-management levels. Specifically, in our conventional elementary, intermediate, and operational improvement courses, we added an analysis course called *Naze Naze Bunseki* (Curiosity and analyses). We also made an elementary quality management course and *Naze Naze Bunseki* compulsory courses for all departments, so that the Company can create a shared awareness of quality management.

In fiscal 2012, we added two courses from the Union of Japanese Scientists and Engineers (JUSE), which are designed to improve problem-solving capabilities and nurture quality-oriented leadership and management capabilities for managers, coordinators, and supervisors, to our quality management education system.

Quality Management Education System



Sharing of Quality-Related Information throughout Operating Sites (Fiscal 2012 Activities)

Quality assurance supervisor meetings for operating sites (called by the general manager of the Technology Development Group) were held in May (sixth meeting) and December 2012 (seventh meeting). At the December meeting, a total of 23 participants introduced their Quality Month events and reported on the status of quality loss and quality complaints. Angelita R. Abonalla of JX Nippon Mining & Metals Philippines also gave a presentation on initiatives to improve quality control by means of statistical process control (SPC). The meeting was a chance to share quality control ideas in the Group as a whole, including operating sites outside Japan; and through lively question-and-answer exchanges, the participants reaffirmed their commitment to carry out thoroughgoing quality control.

Participants at the sixth quality assurance supervisor meeting

Quality Control and Assurance Systems at Operating Sites

The Group's quality control initiatives are not simply limited to the quality of products and services. The Group views quality management with a broader perspective that includes improving the quality of both its administration and management. In view of this concept of quality control, each operating site is operating its own quality management system, principally based on the ISO 9001 standard, and conducting NPM and other improvement activities.

Taking into consideration the specific characteristics of the businesses that each operating site engages in, we have set concrete goals for reducing the percentage of defective products and the number of quality-related complaints and others. To accomplish these goals, we have established a quality control structure that involves representatives responsible for sales, manufacturing, production management, technology, and product development. Implementing the PDCA cycle based on this quality control structure, the Group companies are coming together to promote quality improvements throughout the Group.

Furthermore, several domestic and overseas operating sites have obtained ISO 9001 certification, the international standard for quality control systems.

Operating Sites That Have Obtained ISO 9001 Certification

Domestic

Hitachi Works (Precision Plating Dept., Copper Foil Dept.), Isohara Works, Kurami Works, Isohara Fabricating 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)

Overseas

JX Nippon Mining & Metals Korea Co., Ltd., Changzhou Jinyuan Copper Co., Ltd., Nikko Metals Hong Kong 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., Gould Electronics GmbH

Quality Control Initiatives during the Stages of Development and Manufacturing

Our customers require a high level of quality and reliability in our electronic materials. In order to meet these requirements, we have employed various quality control measures at stages from product development and manufacturing to shipping.

Product development stage	Manufacturing stage	Pre-shipping stage
Physical properties, surface conditions, purities, and other characteristics of all products are checked by various analytical instruments and measures. Only products that pass these rigorous quality checks can move to mass-production stages.	With systems of travel sheets and statistical process control (SPC) systems, we have developed a stringent quality control structure, which covers the acceptance of raw materials to the shipping of manufactured products that meet our quality standards.	We strictly adhere to internal standards that we have developed for each product. Additionally, we have developed a system that allows for thorough and continuous inspections of products by using fine-tuned analytical equipment. The results of these inspections are fed back to development and manufacturing departments through the statistical quality control (SQC) system, to consequently maintain and improve our quality and reliability of our products.

Product Safety Initiatives

To provide safe products, the Group thoroughly complies with applicable laws and regulations. For the purpose of developing a preventive approach toward product safety, and by taking into consideration the characteristics of each product, we are always aware of product safety, from product development to the manufacturing and sales stages. In fiscal 2012, there were no violations of any laws or regulations with regard to product safety or the provision of products and services reported.

Examples of specific initiatives

- Developing safety measures for the shipping of copper ingots and other heavy materials, as well as substances such as sulfuric acid that require special care (establishing and implementing Logistic Safety Action Plans and sharing information regarding safety measures between Group companies, etc.)
- Providing customers with environmental and safety related information on all products through SDS
- Implementing education and training programs regarding product safety activities
- Necessary quality control to ensure safety
- Developing environmentally friendly products to reduce the environmental impact

Business Continuity Planning (BCP) Efforts

Our high market share in many Electronic Materials Group product areas comes with the responsibility to ensure a stable supply of products. Learning from our experience in the Great East Japan Earthquake, we have conducted a review of our business continuity plans and reconfirmed our response to emergencies including the matters indicated to the right.

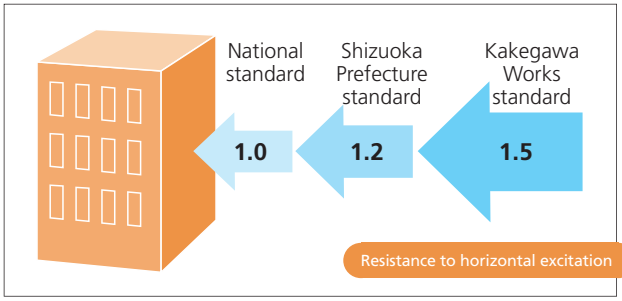
- Securing communication, transportation, and transport means
- Securing electricity and other energy sources, and obtaining water for industrial use
- Securing raw materials and other materials and equipment
- Establishing means of confirming the safety of personnel and of gathering, issuing, and managing information

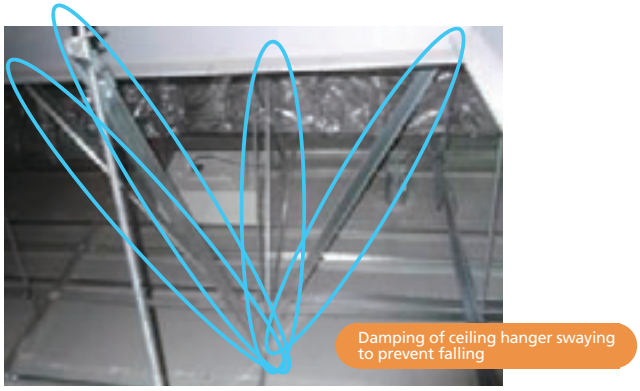
BCP in the JX Metals Precision Technology Kakegawa Works

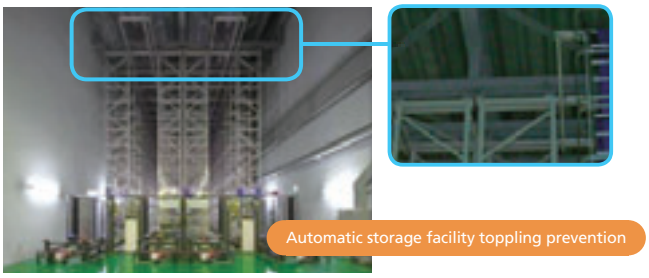
The Kakegawa Works, which began operation in April 2013, is one of the most advanced manufacturing centers in our Group. This report describes what is being done at the Kakegawa Works in the area of BCP.

Aseismic design

The aseismic design of the factory structure is set to 1.5 times the normal seismic hazard zoning factor for the location. Measures are taken to dampen swaying of ceiling hangers and to prevent collision between ceilings and walls, while the upper part of automatic storage facilities is connected to the building by beams to prevent toppling.







Installing of emergency power generation system

A backup power generation system can supply the minimum necessary electricity for 24 hours in an emergency.

Installing of fire shutters on die storage facility

The dies are the most important implements in the stamping process at the Kakegawa Works. To protect these from loss to fire, the facility storing them is equipped with fire shutters.

Reuse of rainwater

Of the water used for toilets and sprinkling of the grounds at the plant, 77% is supplied from stored rainwater.

Partnership with Our Suppliers

The Group aims to develop win-win relationships with its suppliers based on mutual trust. With the purpose of developing a procurement system across the Group, we have entrusted our procurement functions to JX Nippon Procurement Corporation.

Green Purchasing Guideline

When purchasing the materials and equipment necessary for our business endeavors, we consider it essential to make purchase decisions from the standpoint of reducing environmental impact. To that end, we encourage green purchasing and have drawn up the Green Purchasing Guideline.

Green Purchasing Policy

Green purchasing initiatives contribute to the formation of a recycling-oriented society, prevention of global warming, and the promotion of reducing, reusing, and recycling. In the purchasing of all materials and equipment, when the functions, price, and delivery date are similar, items to be purchased are evaluated based on the mandatory conditions and voluntary conditions as to the extent of environmental impact reduction, and the superior item is purchased.

Green Purchasing Survey

We surveyed our suppliers in fiscal 2012 regarding matters such as their use of banned substances in the manufacturing process, inclusion of banned substances in supplied products, procurement from companies with human rights problems, and procurement from conflict-affected regions.

The surveys were conducted from October 2011 to September 2012, targeting 409 vendors that account for 95% of the value of the items purchased and accepted by our company, JX Nippon Environmental Services Co., Ltd., and Pan Pacific Copper Co., Ltd. Responses were received from 346 vendors, for a response rate of 77%.

Confronting the Problem of Conflict Minerals

What are the conflict minerals at issue?

Conflict minerals at issue are columbite-tantalite (coltan), wolframite, cassiterite, or their derivatives, i.e. tantalum, tungsten and tin, and gold (3TG), mined in the Democratic Republic of the Congo or surrounding countries. Exports of conflict minerals are a source of funds for armed groups and antigovernment insurgents in these countries, which are using the funds to import large amounts of weapons, causing concerns about organized violence against people living in the region.

Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502

Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, enacted in July 2010, requires companies listed on the stock exchanges in the US that use the four minerals noted above (tantalum, tungsten, tin, and gold) to file a report to the U.S. Securities and Exchange Commission (SEC) indicating whether the minerals they use were exported from the Democratic Republic of the Congo or surrounding nations. Then on August 22, 2012, the SEC adopted specific procedures for reporting to the commission. The objective of the provision is to eliminate the use of conflict minerals that fuel human rights violations in the region by companies through the societal pressure that comes from information disclosure.

Our approach to the conflict minerals problem

Our Group companies are asked directly or indirectly by our customers to certify that the gold we produce are not made using conflict minerals that finance armed groups in that region. Group company Pan Pacific Copper (PPC) is a member of the London Bullion Market Association (LBMA). In accordance with the LBMA Responsible Gold Guidance, our Group has taken the following measures:

1. Established a strong internal management system
- Adopted a policy regarding due diligence for supply chains of gold
- Set up an internal management system to support supply chain due diligence

2. Identified and assessed risks in the supply chain.

3. Devised and implemented a strategy to respond to identified risks

To assess whether PPC is in compliant with the Guidance, we were audited by KPMG AZSA Sustainability Co., Ltd. and received an assurance report from that firm. Based on this audit, we received LBMA certification and were put on the Conflict-Free Smelter (CFS) Program list of compliant refiners.

Formulation of a Basic Procurement Policy and Measures for Conflict Minerals

We conduct procurement activities as part of our CSR activities, based on the Group's basic procurement policy. In February 2013, we revised Article 4, t he provisions stipulating our principles on conflict minerals, in order to strengthen our efforts toward conflict minerals.

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.

Health and Safety Activities

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 working place.

1. We will continuously improve health and safety management levels through the establishment and efficient operation of 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 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 will also establish and observe necessary voluntary standards.

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." (From a definition by the International Atomic Energy Agency [IAEA])

Management Policy on Health and Safety

The Group, acting in line with its Basic Policy on Health and Safety, sets the Management Policy on Health and Safety each fiscal year. The goals and focal measures of the policy in any particular fiscal year are set in view of an analysis of the performance results for health and safety in the previous fiscal year. The Management Policy on Health and Safety for any particular fiscal year should be discussed and approved by the Central Health and Safety Committee and then promulgated across the Group.

Management Policy on Health and Safety for Fiscal 2012

Goals

1. Serious 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, fires: zero
4. Occupational diseases: zero

Examples of focal measures

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

Special Safety Lecture

A special lecture on safety was presented on June 7, 2012, by Professor Shigeru Haga of the College of Contemporary Psychology, Rikkyo University, as one of the events in our Group's special safety month. Speaking on the theme, "Human Error Accidents and the Culture of Safety: Creating Flexible Workplaces," Professor Haga talked about careless mistakes and other human errors, dealing with unanticipated events, and instilling a culture of safety in the company. The approximately 130 persons in attendance listened with keen interest to this valuable presentation.

Professor Haga giving his talk

Health- and Safety-Related Performance in 2012*1

Our health and safety record for 2012 is as given in the table below. At domestic operating sites, although there were no fatal accidents in 2012, no decrease was evident in the number of industrial accidents.

Category		2010	2011	2012
Safety performance at domestic operating sites*2	Instances of accidents with lost work days and fatal accidents (people)	13*5	10*6	9*3
	Instances of accidents without lost work days (people)	16	24	24
	Total (people)	29	34	33
	Frequency rate of industrial accidents*4	1.36*7	0.27	0.26
	Accident severity rate*4	0.02	0.00	0.00
	Explosions and fires (occurrences)	1*7	2*7	2*7
(Reference) Safety performance at overseas operating sites	Instances of accidents with lost work days (people)	8	9	3
	Instances of accidents without lost work days (people)	6	5	5
	Total (people)	14	14	8

*1 Data on health and safety performance is counted on a calender year basis.

*2 The figures include the performances of affiliated and cooperative companies.

*3 There were two occupational diseases in 2012. 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 diseases. We are continuing to take countermeasures including preventing flying dust, 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) were calculated on the basis of performances of the Company's employees.

(Reference) From January through December 2012, the frequency rate of industrial accidents and the accident severity rate of all businesses in Japan were 1.59 and 0.10, respectively. (Industrial Accident Trend Survey by the Ministry of Health, Labour and Welfare)

*5 The fatality related to the accident that occurred on September 19, 2010, is included.

*6 The three fatalities related to the accidents that occurred on February 7, 2011, October 3, 2011, and October 5, 2011, are included.

*7 There was no physical injury due to fire and explosion.

Promoting Physical and Mental Health Maintenance

We believe that enhancing and maintaining the physical and mental well-being of employees is important.

Mental Health Care

We recognize good mental health as an important factor in creating a happy life for each employee and his or her family as well as heightening productivity and creating lively workplaces. Taking a broad sense of mental health care, we have taken a wide range of initiatives, including facilitating communication at workplaces.

In July 2008, we implemented the Mental and Emotional Health Maintenance Plan and subsequently worked to spread awareness of this plan throughout the Group. Each operating site has launched a system to support employees in maintaining good mental health. Some measures involved in this plan cover the families of employees.

Principal Measures

1. Face-to-face counseling
2. Telephone counseling
3. Online counseling
4. Mental health training
5. Workplace stress checks

Mental Health Lecture

As one of the head office area events for National Industrial Health Week (October 1–7, 2012), we held a lecture on mental health. The approximately 130 persons in attendance included officers and managers from the head office. It was a chance to reaffirm the importance of mental health care and of the role of managers and supervisors in this regard.

Hiromasa Ida, head of the Healthcare Research Institute, Sompo Japan Healthcare Services Inc., giving his presentation in the second floor hall of JX Building

Involvement with Our Employees

"People"—Our Greatest Asset

4 Creation of an optimum working environment | Ethics

The Group's philosophy toward employees dates back to 1905, when the Hitachi Mine was founded. Like many other mines, the Hitachi Mine was located deep in the mountains. The founder, Fusanosuke Kuhara, realized that it would be imperative to provide employees with an environment in which they could work with peace of mind, in order to build business success at the Hitachi Mine, which was also located at a desolate area distant from urban regions. For this reason, he focused his efforts on raising the standard of living at the mine. The Group's philosophy of "respect for employees" originates with this initiative.

Striving to create an environment in which employees could live with their families, Mr. Kuhara built a town that offered not only housing but also schools for children, hospitals, railroads, as well as recreational facilities. Living in the area, which was equipped with workplaces and residences, employees shared all their joys and sorrows with each other, while fostering a sense of togetherness. At the same time, a spirit of "respect for employees" was nurtured.

Fusanosuke Kuhara, the Company's founder

Today, we aim to develop a working environment in which employees feel free to exchange opinions regardless of position, age, or gender.

Respect of Human Rights

Since fiscal 2008, the Company has participated in the United Nations Global Compact, an international initiative that advocates 10 Universal Principles, including human rights and labor. Also, the Group's Code of Conduct states "respect for employees' personality, human rights and individuality" in Article 4, in order to increase awareness about the Group's attitude of respecting human rights in both domestic and overseas Group companies. Furthermore, the Group's Compliance Guidebook, which is distributed to each employee, specifies to strictly inhibit unjust discrimination and sexual harassment.

The Group, developing its business in this region where approximately 2,000 employees work, has implemented strict control on employee age, especially through pre-employment examinations. As a result, no issues regarding child labor have been reported.

The Group also rigorously inhibits forced labor, and no occurrences of this issue have been found.

Going forward, we will globally expand our operations. We aim to build a workplace where employees can be involved in their operation by complying with laws and regulations in countries where overseas operating sites are located and enhancing harmonious relationships with the local communities.

Initiatives toward Diversity ☑

The Nippon Mining & Metals Group values diversity in both human resources and working ways.

In compliance with relevant laws and regulations in Japan and overseas, the Group is promoting the reemployment of retirees and creating workplaces where women can play significant roles. We have set up an environment that supports various types of workers which includes systems for child rearing, elderly care, and international volunteering.

Creating Workplaces where Women Can Play Significant Roles

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

As of March 31, 2013, a total of 930 female employees were working at domestic and overseas operating sites in the Group. Of this, approximately 17% occupy managerial positions. JX Nippon Mining & Metals employed 177 female employees, of whom approximately 15% were currently active in managerial roles. Regardless of gender, fair treatment and base pay compensation are strictly controlled.

Work-life Balance

The Company believes that measures to help employees achieve a balance between their professional and their family lives are essential.

In fiscal 2012, five employees newly used maternity leave and child rearing systems.

Reemployment of Retirees

The Company is promoting the reemployment of retirees, based on its reemployment program. We expect that the reemployment program will not merely engage retirees in day-to-day duties, but will also enable them to pass on their technological know-how and skills to younger employees as well as contribute to operational management by maintaining and improving safety and quality control.

Status of Rehiring Efforts (JX Nippon Mining & Metals) (April 1, 2012 to March 31, 2013)

The number of age-limit retirees (people)	The number of those reemployed (people)	Reemployment ratio (%)
42	31	74%

Initiatives to Employ the Physically Challenged

The Company is actively increasing the percentage of the physically challenged in our workforce.

Consequently, in fiscal 2012, the physically challenged accounted for 1.84% of the Company's employees, satisfying the 1.8% legal requirement.

Maintaining a Good Relationship between Labor and Management

Labor unions are organized in most domestic affiliated companies of the Group.

In fiscal 2012, a labor union is newly organized in SCM Mimera Lumina Copper Chile, which operates the Caserones Copper and Molybdenum Deposit.

Based on mutual trust between management and employees, a sound relationship is maintained. At all regular meetings between representatives of management and a labor union of each company, management discloses details of the business condition of the companies to the union. Also, joint committees on health and safety issues at each company thoroughly discuss causes and other factors involved in any accidents and any necessary remedial measures. The union thus plays an important role as a partner with management.

For the smooth change of the companies' business lines or organizational structure, after adequate explanation and discussion preliminarily made with sufficient duration, the provisional Labor-Management Council is held to obtain deeper understanding of the labor union, in line with labor agreement.

In fiscal 2012, there were no strikes or lockouts.

Human Resources Management and Personnel Systems

Currently, the Company is developing and conducting Company-wide educational programs based on themes to enhance expertise and improve the judgment of those who work on the manufacturing floor, as well as cultivate strategic thinking among employees. Additionally, we encourage employees to participate in a wide range of educational programs, including studying at overseas graduate schools or at institutes for foreign language education in Japan as well as self-enlightenment seminars on financial analysis or presentation skills.

Further, we have introduced the Competency Evaluation System, Performance Evaluation System, and Self-Statement System into our personnel systems. We strive to foster a better working environment by integrating functions to improve communication between the Company and its employees into the personnel systems.

Education and Training Programs Undertaken in fiscal 2012 ☑

Boundary: JX Nippon Mining & Metals Co., Ltd., JX Nippon Environmental Services Co., Ltd., and Pan Pacific Copper Co., Ltd. (Saganoseki Smelter & Refinery, Hitachi Refinery)

(Hours)

	Managerial staff	General employees	Total
Total hours of programs	3,944	65,587	69,531
Average hours per employee	11.88	31.38	28.71

Enhancing Educational Programs by Job Classification

We have developed a system to promote education and training programs that are headed by executive employees. These programs are designed for the enhancement of specialized skills requisite to professionals in order to carry out their duties. The contents of the programs are considered, and education and training are implemented in line with the program by job classification. In this program, individual job rotations are also planned. We enhance the education and training programs for human resources development.

Ensuring Appropriate Personnel Evaluation

The Company has introduced the Competency Evaluation Program based on competency models and a performance appraisal system with management goals. The evaluation of the Competency Evaluation Program requires each employee to have an interview with his or her supervisor.

The interview is conducted in line with competency items determined by the work that each employee is responsible for and their job position. This program aims to evaluate efforts to produce significant results required in the competency models. Results of the evaluation are taken into consideration in relation to employee promotion.

Under the Performance Evaluation Program, employees set work-related goals at the beginning of each fiscal year. The challenge levels of goals and goal attainment levels are discussed with their supervisors and subsequently evaluated. The results of these evaluations are reflected in employee bonuses.

By properly managing the employee evaluation system, we are trying to build a sense of fairness and understanding through a long-term view of treatment of employees and development of abilities.

Self-Statement System

The aim of this system is for the Company to identify each employee's career interests and aspirations, and reflect them in the human resources development programs to the utmost extent. Once a year, looking back at his or her performance, each employee completes and submits the Self-Statement sheet, filling in his or her business affairs, skills they would like to improve and business lines they are willing to challenge, and also any private circumstances they want to let the Company know.

Involvement with Local Communities

7 Harmonious Relationship with Society | Relationship with society

The Group's domestic and overseas operating sites are regularly communicating with local and regional authorities, local chambers of commerce, and other organizations to build relationships of trust with them. Also, we actively promote exchanges with local communities by conducting summer festivals and other events. In this section, we introduce examples of communication with local communities in fiscal 2012.

Dismantling of First Giant Stack at Saganoseki Smelter & Refinery

Pan Pacific Copper decided to dismantle the First Giant Stack, a 167.6-meter tall smokestack at its Saganoseki Smelter & Refinery. The historical background is given here, along with a description of the traditional rite asking for a safe dismantling process.

The curtain falls on a century-long mission of industrial promotion and urban development

The First Giant Stack has stood for nearly 100 years, having been erected in 1916, the same year as the founding of the refinery. Due to deterioration over time, the decision was made to dismantle it. Its smoke exhaust functions will be taken over by the Second Giant Stack that stands next to it. The dismantling work began in October 2012 and was completed in June 2013.

The First Giant Stack was built to solve the problem of smoke pollution (damage to nearby forests and crops from sulfur dioxide), which was said to be the fate of copper smelting operations in the early part of the 20th century. It was constructed using the same method as the 155.7-meter tall Giant Stack of Hitachi Mine, built in 1914 in Hitachi, Ibaraki Prefecture. It was unusual at the time for being a steel-reinforced concrete stack, and was the tallest stack in the world when it was completed. Since then, along with its important role as a smelting operations facility, its imposing appearance has made it a symbol of industrial and economic prosperity and of the flourishing city of Oita where it is located. Known as the "Giant Stack of Seki," it has long been something many people associate closely with their hometown.

In addition to dismantling the First Giant Stack, the refinery is going ahead with plans to repair the flue and other aging equipment, to clean related equipment, and to carry out other refurbishments such as enhancing the greenery on the grounds. At the same time, by pursuing further improvements in energy conservation and efficiency, and by enhancing recycling-related equipment, the company is working to become more competitive and to create a smelter and refinery befitting a recycling-oriented society.

Saganoseki Smelter & Refinery before dismantling began (the stack on the right is the First Giant Stack)

First Giant Stack soon after it was built (around 1917)

Overview of First and Second Giant Stacks

	First Giant Stack	Second Giant Stack
Height	167.6m (when first built)	200m
Altitude of location	126.5m	125m
Date erected	December 1916	September 1972
Inside diameter	Top: 8m Bottom: 11.5m	Top: 7m Bottom: 12.5m

Traditional rite asking for a safe dismantling process for the First Giant Stack

On October 10, 2012, Pan Pacific Copper held a Shinto rite asking for a safe dismantling process for the First Giant Stack at the Saganoseki Smelter & Refinery. In attendance were some 80 people including officials from our Group and the local community. It was a solemn rite from start to finish, performed by a priest from the Hayasuhime Shrine. At the traditional feast following the rite, a DVD was shown looking back at the history of the First Giant Stack, calling up attendees' memories of the smokestack.

Attendees in front of the First Giant Stack

Safety rite

Dismantling of the First Giant Stack

VOICE

Mikio Takahashi
Owner of Takahashi Suigetsudo, a Japanese confectionery shop near the Saganoseki Smelter & Refinery

For as far back as I can recall, there was a smokestack out there whenever I stood in front of my shop. We could tell the day's weather by looking at the smoke rising from the stack. If it was rising straight upward, for example, that meant it would be cloudy. I remember using that to decide whether to go out and play. Fishers living in Saganoseki would also judge the weather by looking at the smokestack. I distinctly recall their saying things like, "It's going to be good weather today," or "Looks like it will be windy." To me, the Giant Stack is like a living witness that has watched over the town of Saganoseki since the early 20th century. In a way, it's heartbreaking to see this smokestack being torn down. No doubt the others living in our town share the same feeling.

Sanjinsha and the Mountain God Festival

We hold various events at our operating sites in and outside Japan for the purpose of actively engaging with local communities. In this report, we introduce one such event, the Mountain God Festival of the Hitachi Works.

Costume procession in Banjoji plaza in the Taisho era (1912–26)

Sanjinsha is a shrine devoted to the mountain god and goddess (Kanayama Hikonomikoto and Himenomikoto) traditionally believed to guard the crafts of extracting metals from the mountains and turning them into swords, mirrors, weapons, and farming implements. Shrines to the mountain gods have long been built in Japan when opening a new mine, to pray for the safety of workers and the success of the mining operations. One such shrine, the Sanjinsha near our Hitachi Works, is said to have been in existence since before our company was founded. The current building, however, was erected in 1910 after opening of the Hitachi Mine. Today it enshrines gods protecting the Hitachi Mine and our operations in the Hitachi area.

The Mountain God Festival was held each year in July along with the Sanjinsha Grand Festival. Since this event offered a once-a-year chance to take a breather from everyday routines for a relaxing vacation, relatives of employees would gather at the Hitachi Mine to celebrate the Bon Festival and to enjoy the Mountain God Festival. As a result, the population around the area at this time was said to swell considerably.

At the Mountain God Festival, outdoor stages were set up for Kabuki and Kyogen plays, vendors sold their goods from stalls, fireworks displays were held, and Bon dancers formed concentric circles around the beating drum. As an event that could be enjoyed free of charge, it is said to have attracted tens of thousands of visitors, including employees and their families and friends along with people from the surrounding communities. People from the area joined in for kendo, judo, Japanese archery, sumo, and other martial arts, turning the festival into an even grander event.

For the Hitachi Works, the Mountain God Festival is a time of close fellowship with the local community. Currently the Sanjinsha Grand Festival along with a martial arts meet dedicated to the shrine and a garden party are held on the last Thursday and Friday of July. At the martial arts meet, small children to high school students as well as adults from the community take part in judo and kendo matches. At the garden party, the Nishimachi branch of the Hitachi Furyumono Preservation Society holds children's musical instrument performances, bingo games, and shows by various artists, drawing 2,000 people each year for a rousing time.

Girls walking on balls (Taisho era, 1912–26)

Bon Festival dance (1960s)

Site of the Mountain God Festival garden party (drawing 2,000 people each year)

Kendo match at martial arts meet dedicated to the shrine

Sanjinsha after refurbishment in 2011

VOICE

Katsutoshi Oda
Administration Section,
Administration Department,
Hitachi Works

Martial arts meet and garden party: Cooperation of the local community is essential

The martial arts meet dedicated to the shrine is regarded as an official meet by youth organizations, middle schools, and high schools in northern Ibaraki Prefecture. The event is held with a great amount of cooperation from athletic federations, police, schools, and others. Among the athletic federation senior officials are some who have been part of the martial arts meet for nearly half a century. With its long history, this meet has taken root in the community, where I believe it contributes to building up the physical strength of local youth.

The garden party, which is part of the summer festival activities, is not just a major event for the Hitachi Works but has become a local tradition. Before it is held, we receive inquiries from local residents as well as teachers at neighboring elementary and middle schools about the schedule and program. The reason is that the teachers need to plan for patrols, as large numbers of elementary and middle school children attend the event. While this means extra work for the teachers, we are grateful for the cooperation of the local community in holding the garden party.

My impressions from being involved in running this event

In taking part in the running of the Mountain God Festival and other events held in the Hitachi area, I am aware of how these events have become deeply rooted in the local community with our company and its century-long history, and especially with the Festival that goes back a long time.

As we go forward with these events, I feel both appreciation for the cooperation of the community and a sense of responsibility. It is my hope that the Festival will go on as an event connecting us to the local society.

The Roots of CSR in the JX Nippon Mining & Metals Group: The Hitachi Giant Stack and Cherry Trees

Construction of the Hitachi Giant Stack

The Hitachi Giant Stack soon after completion

The Hitachi Mine, to which our Group traces its origins, caused sulfur dioxide pollution which is said to be the ill fate of copper smelting operations. The scope of damage from the smoke that contained sulfur dioxide spread from the areas around the mine, causing great harm to farm produce in the region. In an attempt to eliminate pollution from the spreading smoke, the Hitachi Mine built a giant smokestack, requiring a total of 36,800 workers and great cost, completing in December 1914 that was then the world's tallest stack at 155.7 meters. This measure was successful in greatly reducing the smoke pollution.

Raising and Planting Smoke-Resistant Trees

At the Hitachi Mine erosion control planting had been carried out from the time the smoke pollution first occurred; and immediately after the Giant Stack was completed and pollution dropped, full-scale tree planting began in the mountains that had been devastated. Saplings of trees highly resistant to sulfur dioxide, including Oshima cherry, black pine, Japanese green alder, and black locust, were raised on farms. Then, lime was mixed into the soil to neutralize the acidity, grass resistant to dryness was planted in the bare earth, and tree planting began after the grass took root. This tree planting was continued until around 1931, covering an area of approximately 1,200 hectares. In the erosion control planting that took place earlier in the century, trees were planted at a density of 4,300 per hectare, for an approximate total of five million trees. Free delivery of saplings to the surrounding areas also continued for around 20 years, reaching 5.13 million. This makes a total planting of 10 million trees. In the Irishiken-cho district of Hitachi, which had requested delivery of cedar saplings, a beautiful cedar forest grew.

Planting of grass to prevent landslides

Planting of Oshima cherry trees

Collapse of the Hitachi Giant Stack

The Hitachi Giant Stack came to be a familiar symbol of the city of Hitachi, becoming an indelible landmark in the memories of locals. It also became a symbol of coexistence of the Hitachi Mine with the local community and with nature. While this Giant Stack perched on a mountaintop seemed to be a permanent fixture in the landscape, the time came when it reached the end of its lifespan. On February 19, 1993, the stack suddenly collapsed, leaving only the bottom one-third in place. "It fell over slowly and majestically over a short time. For a second I had a solemn feeling," reported an eyewitness to the moment of the collapse. Some 79 years had passed since its construction. The repaired stack currently stands at a height of 54 meters, but it carries on the spirit of the Giant Stack.

The City of Hitachi Constructed Reliefs and a Circular Bench Replicating the Tip of the Giant Stack

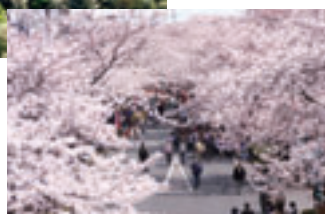
On March 30, 2013, the plaza in front of the central exit of JR Hitachi Station was reopened after a period of refurbishment. The plaza now features a circular bench replicating the top portion of the Giant Stack (8.17 meters in circumference), along with two reliefs also constructed by the city of Hitachi. One of the reliefs depicts the history of coexistence and mutual prosperity between the local community and the Hitachi Mine, which overcame the smoke pollution problem. The other relief depicts the Giant Stack symbolizing this history. (The reliefs are by Tokyo University of the Arts President Ryohei Miyata.)

Circular bench and two reliefs

A City of Cherry Trees

The Hitachi Mine planted 2.6 million Oshima cherry trees, which are resistant to smoke pollution, and another 700,000 were distributed for free, becoming the main tree of the planting project. In 1917, trees resulting from grafting Oshima cherry saplings with Yoshino cherry saplings were planted around the Hitachi Mine employee housing and surrounding facilities. The cherry trees of Hitachi trace their roots to this activity. When Hitachi, Ltd. built factories, employee housing, and other facilities, it also planted cherry trees around them. Yoshino cherry tree saplings were presented to schools and other local institutions as well. This is how Hitachi became a city where you can see lots of cherry trees wherever you go. The cherry blossom, which has been designated as the official Hitachi City flower, is silent testimony to the history of cooperation between communities and corporations to restore greenery to the area.

Oshima cherry blossoms covering the mountains in white



Cherry trees lining Heiwa Dori

Commemorating 100 Years since Oshima Cherry Trees Overcame Smoke Pollution: Participation in the Commemorative Planting and the Unveiling of a Stone Monument for the Mt. Kurakake Cherry Tree Restoration Project

On April 24, 2013, at the Kamine baseball field of our Hitachi Works (by the entrance to Hitachi City's Mt. Kurakake hiking course), a ceremony was held unveiling a stone monument that commemorates the project for restoring Mt. Kurakake by planting cherry trees. A total of around 50 people attended the ceremony, including Hitachi City officials, members of the Mt. Kurakake Cherry Centennial Committee, then President Okada (current Chairman), then Senior Executive Officer Yamaki (current Vice President), and other invited guests. The stone monument erected by Hitachi City lauds our predecessors for their accomplishment in restoring the greenery of Mt. Kurakake. The words inscribed by President Okada on the 6-ton piece (1.5 meters high, 2 meters wide) of Tsukuba stone mean "Commemorating 100 years since Oshima cherry trees overcame smoke pollution."

President Okada (left) takes part in commemorative planting with Mayor Yoshinari

In attendance at the ceremony were Hitachi Mayor Akira Yoshinari and Deputy Mayor Haruki Ogawa, as well as the chair and vice-chair of the city council. In his remarks, President Okada said, "I am truly honored and deeply grateful for the opportunity to inscribe this commemorative stone. The Oshima cherry trees planted jointly by the mine and citizens have been the cornerstone of new urban development over the past century. I wrote this inscription with the sincere wish that, similarly, the Oshima cherry trees to be planted on Mt. Kurakake will become a symbol of the next hundred years of prosperity and happiness for Hitachi City. I wish to express my warm appreciation to the people of Hitachi." Following the ceremony, a commemorative planting took place on Mt. Kurakake, as three Oshima cherry trees were planted along the hiking course that extends along hills overlooking the Pacific Ocean.

From left, Mayor Yoshinari, President Okada, and Mt. Kurakake Cherry Centennial Committee Chair Shimazaki stand beside the commemorative stone

"Pollution problems are ever new. They are like an eternal cross that the human race must bear."

Fusanosuke Kuhara

"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'."

"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 on its own what is said to be the world's tallest smokestack at the time, marking an end to the problem; but this was a valuable experience by 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 their own. Just as Mt. Fuji is more than a tall mountain, the Hitachi Giant Stack is more than simply tall."

Preface by Fusanosuke Kuhara to a 1963 book by Umanojo Seki on the story of Hitachi Mine smoke pollution

Afforestation and Reforestation Activities

The JX Nippon Mining & Metals Group has been promoting afforestation and reforestation activities mainly at the sites of closed mines. This report provides information on our reforestation activities in fiscal 2012 at the closed Takatama, Ryushoden, Oe, and Toyoha mine sites.

Closed Takatama Mine Site

A test planting of trees was carried out on July 10, 2012, at the site of the closed Takatama Mine in Koriyama, Fukushima Prefecture, with the cooperation of the local forest owners' cooperative. Some 250 broadleaf saplings of five kinds (chestnut, zelkova, konara oak, flowering dogwood, and wild cherry) were planted in an area of approximately 1,000 m^2, formerly used as farming fields in the days when the mine was in operation. For the previous eight years, thinning of the forests on this mountain and other maintenance was carried out. If the test planting yields a good result, planting of these broadleaf trees will be carried out over a wider area, aimed at maintaining and improving the natural environment.

Newly planted chestnut saplings

About Takatama Mine

The Takatama Mine was bought by former Kuhara Mining Co., Ltd. in 1918 and was closed in 1976. During its operation, the mine produced large quantities of gold. The closed mine has been managed by Shin-Takatama Mining Co., Ltd., the Company's affiliate.

Closed Ryushoden Mine Site

At the closed Ryushoden Mine site (Monbetsu, Hokkaido) in November 2012, we planted approximately 1,600 Japanese larch saplings at the closed mine site of approximately 8,000 m^2. The reforestation activities at this site began in fiscal 2011 under a newly started five-year plan.

About Ryushoden Mine

The Ryushoden Mine was bought in 1960 by Hokushin Mining Co., Ltd., an affiliate of Nippon Mining Co., Ltd., a predecessor of JX Nippon Mining & Metals Corporation, and closed in 1974. During its operation, the mine produced mercury. Currently, Hokushin Mining Co., Ltd., a Group company, is conducting the treatment of wastewater.

Closed Oe Mine Site

We planted approximately 2,000 Sakhalin spruce saplings at the closed Oe Mine site (Niki-cho, Yoichi-gun, Hokkaido) in an area of approximately 0.95 hectares. The reforestation activities at this site started in fiscal 2008 under a five-year plan with fiscal 2012 as its fifth year. Including the trees planted this fiscal year, approximately 24,500 saplings have been planted in an area of 11.7 hectares during the five years.

Planting in the snow

About Oe Mine

The Oe Mine was bought by former Kuhara Mining Co., Ltd., in 1915, and its operation was stopped in 1984. During the period of operation, the mine produced manganese, gold, silver, copper, lead, and zinc. At present, JX Nippon Mining & Metals Corporation's affiliate Hokushin Mining Co., Ltd., is conducting the treatment of acid mine drainage.

Ishiyama Impoundment at the Closed Toyoha Mine

By thinning out the white birch growing naturally on this former mining impoundment and planting trees in the resulting spaces, the project is creating a natural scenic forest. Carried out in response to requests from local neighborhood associations, thinning and planting during fiscal 2012 covered around 3,000 m^2 of land in the vicinity.

Reforestation on the site of the former Ishiyama impoundment

Planting of Cherry Trees in Ryuju-Satoyama

We are providing support to the city of Nanyo in Yamagata Prefecture in its forest development project, as another way of contributing to society. On October 13, 2012, we took part in the city's commemorative cherry tree planting festival, held in Ryuju-Satoyama.

At this event, sponsored by our company and the city of Nanyo, cherry saplings donated by our company and others were planted. Participants included our company Chairman Masanori Okada, Nanyo Mayor Hideo Shiota, local people involved in the Mt. Ryuju reforestation project, and local elementary school children.

Participants planting saplings on the mountain slope

From left, Chairman Okada, Nanyo Mayor Shiota, and then Senior Executive Officer Yamaki

Volunteer Participation in Mt. Kurakake Reforestation

Employees of our company took part as volunteers in the Mt. Kurakake cherry tree restoration project on December 1, 2012. The event was sponsored by the Mt. Kurakake Cherry Centennial Committee of Hitachi, Ibaraki Prefecture. Approximately 500 trees were planted on Mt. Kurakake, next to our Hitachi Works, including Oshima cherries like those planted by the Hitachi Mine in the early 20th century and after, and wild cherries. A forest development project on this mountain was begun in fiscal 2008, and from time to time employees from the Hitachi Works take part as volunteers. In fiscal 2012, volunteers were also recruited from the head office area and took part in reforestation work. A total of around 200 persons, mainly Hitachi residents, participated this time. They included 26 persons from our head office area and 35 from the Hitachi Works.

Volunteer participants

Mt. Kurakake reforestation work

Elimination of Antisocial Activities

9 Elimination of Antisocial Activities — Ethics

The JX Nippon Mining & Metals Group is committed to the elimination of antisocial activities. We stand firm against all antisocial forces and groups that threaten order and safety.

Drawing up Basic Rules for Dealing with Antisocial Forces

Our Group on June 1, 2012, drew up Basic Rules for Dealing with Antisocial Forces. These spell out our policy for preventing harm from antisocial forces as well as the organization and measures for this purpose, with the objective of helping to shut out all relations with such organizations.

The Basic Rules for Dealing with Antisocial Forces bring together rules on our organization, preventive measures, and measures in case an emergency arises in this regard.

Policy on dealing with antisocial forces

- The officers and employees of the JX Nippon Mining & Metals Group shall observe the Basic Rules.
- In order to shut out relations with antisocial forces, the JX Nippon Mining & Metals Group shall act in concert as an organization.

Saganoseki Smelter & Refinery, Pan Pacific Copper

Meritorious Organization Award Received from Oita Prefectural Association Dedicated to Eliminating Organized Crime Groups

The Saganoseki Smelter & Refinery received a Meritorious Organization award on November 22, 2012, from an Oita Prefectural association dedicated to eliminating organized crime groups. The award recognizes efforts such as attending training sessions for those responsible for preventing improper demands on companies (training provided pursuant to the Act on Prevention of Unjust Acts by Organized Crime Group Members), and keeping tabs on organized crime groups and those around them by contacting the association. The managing director of the association visited the site and presented a letter of appreciation to Kenji Morii, administrative manager of the refinery.

Administrative Manager Kenji Morii, right, receiving a letter of appreciation

Energy Conservation, Energy Consumption Intensity, and Related Issues

Fundamental Policy

Since the Kyoto Protocol took effect, industrialized countries overall are responsible for reducing greenhouse gas emissions, such as CO_2, by 5% from 1990 levels in the five-year period from 2008 to 2012, with Japan being committed to reducing emissions to 6% below 1990 levels. From the point of view of preventing global warming, the promotion of energy conservation measures has become an imperative issue.

The Group has already made more efficient use of energy in its manufacturing processes by rationalizing smelting methods and making effective use of hydroelectric power and photovoltaic power generation.

The Group set goals of reducing energy consumption intensity and CO_2 emission intensity each by 2% in fiscal 2012 from the average level for the period from fiscal 2008 to fiscal 2010. However, these goals have not been attained due mainly to an increase in the volume of ores processed at smelters, as well as a decrease in industrial waste collected in recycling business. Because of the lower copper content in ores, the smelters were obliged to increase the volume of ores to process.

Energy Consumption and Energy Consumption Intensity in Manufacturing Activities

In fiscal 2012, the Group's overall energy consumption in terms of its calorific value was 16,642 TJ, compared with 16,782 TJ in fiscal 1990, the base year of the Kyoto Protocol.*1

Currently, energy consumed at its smelters and refineries accounts for approximately 50% of the Group's total energy consumption in Japan. These smelters and refineries are making various efforts to reduce energy consumption. These efforts include conducting smelting operations with a single flash furnace at the Saganoseki Smelter & Refinery, streamlining smelting and sulfuric acid processes and effectively using waste heat. In addition, we introduced the permanent cathode method into the refining process to improve current efficiency, resulting in more efficient use of energy.

The Group's energy consumption intensity at smelters and refineries for fiscal 2012 decreased by 3 percent compared to fiscal 2011. (See p. 57 for details.)

Although the Group's overall energy consumption intensity has risen, its energy consumption (16,642 TJ) has decreased from the average value (17,046 TJ) in the period from fiscal 2008 to fiscal 2010. This is primarily due to the integration of operating sites and lower capacity utilization rates of their facilities.

From fiscal 2013, we set new goals and work to reduce energy consumption, since the second medium term of the Autonomous Action Plan terminated at the end of fiscal 2012.

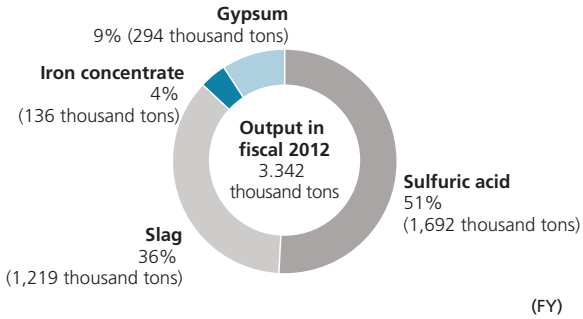
*1 The Group uses coefficients in correspondence with the Act on the Rational Use of Energy at both domestic and overseas operating sites. (A coefficient in the Voluntary Action Plan of the Federation of Economic Organization (Keidanren) is used to calculate the data in fiscal 1990.)

A breakdown of energy consumption is shown below.
FY1990: Fuel (direct): 6,862 TJ
Electricity (indirect): 9,919 TJ (Domestic only)
FY2012: Fuel (direct): Domestic 4,048 TJ Overseas 964 TJ
Electricity (indirect): Domestic 9,998 TJ Overseas 1,632 TJ
TJ: 10^{12}J

Anode furnace at Saganoseki Smelter & Refinery

Energy Consumption (fuel + electricity) ☑

■ Total of domestic operating sites ■ Total of overseas operating sites
(Calorific value in TJ)

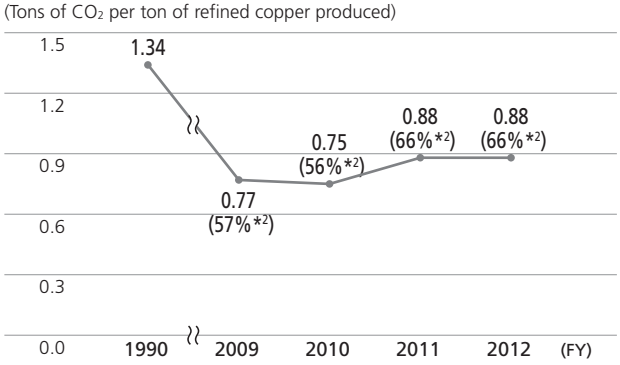


CO_2 Emissions from Energy Consumption*1

In fiscal 2012, the Group's total CO_2 emissions from energy consumption in Japan and overseas were 995 thousand tons. Energy consumed at smelters and refineries accounts for approximately 50% of the energy the entire Group consumes. The Group has reduced the CO_2 emission intensity to 0.88 in fiscal 2012, which is 66% of 1.34 in fiscal 1990 level as a result of energy conservation measures, such as conducting smelting operations with a single flash furnace, and reductions in the emission coefficients of respective electric power companies.

*1 The emissions are calculated using emission coefficients in correspondence with the Act on Promotion of Global Warming Countermeasures. Coefficients that individual electric power companies made public and statistical data released by the International Energy Agency (IEA) are used to calculate amounts of emissions from electric power consumption of domestic and overseas operating sites, respectively.

CO_2 Emission Intensity at Smelters and Refineries



*2 These percentage figures are calculated in comparison with the intensity of fiscal 1990.

CO_2 Emissions from Sources Other than Energy Consumption and Other Greenhouse Gases*1

Operating sites in the recycling and environmental services business are required to submit reports on the emission of CO_2 from sources other than energy consumption*2 as well as the emission of other greenhouse gases. In the Group's operations, nitrous oxide (N_2O)*3 meets the definition of other greenhouse gases.

Calculated on a CO_2 equivalent basis, emissions of these gases in fiscal 2012 were approximately 83 thousand tons*4.

*1 Emissions are calculated using emission coefficients in correspondence with the Act on Promotion of Global Warming Countermeasures.
*2 Emitted during the incineration of waste oil, plastic and rubber tires.
*3 Emitted during the incineration of sludge, waste oil, plastic and rubber tires as well as during fuel consumption.
*4 In fiscal 2012, the value of our N_2O emissions was less than the threshold level and therefore not accounted for.

Logistics Stage

In fiscal 2012, the Group's*1 energy consumption in Japan was 551 TJ and CO_2 emissions were 38.9 thousand tons, compared with 536 TJ and 37.9 thousand tons, respectively, in fiscal 2011.

Both energy consumption and CO_2 emissions increased by about 3% from the previous fiscal year. This was chiefly due to increased operation time at the Saganoseki Smelter & Refinery and increase in the sales of copper slag in Japan, caused by ongoing recovery from the Great East Japan Earthquake.

Concerning international transport, in December 2013 we plan to launch a second vessel to shuttle between Japan and the west coast of South America. From Japan, the vessel will carry sulfuric acid; from South America it will carry copper concentrate.

*1 These figures are the sums of energy consumption and CO_2 emissions of two Group companies—Kasuga Mines Co., Ltd., and Pan Pacific Copper Co., Ltd.—that are subject to the Act on the Rational Use of Energy.

Together with the Mar Camino, a ship already in service, the new ship will transport copper concentrate primarily from the Caserones Mine.

The Group will continue to reduce logistics-related energy consumption and CO_2 emissions by directing our efforts not only toward improving the loading ratio and enlarging the lot size, but also toward optimizing transport methods by adopting innovative ideas.

The Mar Camino

Implementing Initiatives Regarding Climate Change Issues

Fundamental Policy

The continued advance of global warming has caused changes in the environment such as a rise in the sea level and abnormal weather, as well as exerted an impact on the ecosystem.

At the same time, climate change has the potential to substantially affect the financial performance of our business activities of the Group. The initiative to reduce the emission of CO_2 is indispensable not only for the continuity of the Group's business but also for the sustainable development of society. The Group systematically works to reduce the amount of greenhouse gas emissions from a variety of angles in accordance with the activities of the Energy Conservation Subcommittee.

Renewable Energy

The Group has engaged in hydroelectric power generation since 1907, the days of Kuhara Mining Co., Ltd., which was the predecessor of JX Nippon Mining & Metals. Hydroelectric power, which is generated by using the force of water flowing downstream in a river, is a form of clean, renewable energy that does not emit CO_2 and is renewed through the water cycle. Currently, we generate hydroelectric power in Fukushima Prefecture and sell the energy generated to a power producer and supplier (PPS). Although an aftershock of the Great East Japan Earthquake had suspended the operation of the hydroelectric power plant, the plant resumed power generation. Our hydroelectric power generation in fiscal 2012 was around 24 MWh.

We have also launched photovoltaic power generation (240 kW; amounting to power for 60 households) at the Kakegawa Works of JX Metals Precision Technology.

Panels for photovoltaic power generation at the Kakegawa Works of JX Metals Precision Technology

Conserving Resources, Utilizing By-products, and Recycling and Reducing Waste Materials

Fundamental Policy

In Japan, it is becoming increasingly difficult to secure sites for final waste disposal. Therefore, reducing waste is becoming ever more important.

The Group aims to prevent the depletion of natural resources by using recycled resources as raw materials, more effectively utilizing by-products, and recycling waste materials. Needless to say, we are also working hard to reduce waste output. At the same time, we are leveraging the sophisticated technologies we have accumulated through our mining, and smelting and refining operations to recover value-bearing metals from waste materials.

Furthermore, by properly disposing of waste oils, liquids, and other such substances, we are working to detoxify and reuse waste materials, or at the very least neutralize the environmental impact. Through these efforts, we are contributing to the creation of a resource-conservation and zero emission society.

As part of our efforts to reduce waste volume, in fiscal 2011 we adopted a new concept of a non-value-bearing waste ratio (ratio of the combined volume of waste for final disposal and incinerated waste), and set a goal of maintaining that ratio below 1%. In fiscal 2012 we were able to achieve the goal for the second consecutive year. (See p. 56 for details.)

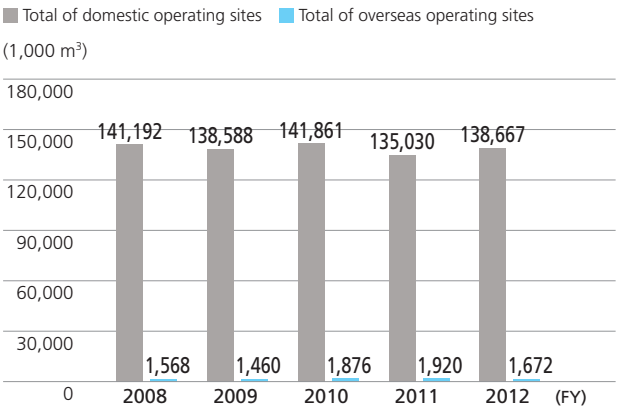
We will continue to make every effort to use recycled resources and reduce the volume of final landfill disposal. To this end, we will improve the yield ratio and extraction percentage, streamline production processes and promote recycling. Through these efforts, we will contribute to creating a resource-conservation and zero emission society.

Conserving Resources (Water Usage and Water Discharge Volumes)

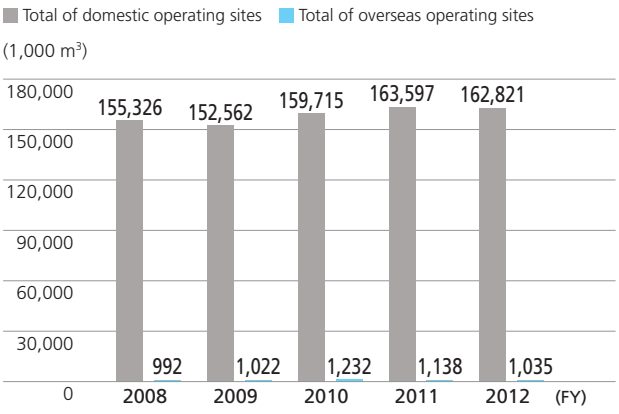
The Group's water usage in fiscal 2012 amounted to 140,339 thousand m^3, of which 85% was seawater. The volume of water discharge was 163,856 thousand m^3, of which 91% was discharged into the sea.

The volume of seawater usage slightly increased at the Group's smelters and refineries, which are responsible for 89% of the Group's total water usage. Although a few such facilities curtailed the usage of seawater by using recycled water for granulation of slag, the total volume slightly increased due to the increased output of sulfuric acid, resulting from the higher sulfur content in ores. As a result, the water usage intensity at smelters and refineries has remained at almost the same level. The water discharge intensity has also remained flat, due to increased rainfall.

Water Usage



Discharge Volumes



Water Usage (domestic and overseas)

(1,000 m^3)

	2008	2009	2010	2011	2012
Seawater	121,138	118,685	123,128	115,452	119,475
Groundwater / Industrial water	19,583	19,408	18,477	19,146	18,960
Waterworks	1,937	1,858	2,051	2,259	1,820
Rainwater	103	96	81	93	84
Total	**142,760**	**140,047**	**143,737**	**136,950**	**140,339**

Discharge Volumes (domestic and overseas)

(1,000 m^3)

	2008	2009	2010	2011	2012
Ocean	140,748	138,598	145,975	149,693	148,557
River	15,217	14,648	14,569	14,699	14,936
Drainage systems	353	339	404	343	363
Total	**156,318**	**153,585**	**160,947**	**164,735**	**163,856**

Water Usage Intensity at Smelters and Refineries

(m^3 per ton of refined copper produced)

Discharge Intensity at Smelters and Refineries

(m^3 per ton of refined copper produced)

Resource Conservation (Recycled Resource Input Volume and Total Material Input)

Unfortunately, the ores and other resources extracted from the natural environment are limited, and as a result these resources must be preserved for the next generation. Therefore, minimizing resources that are extracted directly from the nature by effectively utilizing recycled resources has become a pressing issue.

In fiscal 2012, the Group's total material input was 2,824 thousand tons. Of this, recycled resources accounted for 255 thousand tons, or 10% of the total material input.

(1,000 tons)

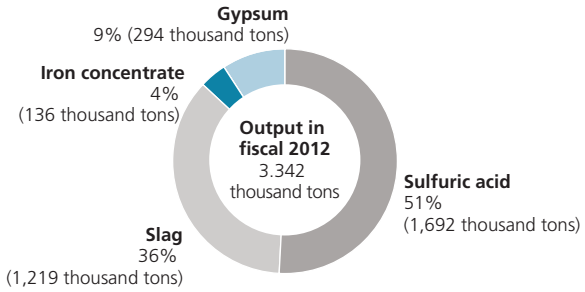
	Product	Input volume
Primary resources	Copper concentrate, Silicate ore, Copper shot, Iron and copper elements (bare strips), Nickel, zinc, other metals, etc.	2,569
Recycled resources	Copper and copper alloy scraps, Silver and gold residual slag, Copper scraps, etc.	255
Total		2,824

By-products

In fiscal 2012, the Group produced 3,342 thousand tons of by-products, including 1,692 thousand tons of sulfuric acid, 1,219 thousand tons of slag, 136 thousand tons of iron concentrate, and 294 thousand tons of gypsum.

Slag is utilized as a sandblasting material, a cement material, a caisson filler, and aggregate for wave-dissipating blocks. Iron concentrate and gypsum are used in cement.

By-product Production Volume

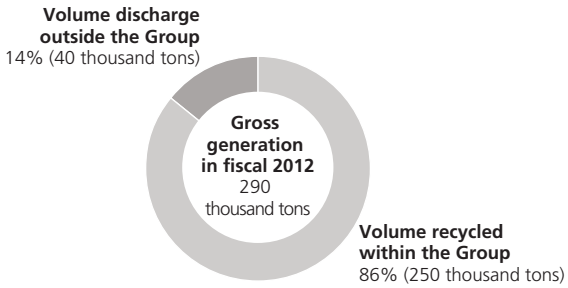


Gross Generation of Waste Materials and Final Gross Discharge

The gross generation of waste materials in fiscal 2012 was 290 thousand tons, of which 86%, or 250 thousand tons, was reused within the Group. As a result, final gross discharge, including sales of non-value-bearing waste, was 40 thousand tons. The volume of landfill disposal*1, excluding the volume recycled externally and others, was approximately 0.7 thousand tons in fiscal 2012, down to less than tenth of that of fiscal 2005. This result is attributable to our efforts to continuously and repeatedly reuse all neutralized slag generated at smelters and refineries as well as expand applications of waste materials at smelters and operating sites manufacturing electronic materials.

*1 Defined as the volume of materials disposed of in landfills by the Group, as well as those materials for which the purpose of use could not be clearly identified as either recycling, heat recovery, or incineration before being discharged outside of the Group

Gross Generation of Waste Materials and Volume Recycled Internally



Discharge Outside the JX Group

(1,000 tons)

Purpose		2012
Recycling	Sales of value-bearing metals	29.0
	Waste	9.4
Heat recovery	Waste	0.9
Incineration	Waste	0.4
Final disposal	Waste	0.7
Total waste		11.5
Total		40.5

Type of Waste

(1,000 tons)

Type	2012
Sludge	4.7
Cinder	2.7
Waste acid / Waste alkaline	0.9
Glass / Concrete / Ceramics / Porcelain	0.1
Waste plastic	0.9
Other	2.2
Total	11.5

Environmental Risk Management

Fundamental Policy

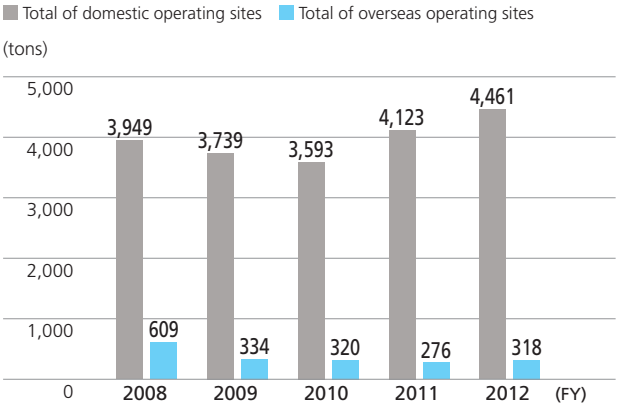
Air and water systems have a great influence on people's health and daily life. The Group places the utmost importance on protecting the environment relating to these two systems. In addition to abiding by all relevant laws, regulations, and other ordinances to reduce the environmental impact, we have developed our own voluntary standards to monitor air and water emissions at our operating sites. We also implement the PDCA cycle to reduce environmental risks.

Preventing Air Pollution ☑

The Group monitors waste gas emissions at all operating sites in compliance with laws and regulations, ordinances and agreements, as well as its own voluntary standards. As indicated in the chart below, in fiscal 2012 emissions of sulfur oxides (SOx) and nitrogen oxides (NOx) increased by 381 tons*1 and 38 tons*1 respectively. The major cause of the substantial increase in SOx is the worsening SOx emission intensity at smelters and refineries, which resulted from an increase in ores with high sulfur content. The smelters and refineries will continue taking various initiatives to reduce these emissions, including efforts to maintain high sulfur inversion rates and to introduce environmentally conscious facilities.

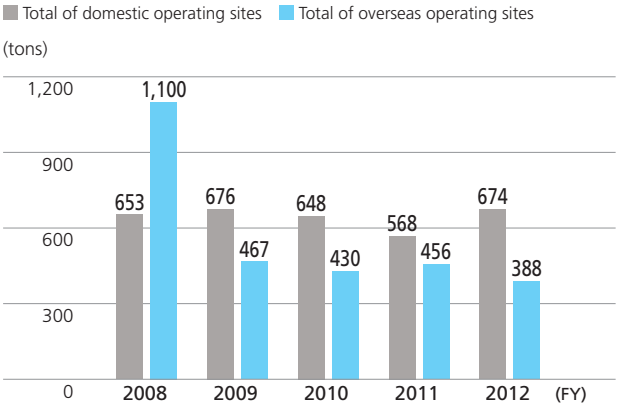
At overseas operating sites, since fiscal 2009 both SOx and NOx emissions have been decreasing significantly. This is basically attributable to the gradual shift from in-house power generation using diesel generators to purchased power, which began in fiscal 2008 at operating sites of electronic materials business.

SOx Emission Volume*1



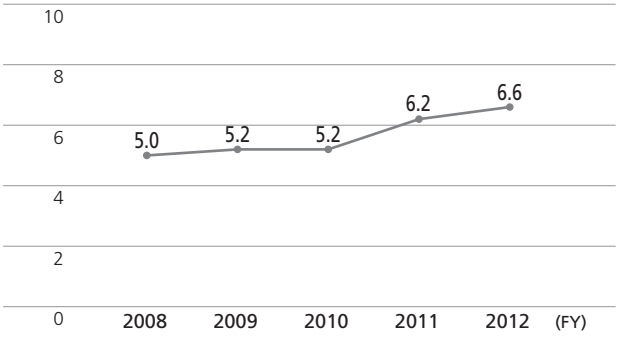
*1 Total of volumes from operating sites subject to legal requirements

NOx Emission Volume*1



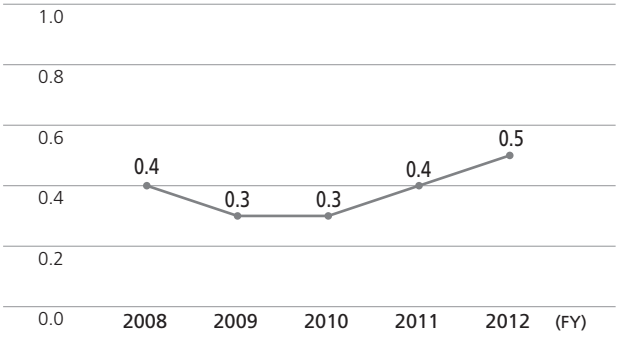
SOx Emission Intensity of Smelters and Refineries

(kg of SOx per ton of refined copper produced)



NOx Emission Intensity of Smelters and Refineries

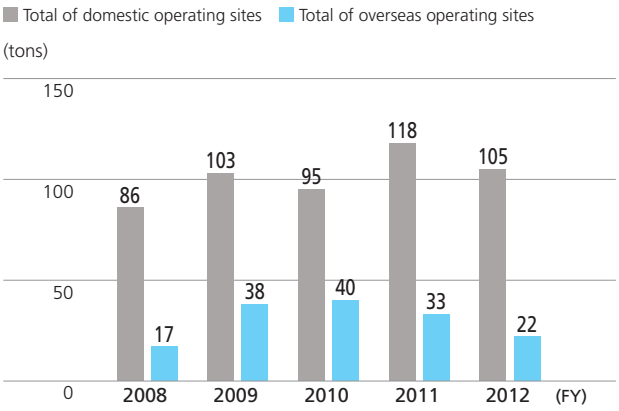
(kg of NOx per ton of refined copper produced)



Preventing Water Pollution

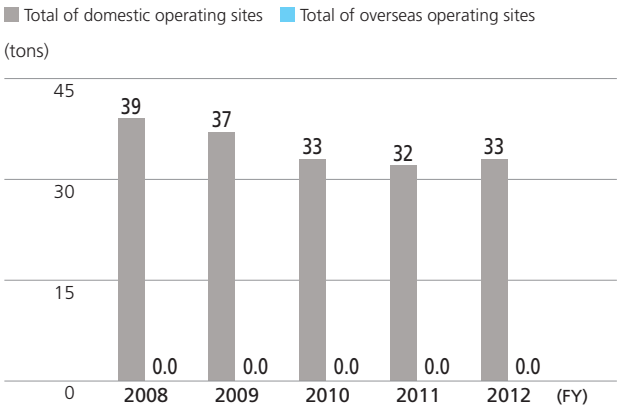
The Group monitors water discharge at all operating sites in compliance with laws and regulations, ordinances and agreements, as well as its own voluntary standards. The amounts of chemical oxygen demand (COD) and biochemical oxygen demand (BOD) are outlined in the graphs below.

COD*1



*1 Total of volumes from operating sites subject to legal requirements
Previously, there were operating sites whose COD and BOD were both included in the totals. From this year's report, we only include COD of those operating sites that discharge wastewater to either the sea or a lake. Data for previous years were retroactively revised along these lines.

BOD*2



*2 Total of volumes from operating sites subject to legal requirements
Previously, there were operating sites whose COD and BOD were both included in the totals. From this year's report, we only include BOD of those operating sites that discharge waste water to a river. Data for previous years was retroactively revised along these lines.

Chemical Management

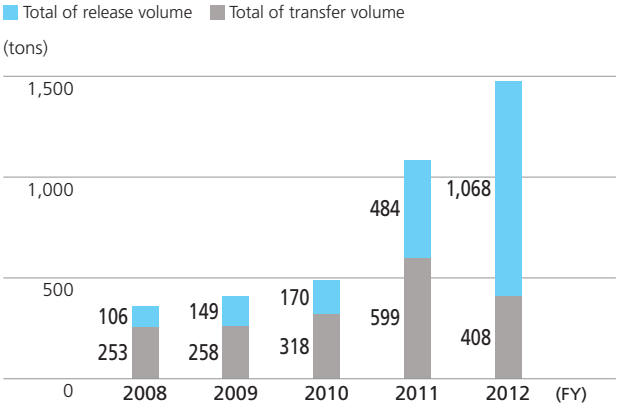
Identifying Quantities of Specific Chemical Substances Released into the Environment and Improving Controls

The Group strictly adheres to the Act prescribing the Pollutant Release and Transfer Register (PRTR) System. Also, as part of its environmental management activities, the Group is working hard to reduce its environmental impact by setting each operational site and affiliated company targets for decreasing the use and release of specific chemical substances into the environment.

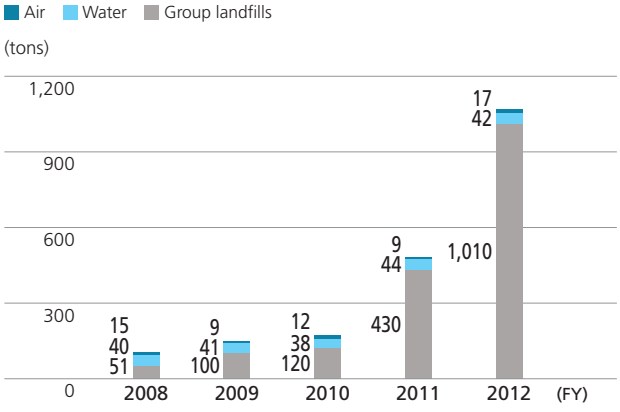
Further, the Group applies the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) in the compilation of Safety Data Sheets (SDS). We strive to provide easy-to-understand information regarding the characteristics and handling of chemical substances.

Looking at the Group's release and transfer volumes of chemical substances to be reported in compliance with the PRTR Act, the release volume in fiscal 2012 increased 584 tons from fiscal 2011, mainly due to an increase in Group landfills*1. At the same time, the transfer volume decreased 191 tons as a result of increases in the volume of recycling waste.

Volume of Release / Transfer*1



Breakdown of Release Volumes*1



*1 At the Toyoha Mine, the Motoyama Mine water treatment plant operated for a full year in fiscal 2012. As a result, the volume of Group landfills of neutralized sludge has increased from fiscal 2011.

Release and Transfer Volumes of Chemicals

(tons)

No.	Material number	Chemical	Release volume			Transfer volume	
			Air	Water	Group landfills	Waste	Drainage systems
1	1	Zinc compounds (water soluble)	0.4	4.1	0.0	35	0.0
2	31	Antimony and its compounds	0.1	0.8	0.0	12	0.0
3	44	Indium and its compounds	0.0	0.3	0.0	2.5	0.0
4	75	Cadmium and its compounds	0.1	0.1	0.0	0.0	0.0
5	80	Xylene	0.1	0.0	0.0	0.0	0.0
6	82	Silver and its water-soluble compounds	0.1	0.6	0.0	0.0	0.0
7	132	Cobalt and its compounds	0.0	0.0	0.0	2.4	0.0
8	158	1,1-Dichloroethylene (vinylidene chloride)	0.0	0.2	0.0	0.0	0.0
9	242	Selenium and its compounds	0.0	1.1	0.0	0.0	0.0
10	272	Copper salts (water soluble, except complex salts)	0.3	6.0	0.0	0.0	0.0
11	279	1,1,1-trichloroethane	0.0	0.5	0.0	0.0	0.0
12	296	1,2,4-trimethylbenzene (pseudocumene)	0.2	0.0	0.0	0.0	0.0
13	305	Lead compounds	0.9	0.4	0.0	193	0.0
14	309	Nickel compounds	0.1	1.1	0.0	39	0.0
15	332	Arsenic and its inorganic compounds	0.4	0.9	0.0	120	0.0
16	374	Hydrogen fluoride and its water-soluble salts	0.0	14	0.0	1.2	0.1
17	384	1-Bromopropane	13	0.0	0.0	1.7	0.0
18	405	Boron compounds	0.0	9.2	0.0	1.2	0.0
19	412	Manganese and its compounds	0.0	1.5	1,010	0.1	0.0
20	438	Methylnaphthalene	0.9	0.0	0.0	0.0	0.0
							(g-TEQ)
21	243	Dioxins	0.095	0.028	0.0	23.2	0.0

*1 There are 48 chemicals that are required to be reported.
*2 Except for the figures for dioxins, all figures are the totals of substances of 0.10 ton or more.
*3 There is no discharge into the soil.

Detoxification of Wastes Containing PCBs

Utilizing the early registration system of the Japan Environmental Safety Corporation (JESCO)*1, the Group completed registration of products containing PCBs, including condensers and transformers both in storage and in use, in fiscal 2005 and has been promoting the detoxification of these products according to plan.

*1 Japan Environmental Safety Corporation (JESCO): A special company wholly owned by the Japanese government that successively handles the PCB waste disposal program formally conducted by the Japan Environment Corporation.

Compliance with the REACH Regulation

The European Union (EU)'s REACH Regulation, which applies precautionary principle, came into effect in June 2007. The purpose of this regulation is to harmonize the management of chemicals that are released and transported within the region, and to clarify risks that the chemicals bear and their impacts on the environment.

The Group assents to the intent of the regulation defined in REACH, and it has completed preliminary registration of products that are subject to the regulation, and plans to complete official registration by 2018.

Initiatives Regarding Biodiversity

SCM Minera Lumina Copper Chile ("MLCC"), which operates the Caserones Copper and Molybdenum Deposit Project, has set aside 0.87 km^2 of the overall owned area of 385 km^2 as a protection area for animals and plants inhabiting the area. MLCC is in compliance with the following local regulations: 1) "In case trees are cut in a certain area, trees must be planted for an area 1.6 times larger than the trimmed forest area," and 2) "In case any protected plant is cut out of necessity, 10 times the number of the same kind of plant must be planted." In November 2010, under experts' guidance, plants in a wetland plant zone (9,400 m^2) of the Caserones Valley, in which valuable wetland plants are distributed and which is the planned construction site of our production facilities, were wholly transplanted to La Ollita Valley, the nearest place with an appropriate habitat. The vega plant, a rare plant that thrives in wetlands under arid climates and is subject to legal protection, has been confirmed to have rooted at the transplanted site.

In the lower reaches of the Copiapo riverine system, in which the Caserones deposits are located, a water shortage has become conspicuous due to the flourishing viniculture. MLCC takes various initiatives to keep a good balance with the water used for its mining business. MLCC's initiatives in this regard include 1) discontinuing alfalfa cultivation by purchasing agricultural lands and mowing weeds at riversides to restrict the large loss of water incurred through evaporation in the mid- and upstream areas of the Copiapo River, and 2) providing desalinated seawater for irrigation to communities downstream along the Copiapo River.

Emergency Response Measures

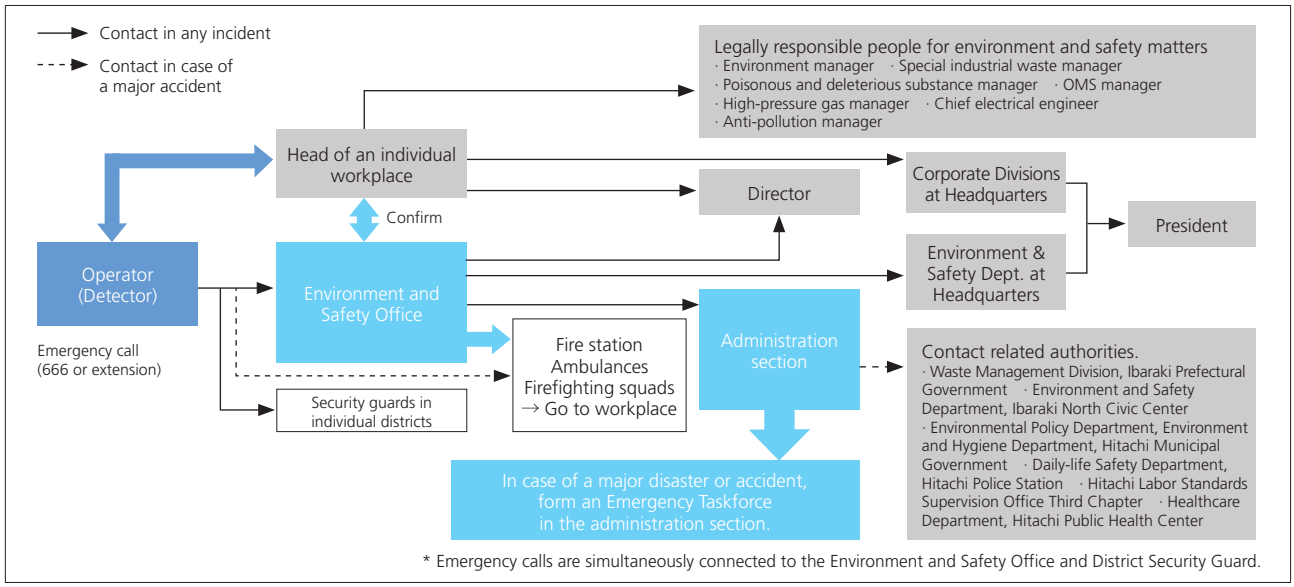
When an accident or disaster occurs, there is the potential for related environmental accidents such as fires, spills of hazardous materials or chemical substances or the anomalous occurrence of smoke or wastewater.

The Group therefore strives to prevent accidents and disasters and to detect abnormality at an early stage through periodic inspections of equipment including meticulous preventive maintenance and regular patrols.

Moreover, we conduct comprehensive disaster prevention drills and training with our own firefighting squads in order to prevent accidents and disasters from exacerbating.

Firefighting squad training at the Hitachi Works

Emergency Procedures (An example of the Hitachi Works)



* Emergency calls are simultaneously connected to the Environment and Safety Office and District Security Guard.

Environmental Education

EMS (Environmental Management System) Provisional Auditor	3
EMS Internal Auditor (Outside training completed)	284
EMS Internal Auditor (In-house training completed)	297
First Grade Air Pollution Control Manager	96
First Grade Water Pollution Control Manager	141
Noise Abatement Manager	18
Vibration Abatement Manager	12
Noise and Vibration Abatement Manager	8
Chief Manager of Pollution Control	1
Dioxins Pollution Control Manager	9
Senior Safety Engineer	16
First Grade Mining Pollution Control Manager	15

Persons

Certified Environmental Measurer	21
Waste Disposal Facilities Engineering Manager (Others, including waste crushing and treatment facilities)	11
Waste Disposal Facilities Engineering Manager (Intermediate treatment facilities)	24
Waste Disposal Facilities Engineering Manager (Incineration facilities)	24
Waste Disposal Facilities Engineering Manager (Final landfill sites)	9
Qualified Manager of Specially Controlled Industrial Waste	73
Registered Energy Manager (hear and electric)	86
Operation Chief Handling Specified Chemical Substances	1,294

* Includes Group companies under the control of the Technology Development Group and the Corporate divisions (as of April 1, 2013)

Obtaining ISO 14001 Certification

Operating Sites that Have Obtained ISO 14001 Certification

Domestic	Hitachi Works (including 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; Isohara Fabricating 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.; JX Nippon Kurobe Galva Co., Ltd.; Esashi Works, Tatebayashi Works, Nasu 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, Nikko Metals Taiwan Co., Ltd.

Creating a Culture of Safety and Eradiating Accidents

At the JX Nippon Mining & Metals Group, five fatal accidents occurred in the two years and five months from June 2009 to October 2011. This made us realize that we must radically review and improve our conventional safety activities so as to promote employee awareness of safety at work. With this in mind, since fiscal 2011 we have been committed to the Group-wide campaign to create a culture of safety and eliminate accidents.

Activities to Create a Culture of Safety Culture

Upholding the Basic Policies on Health and Safety, which stipulates "safety first," the Group has been committed to various activities aimed at the creation of a culture of safety. However, we are aware that we must make further efforts to instill "safety first" in the mind of each employee. During fiscal 2012, based on the definition of "culture of safety" (see p. 17 and p. 63), individual operating sites were encouraged to hold in-depth discussions to identify safety-related problems and take appropriate measures. To name a few, initiatives taken by individual operating sites include reinforcing safety education for new and inexperienced operators and organizing follow-up training programs; reinforcing safety patrols and prevention of near-misses by systematically improving details of instructions and suggestions; and promoting thorough observation of rules by giving safety instructions after confirming employees' levels of understanding as to basic safety rules.

In addition, we are continuing activities to reinforce educational programs for various employee ranks (including programs for management) along with activities to learn from previous errors (e.g. to remember fatal accidents in the past so as to prevent recurrence).

In the educational programs for various employee ranks, in addition to frontline operators, safety education is provided to supervisors. Moreover, a special safety seminar is held annually for the management. In fiscal 2012, a lecture was given by Professor Shigeru Haga from the College of Contemporary Psychology of Rikkyo University. His lecture, titled "Human errors and safety culture—creating a flexible workplace environment," shed light on topics on human errors, responses to unexpected incidents, and safety culture. In January 2013, the Group also opened the JX Safety Education Center. Targeting employees of contract companies, as well as all employees of the Group, the center offers training to enhance employees' safety awareness and risk sensitivity.

Regarding the activities to learn from previous errors, in addition to periodic and systematic educational programs on previous fatal accidents, the JX Safety Education Center constantly displays panels showing previous fatal accidents so as to keep memories fresh and prevent recurrence of such accidents.

Thorough Accident Prevention Activities for Each Issue

Until fiscal 2011, the Group was committed to activities to prevent recurrence of fatal accidents. However, we realized that without working to prevent minor accidents, we cannot reduce the number of accidents. It would also be difficult to prevent fatal accidents without addressing minor accidents since for every major accident, there are many more minor accidents, as indicated by Herbert Heinrich (Heinrich's Law). In recognition of this, we analyzed all accidents that took place at work in the past three years, and extracted five issues that are essential in addressing risks of accidents. Individual operating sites have been instructed to determine the order of priority of the five issues in consideration of their respective situations (risks and previous accidents at their worksite), and to work to eradicate accidents related to the five issues in a three-year program. Moreover, we have published reports of previous accidents to communicate the types of process most likely to cause a particular type of accident, and the key points for preventing accidents.

In fiscal 2012, along with activities to create a culture of safety, the Group placed priority on the accident prevention activities for each of the five issues. For the latter, it is the individual operating sites, rather than the head office, that take the initiative in creating a culture of safety and eradicating accidents from their respective workplaces.

Issues to address to prevent accidents extracted from the accident occurrence tendencies of the past three years

❶ Prevention of accidents caused by contact with hazardous substances and high-temperature objects.
❷ Prevention of accidents related to heavy object handling operation and equipment operation.
❸ Prevention of accidents related to operations at high locations (prevent a person or an object from falling).
❹ Prevention of being caught in equipment.
❺ Prevention of cutting and scraping.

Other Health and Safety Activities

Health- and Safety-related Conference (Overall Company)

The Central Health and Safety Committee meeting is held once a year, and the Central Health and Safety Committee's ordinary meeting is held five times a year to summarize various measures for health and safety, discuss health and safety management policy for the next year and deliberate measures to prevent the recurrence of accidents. We also conduct a health and safety patrol once a year and the Group safety staff meeting twice a year to discuss the health and safety management status and related measures and exchange related information.

Establishment and Efficient Management of the Health and Safety Management System

Our Basic Policy on Health and Safety includes the "Establishment and Efficient Management of the Health and Safety Management System," under which we obtained and manage the OHSAS 18001 certification at our domestic operating sites as described on the below table.

Operating Sites that Have Obtained OHSAS 18001

Fiscal year certification 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. (currently Hibi Smelting Logistics 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 (Planned)	Nasu Works and Kanegawa Works of JX Metals Precision Technology Co., Ltd.

Introducing a Safety-related Official Commendation System

At the domestic operating sites of the Group, we introduced a safety-related official commendation system through which the president officially commends operating sites that have continuous operations without an accident for a designated period, which is determined according to the number of personnel. Since the commendation system started in September 2011, 17 operating sites had been officially commended as of the end of 2012.

Names of the Operating Sites Officially Commended for Safe Operations (in 2011 and 2012)

	Operating sites
Commended for complete eradication of accidents	Kasuga Mine Co., Ltd., JX Nippon Kurobe Galva Co., Ltd., Kamine Clean Service Co., Ltd., Amagasaki Office and Tokyo Recycling & Technical Services Center of JX Metal Trading Co., Ltd., Hokushin Mining Co., Ltd., Kamikita Mines Co., Ltd., Hanawa Mines Co., Ltd., Namariyama Mines Co., Ltd., Oya Mines Co., Ltd., Yoshino Mines Co., Ltd., Hitachi Mines Co., Ltd., Hokuriku Mines Co., Ltd. Nippon Marine Co., Ltd.
Commended for zero serious accidents	Ichinoseki Foil Manufacturing Co., Ltd., Kyushu Office of JX Metals Trading Co., Ltd.

Mr. Ozawa, then president of Nippon Marine of Co., Ltd. (central) at the commendation ceremony

Environmental Safety Audit

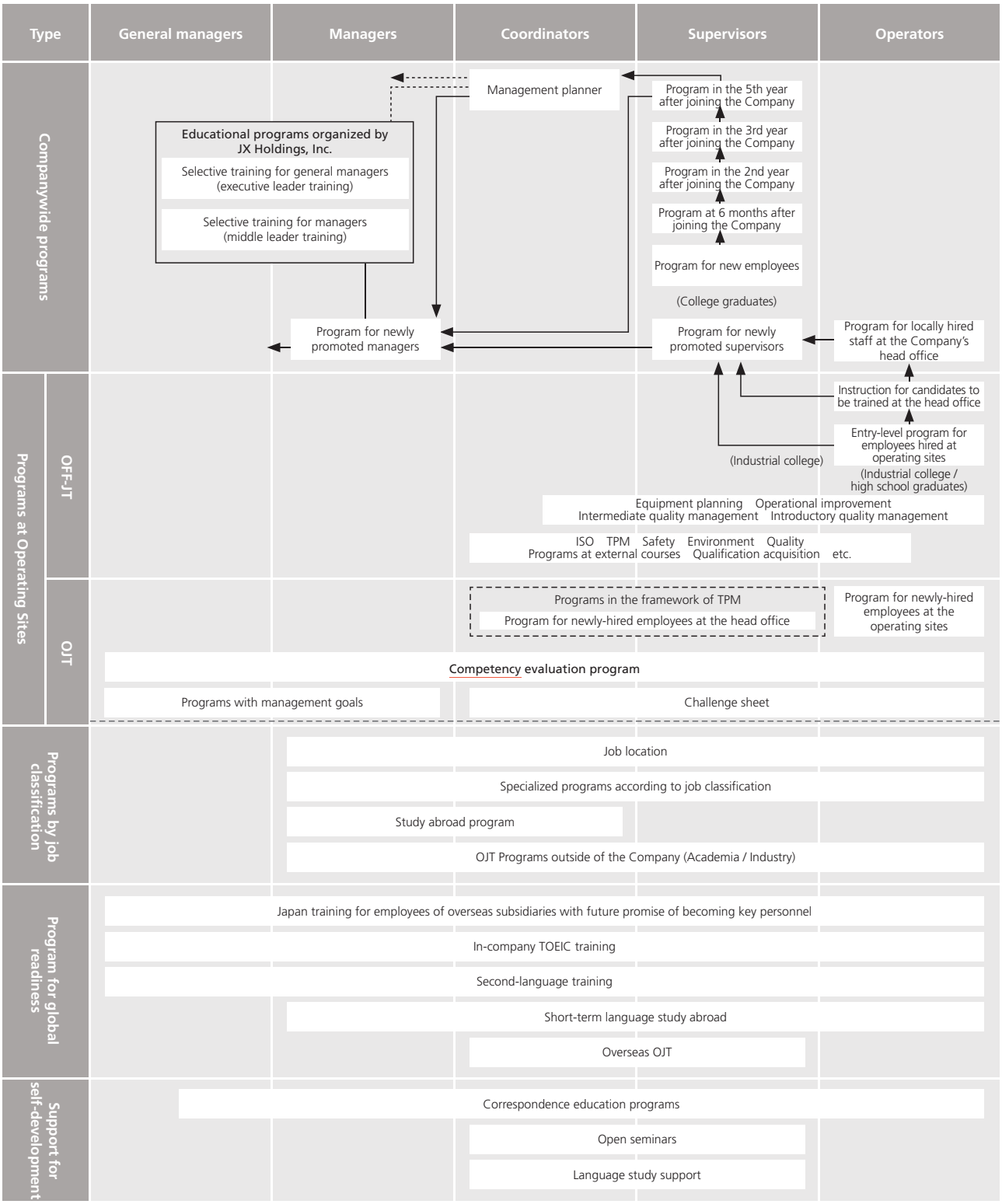
The environmental safety audit has been conducted at operating sites directly run by the Company and domestic affiliated companies of the Group by the environmental safety audit team directly supervised by the president. Issues discovered as a result of the audit are reported to the president and to each operating site to facilitate improvements, which are monitored as a follow-up measure.

Measures for Legal Compliance

We conducted an Inspection on Environment and Safety-Related Compliance, with the cooperation of an external organization attorneys and consultants, to keep up with the revisions to laws and regulations related to safety, health and environment and to take appropriate measures. In addition, we introduced a legal compliance monitoring system to obtain the latest information on legal revisions on a weekly basis and compile and issue instructional handbooks and manuals regarding important legal revisions to ensure a full understanding of the content of the revisions to laws and regulations and complete legal compliance at each operating site.

We also issue instructional handbooks that outline laws, regulations, directions and notices related to particular items to enhance the related personnel's understanding of laws and regulations.

Our Educational Programs in Fiscal 2012



Systematic Education Programs for College Graduates

For employees who are college graduates, we positioned the first five years after joining the Company as a period for systematic human resources development. During this period, they participate in various educational programs that help develop specific business skills.

Educational programs Implemented in Fiscal 2012

Program for new employees	❶ Understanding the current business conditions and management issues of the Company and its corporate social responsibility.
	❷ Acquiring basic skills requisite to a business person, including business manners, English conversation, financial accounting, etc.
	❸ Developing a sense of cooperation and community among employees entering the Company at the same time.
Program at 6 month after joining the Company	❶ Looking back on their lives as members of society after entering the Company and examining the current issues.
	❷ Strengthening basic skills requisite to a business person such as communication and presentation.
Program in the 2nd year after joining the Company	❶ Deepening understanding of the Company's social responsibility in relation to operational management and its initiatives through the study tour of the Toyoha Mine and other activities.
	❷ Deepening understanding of the Company's corporate philosophy and its corporate DNA, and at the same time encouraging them to be proud of being the Company's employees.
Program in the 3rd year after joining the Company	❶ Deepening understanding of the current business conditions and management issues of the Company.
	❷ Acquiring additional business skills such as logical thinking.
	❸ Understanding role expectations and enhancing motivation.
Program in the 5th year after joining the Company	❶ Enhancing self-advancement problem-solving abilities.
	❷ Acquiring business skills necessary for problem solving such as logical thinking, problem identification, problem resolution, project management, etc. as the final step in the educational programs for college graduate employees.
	❸ Logically and systematically implementing issues found in actual operations and practicing business skills acquired in the programs into actual operations.

The workforce of JX Nippon Mining & Metals and its 54 affiliated companies (37 domestic, 18 overseas) encompassed in the boundary of this Report

Breakdown of Employees (As of March 31, 2013) ☑

(People)

	Full-time			Others			Total	Temporary employees	Total workforce
	A	B	Subtotal	A	B	Subtotal			
Domestic companies (37)	4,665	546	5,211	18	109	127	5,338	81	5,419
Overseas companies (18)	1,319	348	1,667	8	1	9	1,676	44	1,720
Total	**5,984**	**894**	**6,878**	**26**	**110**	**136**	**7,014**	**125**	**7,139**

*The "domestic companies" category includes the Company.
The "full-time" category encompasses regular employees and employees working equivalent hours to regular employees.
A: Employees not on fixed-term contracts.
B: Employees on fixed-term contracts.

Number of Mangers Employed at Overseas Operating Sites (As of March 31, 2013) ☑

(People)

Local employees	Of which, managers
1,961	153

*Local employees are those employees who work full-time at our operating sites. Managers are those employees positioned as manager or higher.
*Approximately 95% of local employees possess citizenship of the countries in which they are employed.

Composition of Managerial-level Employees by Region (As of March 31, 2013) ☑

(People)

		Managerial-level employees			Others			Total		
		Men	Women	Subtotal	Men	Women	Subtotal	Men	Women	Subtotal
Domestic companies (37)	Japan	1,544	41	1,585	2,913	419	3,332	4,457	460	4,917
	North America	4	0	4	0	0	0	4	0	4
	South America	31	0	31	1	0	1	32	0	32
	Asia	67	3	70	129	49	178	196	52	248
	Europe	0	0	0	0	0	0	0	0	0
	Oceania	5	0	5	5	0	5	10	0	10
Subtotal		1,651	44	1,695	3,048	468	3,516	4,699	512	5,211
Overseas companies (18)	North America	16	1	17	40	15	55	56	16	72
	South America	174	26	200	192	28	220	366	54	420
	Asia	188	85	273	547	201	748	735	286	1,021
	Europe	16	1	17	128	9	137	144	10	154
Subtotal		394	113	507	907	253	1,160	1,301	366	1,667
Total		**2,045**	**157**	**2,202**	**3,955**	**721**	**4,676**	**6,000**	**878**	**6,878**

*The figures stipulated in the table on the left represent the number of full-time employees. The "managerial-level employee" category encompasses general managers, managers, assistant managers, and supervisor.
*The "domestic companies" category includes the Company.

Composition of Managerial-level Employees by Age (As of March 31, 2013)

(People)

		Managerial-level employees			Others			Total		
		Men	Women	Subtotal	Men	Women	Subtotal	Men	Women	Subtotal
Domestic companies (37)	Below 29 years of age	115	6	121	801	95	896	916	101	1,017
	30–49 years of age	851	30	881	1,697	292	1,989	2,548	322	2,870
	Above 50 years of age	685	8	693	550	81	631	1,235	89	1,324
Subtotal		1,651	44	1,695	3,048	468	3,516	4,699	512	5,211
Overseas companies (18)	Below 29 years of age	76	42	118	300	109	409	376	151	527
	30–49 years of age	229	66	295	474	123	597	703	189	892
	Above 50 years of age	89	5	94	133	21	154	222	26	248
Subtotal		394	113	507	907	253	1,160	1,301	366	1,667
Total		**2,045**	**157**	**2,202**	**3,955**	**721**	**4,676**	**6,000**	**878**	**6,878**

*The figures stipulated in the table on the left represent the number of full-time employees. The "managerial-level employee" category encompasses general managers, managers, assistant managers, and supervisor.
*The "domestic companies" category includes the Company.

Average Age and Average Number of Years of Service (As of March 31, 2013)

	Age (years)			Years of service (years)		
	Men	Women	Total	Men	Women	Total
Domestic companies (37)	41.2	40.5	41.1	11.6	9.2	10.5
Overseas companies (18)	38.4	34.1	37.5	6.7	6.3	8.0
Average	40.5	37.6	40.1	10.5	8.0	10.2

*The "domestic companies" category includes the Company.

Number of Employees Recruited (April 1, 2012 to March 31, 2013)

(People)

	Men	Women	Total
Domestic companies (37)	360	46	406
Overseas companies (18)	371	73	444
Total	**731**	**119**	**850**

*The "domestic companies" category includes the Company.

Number of Employees That Left the Companies (April 1, 2012 to March 31, 2013)

		Number of employees that left the companies (people)			Rate of employees leaving the companies (%)		
		Men	Women	Total	Men	Women	Total
Domestic companies (37)	Below 29 years of age	55	14	69	6	12	6
	30–49 years of age	85	26	111	3	7	4
	Above 50 years of age	220	10	230	15	10	15
Subtotal		360	50	410	7	9	7
Overseas companies (18)	Below 29 years of age	92	59	151	20	28	22
	30–49 years of age	78	22	100	10	10	10
	Above 50 years of age	20	3	23	8	10	8
Subtotal		190	84	274	13	19	14
Total		**550**	**134**	**684**	**8**	**13**	**9**

*The number of employees that left the companies includes the number of those who left the companies due to age-limit retirement, personal circumstances, death, and involuntary retirement.
*Rate of employees leaving the companies is the percentage of the number of full-time employees who left the companies to the total number of employees.
*The "domestic companies" category includes the Company.

Labor Union Members (As of March 31, 2013)

		The number of union members (people)			Percentage of labor union members (%)		
		Men	Women	Total	Men	Women	Total
Domestic companies (37)	Below 29 years of age	637	56	693	70	55	68
	30–49 years of age	1,639	205	1,844	64	64	64
	Above 50 years of age	441	40	481	36	45	36
Subtotal		2,717	301	3,018	58	59	58
Overseas companies (18)	Below 29 years of age	213	94	307	57	62	58
	30–49 years of age	248	61	309	35	32	35
	Above 50 years of age	64	4	68	29	15	27
Subtotal		525	159	684	40	43	41
Total		**3,242**	**460**	**3,702**	**54**	**52**	**54**

*The percentage of labor union members is the ratio of union members to the number of full-time employees.
*The "domestic companies" category includes the Company.

Regional

The Group's domestic and overseas operating sites are regularly communicating with local and regional authorities, local chambers of commerce and other organizations, to build relationships of trust with them. Also, we actively promote exchanges with local communities by conducting summer festivals and other events.

● Communication with Local Communities

In this section, we will introduce examples of communication with local communities in fiscal 2012.

Participation in regional organizations (Fiscal 2012)

The Company and its Group companies participate in chambers of commerce and other such organizations in all regions in which it has operating sites (Tomakomai, Kitaibaraki, Hitachi, Kurobe, Tsuruga, Tokyo, Samukawa, Tamano, Oita, Makurazaki, Tatebayashi, Oshu, the Philippines, Freiburg in Germany, etc.). Further, the Company is a member of the organizations listed below, and participates in regular meetings (Executive Committee) and various other committees. Through these and other initiatives, we are actively participating in regional organizations.

Organization (Other)	Participating operating site/Group company (Position with the organization)
Industrial Waste Association (Hokkaido, Toyama, Ibaraki, Fukui, Osaka)	JX Nippon Tomakomai Chemical Co., Ltd. (Director), JX Nippon Mikkaichi Recycle Co., Ltd., JX Nippon Environmental Services Co., Ltd., JX Nippon Tsuruga Recycle Co., Ltd., Hitachi Works, JX Metals Trading Co., Ltd.
The Foundation For The Advancement of Industrial Technology In Dohoh Area	JX Nippon Tomakomai Chemical Co., Ltd.
Kitaibaraki-shi Association for Safety of Hazardous Materials	Isohara Works (Director), Isohara Fabricating Works (Director)
Kitaibaraki-shi Boka-Kanri-Kyogikai (Fire Protection and Control Council of Kitaibaraki)	Isohara Works (Director), Isohara Fabricating Works (Director)
Takahagi-chiku Koyo Taisaku Kyogikai (an association for employment measures in Takahagi District)	Isohara Works (Director)
Hitachi-roudoukijunkyokai (an organization to provide information about labor regulations, industrial accidents, and others)	Hitachi Works, Isohara Works (Director)
Hitachi Traffic Safety Association	Hitachi Works
Kurobe Water Resource Management Committee	JX Nippon Mikkaichi Recycle Co., Ltd. (Director)
Kurobe Industrial District Support Organization	JX Nippon Kurobe Galva Co., Ltd.
Reinan Environmental Conservation Organization	JX Nippon Tsuruga Recycle Co., Ltd.
Tsuruga Mikata Association for Safety of Hazardous Materials	JX Nippon Tsuruga Recycle Co., Ltd. (Vice Chairman)

Organization (Other)	Participating operating site/Group company (Position with the organization)
Samukawa Hazardous Substance Safety Association	Kurami Works
Tamono-shibu (Tamano branch division), Japan Coast Guard Association	Hibi Kyodo Smelting Co., Ltd. (Assistant Branch Manager)
Tamano Traffic Safety Association	Hibi Kyodo Smelting Co., Ltd. (Director)
Saganoseki Machidukuri Kyogikai (NPO Council for Revitalization of Saganoseki)	Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd. (Vice Director)
Saganoseki Donation Allocation Intermediately Association	Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd. (Vice Chairman)
Kyushu-chihou Kouzan-kai (Mining Association of Kyushu district)	Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd. (Chairman), Kasuga Mines Co., Ltd. (Director)
Association for Safety of Hazardous Materials	JX Metals Precision Technology Co., Ltd. (Meguro, Tatebayashi, Esashi)
Suzhou Foreign Business Association	Nippon Mining & Metals (Suzhou) Co., Ltd.
Association of Enterprises with Foreign Investment, Changzhou	Changzhou Jinyuan Copper Co., Ltd.
Taoyuan Waste Committee	Nikko Metals Taiwan Co., Ltd. (Director)
The Japanese Association, Manila, Inc.	JX Nippon Mining & Metals Phillippines, Inc.
Laguna Industrial District Organization	JX Nippon Mining & Metals Phillippines, Inc.
Japan Business Association of Arizona	JX Nippon Mining & Metals USA, Inc. (Vice Chairman)
Atacama Region Mining Association	SCM Minera Lumina Copper Chile (Chairman)

Responding to complaints

The Group responds earnestly to any complaints it receives from local communities. It makes sincere efforts to rectify the situation by working to quickly assess the situation and develop necessary improvement measures. The complaints received in fiscal 2012 are recorded in the table below. In all cases, the Company responded quickly and took appropriate corrective measures. Going forward, we will redouble our efforts to prevent such complaints from arising in the future.

Operating site	Complaint	Response measure	Future improvements, etc.
Kurami Works	Noise generation	Replaced parts of the machine installed at a high place, since it was likely to be the noise source. Also inspected other machines to prevent noise generation.	Reviewed and improved inspection and maintenance operations of machines and systems installed at high places and outdoors.
JX Metals Precision Technology Co., Ltd.	Vibration and noise generation	Residents complained about vibration and noise caused by the demolition of a factory. To reduce vibration and noise levels, a low-vibration and low-noise demolition method was employed.	In consideration of the special situation in which a music recording studio is located adjacent to the factory, a demolition method of even lower noise and vibration levels is being sought.
SCM Minera Lumina Copper Chile	Complaints about the speed of vehicles passing through from the site of the Caserones project	Adopted traffic regulations, and regularly organized traffic safety seminars for drivers. Promoted traffic rules by handing out brochures and monitored the speed of heavy goods vehicles. Explained to local residents about the measures taken.	Rigorously instruct drivers engaged in the Caserones project to comply with the rule.

Examples of communication with local communities
Implementation of Plant Tours, Etc. (Fiscal 2012)

Operating site	Initiative	Participants	Period of implementation (Fiscal 2012)	Number of participants (people)
Isohara Works	Plant tour	North Chapter of Ibaraki Employers' Association	February	30
Hitachi Works	Interns	Hitachi Technical High School	October	4
	Plant tour	Trainees of the International Institute for Mining Technology	November	22
		Institute of Industrial Science, University of Tokyo	November	35
Kurami Works	Plant tour	Nikko Kurami-kai	June	20
Kasuga Mines Co., Ltd.	Plant tour	Bonotsu Yamabiko NPO	March	30
		Beppu Elementary School	October	15
JX Nippon Tomakomai Chemical Co., Ltd.	Plant tour	Obihiro Advanced Institute of Technology	July	22
JX Nippon Kurobe Galva Co., Ltd.	Plant tour	Kurobe citizens	August	20
		Local junior high schools	October	10
JX Nippon Tsuruga Recycle Co., Ltd.	Plant tour	Students of Tsuruga High School	July	43
		Tsuruga Technical College	July	38
		University students who have returned to Fukui Prefecture	August	20
		Fukui Prefecture Industrial Waste Association	August	33
		Toyama Prefecture Foundation to Save Patients of Pollution-Caused Diseases	October	16
Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd., Hibi Kyodo Smelting Co., Ltd.	Plant tour	Tamano City Tourist Association	February	43
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Plant tour	Sakanoichi Municipal Council	November	38
		Sulfuric Acid Association of Japan	November	42
		Saburo Okita Forum for Future Global Issues	November	37
		Liberation Committee of Shunko Konwa-kai	November	14
		Futsuka-kai	November	8
		Fifth-grade students of Saganoseki Elementary School	November	29
		Funding Committee, Japan Mining Industry Association, Saganoseki Smelter & Refinery	March	9
Nasu Works, JX Metals Precision Technology Co., Ltd.	Plant tour	Otawara Press Disaster Prevention Council	August	10
Ichinoseki Foil Manufacturing Co., Ltd.	Plant tour	Ichinoseki Tech High School, Prefectural High School	October	2
Gould Electronics GmbH	Plant tour	Families of personnel, representatives of region	May	300
SCM Minera Lumina Copper Chile	Plant tour	Inspections by directors of various regional bureaus	April	8
		River Water Management Association and Basin Agricultural Produce Export Association	October	25
		Students of the University of Atacama, majoring in natural resources science	May	17
		Parliamentary members selected from the Atacama region	June	4
		President of the Mining Association	July	7
		Parties related to the Atacama regional government	September	7
Pilot plant in Perth, Australia	Plant tour	Japanese School in Perth	July	5
		Japanese Consul General in Perth	February	3

Plant tour for children and their parents organized by Fukui Prefecture Industrial Waste Association at JX Nippon Tsuruga Recycle

Plant tour for students of Tsuruga Technical College at JX Nippon Tsuruga Recycle

Plant tour for residents of Kurobe at JX Nippon Kurobe Galva

Students of the University of Atacama, majoring in natural resources sciences, at the mine

Plant tour of the Japanese School in Perth, at the pilot plant

Convivial Events (Summer festivals and other events to which members of the community were invited, fiscal 2012)

Operating sites	Event details, number of participants, etc.
Hitachi Works	Conducted an outdoor event held as a part of the "Sanjin-sai" summer festival held on the company grounds and a martial arts tournament held in the Nikko Shido Kan (Held annually in July 2012, approx. 2,000 participants).
Kurami Works	Participated in the "Shinko-sai" festival (Held annually in September 2012, approx. 200 participants): The company participated in a festival held at the local Kurami Shrine. Part of the plant is opened to visitors and employees participated in carrying a *mikoshi*, a traditional Japanese festival event.
JX Nippon Tsuruga Recycle Co., Ltd.	Held firefly viewing event in cooperation with the local NPO Aqua Sangha (June 2012, approx. 20 participants).
	Participated in the Tsuruga "Ajisai" Road Project.
Hibi Kyodo Smelter, Hibi Kyodo Smelting, Pan Pacific Copper	Participated in Shibukawa Fire Department's Dezome-Shiki New Year's Parade (January 2013, approx. 20 participants)
Saganoseki Smelter & Refinery, Pan Pacific Copper	Participated in the "Seki no Tai-tsuri Odori Taikai" festival (September 2012, approx. 30 participants).
	Participated in various other local festivals and events
JX Nippon Arts & Crafts	Displayed jewelry, precious metals, and arts and crafts at the Saganoseki Hometown Festival, (November 2012)
Kasuga Mines	Held the "Sanjin-sai" festival (October 2012, approx. 30 participants)
JX Nippon Kurobe Galva	Participated in the Kurobe New Year's Party in January 2013, in Kurobe, 200 participants.
	Participated in sand borer fishing contest, July 2012, in Kurobe, 20 participants.
Head Office, JX Metals Precision Technology	Participated in the festival of Otori Shrine (September 2012)
Nasu Works, JX Metals Precision Technology	Participated in the Kuroiso *bon* dance (August 2012)
JX Nippon Mining & Metals USA, Inc.	Participated in the Japan Business Association of Arizona's New Year's Party (January 2013, approx. 100 participants).
SCM Minera Lumina Copper Chile	Sponsored San Isidro Festival in Potro (May 2012, approx. 150 participants)
	Sponsored the Festival of the Virgin of Carmen (Los Loros) (July 2012, approx. 1,000 participants)
	Participated in ceremonies on Women's Day, a ceremony to celebrate the completion of a rodeo stadium, and other local events.

Shinko Festival
Kurami Works

Participated in the "Seki no Tai-tsuri Odori Taikai" festival.
Saganoseki Smelter & Refinery, Pan Pacific Copper

Saganoseki Furusato Festival
JX Nippon Arts & Crafts

The ceremony on Women's Day
SCM Minera Lumina Copper Chile

Contributions to local communities

In addition to contributing to society through its business activities, the Group acts in accordance with its Code of Conduct and engages in social contribution activities geared toward helping develop and enrich local communities while also building harmony with these communities. The Group engages in a variety of activities including cleanup activities as well as crime prevention activities and disaster preparedness drills. Through these activities, we are promoting continuous communication and interaction with members of the local community, as well as developing mutual understanding and friendship.

Major contribution activities in fiscal 2012 toward local communities in areas where Group operations are located are listed in the table below.

Local Cleanup Activities (Fiscal 2012)

Operating sites	Activity details
Isohara Works, Isohara Fabricating Works	Conducted beautification activities of roads surrounding the Works and cleaned up an area near the Works (June and September 2012, total of 220 participants).
Hitachi Works	All employees cleaned up grounds of the Works and surrounding areas in first week of every month.
	Participated in the campaign to clean up the Miyata River (spring and summer 2012, total of 100 participants).
Kurami Works	Participated in the Sagami River Clean Campaign to clean the riverbed of the Sagami River, which flows through the area (May 2012, approx. 60 participants).
	Participated in a beautification campaign organized by Samukawa City (Kanagawa Prefecture) (June and September 2012, total of 100 participants)

Clean-up campaign in the vicinity of works Isohara Works and Isohara Fabricating Works

Operating sites	Activity details
JX Nippon Tomakomai Chemical Co., Ltd.	Participated in a clean-up campaign of Association of Coastal Companies (April and October 2012, 16 participants)
	Conducted autonomous cleanup activities around the plant (from April to October, 33 participants).
JX Nippon Tsuruga Recycle Co., Ltd.	Participated in "Operation Cleanup Fukui" sponsored by Tsuruga City in Fukui Prefecture (September 2012 and March 2013, 65 participants).
	Cleaned up the Kehi-no-Matsubara Beach as a part of local the community's en masse beautification campaign (June 2012, 45 participants)
	Participated in the clean-up campaign of Kinome, Wakaizumi (May 2012, 15 participants). Cleaned up the Mikatago Lake (March 2013, 17 participants)
Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd., Hibi Kyodo Smelting Co., Ltd.	Conducted bi-monthly cleanup activities on the roads and sidewalks around the plant (approx. 20 participants each time).
	Participated in cleanup activities of the coast of Shibukawa (June 2012, approx. 20 participants). The coast of Shibukawa is a specially designated area of the Setonaikai National Park. The Pan Pacific Copper Hibi Kyodo Smelter and Hibi Kyodo Smelting Co., Ltd. are located on an area of land bordering the coast that is approximately 789,517 m^2.
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Conduct clean-ups and beautification activities once a month (approx. 80 participants each time)
Kasuga Mines Co., Ltd.	Participated in volunteer activities in the local community (Cleanup of the port, mowing grass along public roads, and cleanup of the coast on Marine Day).
JX Metals Precision Technology (Esashi Works)	Participated in the industrial estate clean campaign (June and October 2012, more than 4 participants).
JX Metals Precision Technology (Nasu Works)	Picked up garbage around the Works (monthly, approx. 15 participants)
JX Nippon Mining & Metals Korea	Participated in clean-ups in the industrial park (April 2012, 45 participants)
JX Nippon Mining & Metals Philippines, Inc.	Participated in the Lakeshore Clean-up in Laguna (April 2012), and in the Mt. Makiling, Los Baños (February 2013)
	Visited Buntog Elementary School, Home of Joy Orphanage, and home for the elderly (May, June and September 2012, total of 60 participants).

Sagami River clean-up campaign
Kurami Works

Shibukawa Beach clean-up campaign
Hibi Kyodo Smelter, Pan Pacific Copper

Visit to a home for elderly women
JX Nippon Mining & Metals Philippines Inc.

Crime Prevention and Disaster Preparedness Drills (Fiscal 2012)

Operating sites	Activity details
Hitachi Works	Conducted disaster preparedness drill (December 2012, participated in by all employees)
Kurami Works	Conducted disaster preparedness drills (October 2012, approx. 200 participants).
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Conducted crime prevention patrols as part of the Saganoseki Donation Allocation Committee's Umineko-Tai, a local patrol team (Once a month, 8 participants each time).
	Conducted disaster preparedness drills (June, approx. 150 participants).
	Participated in Oita City Fire Drill Competition (June 2012, 8 participants)
JX Nippon Tomakomai Chemical Co., Ltd.	Conducted disaster preparedness drills (June 2012).
JX Nippon Tsuruga Recycle Co., Ltd.	Held an emergency training (July 2012), a disaster prevention evacuation training (September 2012), a night emergency training (March 2013). All personnel participated.
	Participated in Fire Drill Assembly (August 2012, 7 participants)
Tatebayashi Works, JX Metals Precision Technology	Conducted disaster (fire/earthquake) preparedness drills (November 2012 and March 2013)
Ichinoseki Foil Manufacturing Co., Ltd.	Participated in a disaster prevention training organized by the fire department (October)
Nikko Fuji Precision (Wuxi) Co., Ltd.	Held fire and disaster prevention drills (November 2012, 34 participants)
Gould Electronics GmbH	Held fire drills (October 2012, 43 participants)
SCM Minera Lumina Copper Chile	Held educational seminars for the prevention of alcohol and drug use, (September 2012, 30 participants)
Nikko Metals Taiwan Co., Ltd.	Conducted disaster preparedness drills (May 2012).

Comprehensive disaster preparedness drill
Disaster drill at Saganoseki Smelter & Refinery, Pan Pacific Copper

Fire drill of firefighting squad
JX Nippon Tomakomai Chemical

Disaster preparedness drill
Tatebayashi Works, JX Metals Precision Technology

Traffic Safety and Blood Drive Activities (Fiscal 2012)

Operating sites	Activity details
Isohara Works	Conducted monthly traffic safety activities (approx. 350 participants).
	Conducted blood drives (November 2012 and March 2013, total of 80 participants).
Hitachi Works	Participated in events sponsored by the Hitachi Traffic Safety Association (5 times a year, approx. 50 participants each time).
	Conducted blood drives (four times in fiscal 2012, approx. 50 participants, respectively).
	Held lectures on traffic safety (once every two months, each time with 100 participants)
Kurami Works	Conducted road traffic safety lectures (June and December 2012, approx. 80 participants, respectively).
	Conducted blood drives (May and November 2012, total of 40 participants).
JX Nippon Tomakomai Chemical Co., Ltd.	Participated in road traffic safety lectures conducted by local municipal bodies responsible for traffic safety and the police (May 2012).
JX Nippon Mikkaichi Recycle Co., Ltd.	Held a first-aid training session (July 2012)
JX Nippon Tsuruga Recycle Co., Ltd.	Participated in traffic safety activities organized by residents of the prefecture (4 times in the year, 2 participants each time).
Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd., Hibi Kyodo Smelting Co., Ltd.	Participated in events of the Tamano area safe driving control council as a member (Several times each year, 1 participant)
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Conducted monthly JX Nippon Mining & Metals Group "Yamabiko Undo" traffic safety awareness activities (approx. 15 participants each time).
	Participate in safe driving trainings of a driving school (quarterly, 145 participants)
	Conducted blood drives (April and October 2012, 50 participants, respectively).
Esashi Works, JX Metals Precision Technology Co., Ltd.	Conducted blood drives (February 2013, 20 participants).
Nasu Works, JX Metals Precision Technology Co., Ltd.	Conducted blood drives (June 2012, approx. 15 participants).
JX Nippon Mining & Metals Philippines, Inc.	Conducted blood drives (three times in the year).
SCM Minera Lumina Copper Chile	Cooperated with pilgrimage to Potro village (May 2012) Sponsored the Festival of the Virgin of Carmen (July 2012)

Conducted blood drives at Saganoseki Smelter & Refinery, Pan Pacific Copper

Festival of the Virgin of Carmen SCM Minera Lumina Copper Chile

Opening of company facilities

The Group opens a number of its facilities to the public, such as the grounds, at principal operating sites and affiliated companies. These facilities are used throughout the year to hold a wide variety of events.

Examples of opening facilities to the public in fiscal 2012 are listed in the table below.

Operating sites	Facility	Activity details
Isohara Works	Employee club	Provided an area for children's events to be held.
Hitachi Works	Nikko Shido Kan	Provided a place for children as well as junior high school and high school *kyudo* (Japanese archery) and *kendo* (Japanese fencing) teams for practice and games.
Kurami Works	Company grounds	Provided an area for baseball tournaments to be held.

Nikko Shido Kan, Hitachi Works

Operating sites	Facility	Activity details
Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd., Hibi Kyodo Smelting Co., Ltd.	E-No-Hara Grounds	Provided an area for baseball practice and games (Used by local youth baseball groups and police station personnel).
	Kyohi Gymnasium	Provided an area for volleyball, badminton, *kendo* and other sports tournaments to be held (Used by local residents).
	Idle land on grounds of company dormitory	Provided an area for elementary school events and as an evacuation area during disasters
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Oziuki Baseball Field	Provided an area for baseball tournaments and practice to be held.
	Fujiu Grounds	Provided an area for Ground Golf tournaments to be held.
Kasuga Mines Co., Ltd.	Grounds of company dormitory	Provided an area to practice golf.
	Makurazaki (ore) Port berth	Provide an area as viewing place and parking lot for summer fireworks displays
SCM Minera Lumina Copper Chile	MLCC Los Loros office	Opened the office and held exchange events between MLCC personnel and local residents (used by 200 people every month).
	Copiapo branch	Opened the branch to provide venue for employment briefings and education for MLCC personnel and local residents (used by 2,200 participants every month).

Employees of SCM Minera Lumina Copper Chile

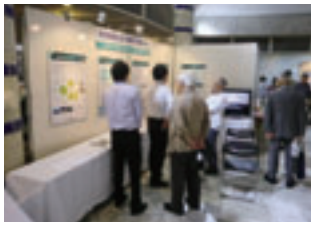
Principal Displays in Exhibitions (Fiscal 2012)

Exhibitor	Activity details
Head Office of JX Nippon Mining & Metals Corporation	Displayed treated rolled copper foil, electro-deposited copper foil, and copper foil for lithium-ion batteries, and other electronic materials at JPCA Show 2012 (June 2012).
	Displayed treated rolled copper foil, electro-deposited copper foil, surface treatment agents, etc. at TPCA Show 2011 (October).
	Displayed various sputtering targets and under bump metallurgy (UBM) formation service at SEMICON JAPAN 2012 (December)
	Made a presentation at NEPCON WORLD JAPAN 2012 (January 2013) 1. IC Packaging Technology Expo: With JX Metals Trading Co., Ltd., jointly displayed various types of surface treatment agents, etc. 2. Advanced Electronic Materials Expo: Displayed world's thinnest rolled copper foil (6 μm) and copper foil for lithium-ion batteries
	Displayed various sputtering targets, etc., at SEMICON Korea 2012 (February 2013).
	Displayed newly developed treated rolled copper foil and electro-deposited copper foil at CPCA Show 2012 (March 2013)
	Displayed electro-deposited powder and other metallic powder at PM Yokohama (October 2012).
Hitachi Works, JX Nippon Environmental Services	Displayed at Eco Festival Hitachi (July 2012).
Hitachi Works	Displayed ingots of precious and rare metals and ore from the Hitachi Mines at the 56th Special Exhibition at Ibaraki Nature Museum (October 2012).
JX Nippon Mikkaichi Recycle Co., Ltd., JX Nippon Kurobe Galva Co., Ltd.	Participated in "Kurobe Fair 2012," hosted by Kurobe City and the Kurobe City Chamber of Commerce and Industry (September 2012).
JX Nippon Tsuruga Recycle Co., Ltd.	Displayed at the "Tsuruga City Environmental Fair" (February 2013)
Nikko Metals Taiwan Co., Ltd.	Displayed sputtering targets for LCDs (ITO and IGZO) at DISPLAY TAIWAN 2012 (June 2012).
	Displayed various sputtering targets, 450 mm-diameter polycrystalline silicon wafers, etc., at SEMICON Taiwan 2012 (September 2012).

SEMICON JAPAN

SEMICON KOREA

CPCA Show



Eco Festival Hitachi
Hitachi Works

Display Taiwan
Nikko Metals Taiwan Co., Ltd.

Awards received from external organizations

In fiscal 2012, the Group received a wide variety of awards from public and industry organizations in the various regions in which it operates. Details about these awards are outlined in the table below.

The fact that various day-to-day activities have been highly evaluated will serve as a driving force behind future efforts to develop our operations. Going forward, we will work to ensure the continuation of these activities.

Public and Industrial Organizations, Etc. (Fiscal 2012)

Operating site	Organization	Award details	Reason
Isohara Works	Takahagi-chiku Koyo Taisaku Kyogikai (an association for employment measures in Takahagi District) Hitachi-roudoukijunkyokai (an organization to provide information about labor regulations, industrial accidents, and others)	Superior Employee Award	Received for contributing to the development of the plant (target group for award: managers)
	Fire Headquarters of Kita-Ibaraki City	Award for promoting first aid	Received for promoting first aid.
Hitachi Works	Hitachi-roudoukijunkyokai (an organization to provide information about labor regulations, industrial accidents, and others)	Superior Employee Award	Received by employees who have served a long term of continued service (those that set a good example for other employees)
	Hitachi-shi Bosai Kyokai (an association of disaster prevention in Hitachi City)	Superior Employee Award	
	Japan Crane Association	Superior Crane Operator	Received by crane operators that have achieved significant results in promoting accident prevention and improving their operation of cranes, etc.
Kurami Works	Japan Copper and Brass Association	Superior Employee Award	Received by employees who possess a rich wealth of knowledge and technical skills (those that set a good example for other employees)
	Kanagawa Environmental Conservation Association	Kanagawa Environmental Conservation Association Award for preserving air, water, and soil environments	Received for continued contributions to preserving air, water, and soil environments.
JX Nippon Tsuruga Recycle Co., Ltd.	Fukui Industrial Waste Association	Superior Employee Award for the Appropriate Disposal of Industrial Waste	Received by employees who have performed duties diligently for many years and whose work has produced outstanding results
Saganoseki Smelter & Refinery, Pan Pacific Copper Co., Ltd.	Japan Boiler Association	Japan Boiler Association Branch Head's Award	Received for the stable and safe operation of boilers
	The High Pressure Gas Safety Institute of Japan, Oita	Superior Employee Award (individual)	Received for initiatives for the safety of high-pressure gas facilities and safety instruction
	Oita Citizens' Association to Expel Crime Syndicates	Award for Organizations of Merit	Received the award in recognition of the participation in seminars for managers responsible for illegal demand for payment, and inquiries to the association about complaints from parties in question.
JX Nippon Mining Ecomanagement	Four communities in Atami Town, Koriyama City, Fukushima Prefecture	Certificate of gratitude (to Janitor Kato of Shin-Takatama Mining)	Received the certificate of gratitude in recognition of the prompt completion of the improvement project of the Zenigami Impoundment at the Takatama Mine in collaboration with the construction company, and for sufficient consideration for the living environment of local residents.
Changzhou Jinyuan Copper Co., Ltd.	Changzhou Municipal People's Government	Excellent Company Award (Star-Ranking Company Award and Sales Size Award) Excellent Entrepreneur Award	Received for the company's superior performance (sales and income)
Nippon Mining & Metals (Suzhou)	Labor and Social Security Bureau of Suzhou Industrial Park	AA-class Labor Security Credit Unit	Received for excellent labor-management relationship
	Suzhou Industrial Park Authorities	Excellent Award for Management of Hazardous Chemicals	Received for excellent management of poisonous and deleterious substances.
SCM Minera Lumina Copper Chile	Atacama Region Mine Security Committee	Safety Award for 2011	Received the award in recognition of no accidents accompanied by lost work days.

Donations to Local Communities, Etc. (Fiscal 2012)

Receiving organization	Amount (billion yen)	Number of donations
1. Local public organizations (including colleges and hospitals)	0.1	34
2. Other regional organizations (festivals, events, municipal councils, etc.)	0.23	141
3. Nonprofit foundations, corporations, charities, etc.	0.003	31
Total	0.33	206

Donations from overseas affiliated companies have been denominated in yen by using the average exchange rate for fiscal 2012.

Awards received from our customers

	Operating site	Organization	Award details	Reason
1	JX Nippon Mining & Metals Corporation	AIS Company, Panasonic Corporation	2012 Best Supplier Award	Received the award in recognition of various original ideas, stable product quality, and stable delivery.
2	JX Nippon Mining & Metals Corporation	Intel Corporation	Intel SCQI Award 2011	Quality reliability, technological improvements, and stable delivery through supply of sputtering targets in leading-edge areas received acclaim. Also, the quick restoration of the Isohara Works following damage from the Great East Japan Earthquake, and subsequent swift recovery in manufacturing volume.
3	JX Nippon Mining & Metals Singapore Pte. Ltd.	X-FAB Sarawak Malaysia	Supplier Excellence Award 2011	This award is provided to only one supplier with the highest performance. In addition, the company's prompt restoration from the damage of the Great East Japan Earthquake was highly evaluated.
4	Nippon Mining & Metals (Suzhou)	Yidong Electronic Technology Group Co., Ltd.	Excellent Quality Award	Received the award in recognition of excellent product quality.

Industry Organizations Participated in by Group Companies (Abbreviated List for Fiscal 2012)

Organization	Participating Group company (Position with the organization)
Japan Mining Industry Association	JX Nippon Mining & Metals Corporation (Director), Kasuga Mines Co., Ltd., JX Nippon Exploration and Development Co., Ltd., Pan Pacific Copper Co., Ltd. (Director), Hibi Kyodo Smelting Co., Ltd. (Director), PPC Logistics Co., Ltd.
International Council on Mining and Metals (ICMM)	JX Nippon Mining & Metals Corporation
International Copper Association (ICA)	Pan Pacific Copper Co., Ltd.
Mining Safety and Health Association, Japan	Kasuga Mines Co., Ltd.
Shigen Sozai Gakkai	JX Nippon Mining & Metals Corporation, Hibi Kyodo Smelting Co., Ltd. (Regular Member)
Japan Society of Newer Metals	JX Nippon Mining & Metals Corporation
The Japan Institute of Metals	JX Nippon Mining & Metals Corporation
The Japan Society of Applied Physics	JX Nippon Mining & Metals Corporation
Japan Institute of Electronics Packaging	JX Nippon Mining & Metals Corporation
Copper Foil Industries Associations	JX Nippon Mining & Metals Corporation
Japan Powder Metallurgy Association	JX Nippon Mining & Metals Corporation
The Japan Society for Analytical Chemistry	JX Nippon Mining & Metals Corporation
Japan Copper and Brass Association	JX Nippon Mining & Metals Corporation
Japan Catalyst Recovering Association	JX Nippon Mining & Metals Corporation
The Society of Resource Geology	JX Nippon Mining & Metals Corporation, JX Nippon Exploration and Development Co., Ltd.
Sulfuric Acid Association of Japan	Pan Pacific Copper Co., Ltd. (Vice Chairman), JX Nippon Tomakomai Chemical Co., Ltd. (Director), Hibi Kyodo Smelting Co., Ltd. (Director)
Hokuriku Electric Association	JX Nippon Mikkaichi Recycle Co., Ltd.
Japan Galvanizers Association	JX Nippon Kurobe Galva Co., Ltd.
Japan Plating Suppliers Association	JX Metals Trading Co., Ltd.
Japan Federation of Coastal Shipping Associations	Nippon Marine Co., Ltd. (Special IMO-Related Committee Member, etc.)
The Japanese Shipowners' Association	Nippon Marine Co., Ltd. (Coastal Shipping Committee Member, etc.)
Japan Coastal Cargo Ship-operators Association	Nippon Marine Co., Ltd. (Standing Director, etc.)
Japan–Peru Business Committee	Pan Pacific Copper Co., Ltd.
Korea Display Industry Association	JX Nippon Mining & Metals Korea Co., Ltd.
Association of Enterprises with Foreign Investment, Changzhou	Changzhou Jinyuan Copper Co., Ltd.
ZVEI (German electrical and electronic manufacturers' association)	Gould Electronics GmbH
WVIB (Association of Industrial Companies Baden eV)	Gould Electronics GmbH

As a member company of the ICMM

JX Nippon Mining & Metals Corporation formulated its Code of Conduct based on the 10 International Council on Mining and Metals (ICMM) principles. We also adhere to the ICMM Position Statements.

As a member company of the ICMM, the Company is aggressively addressing issues related to the environment, safety and sanitation, the management of chemical substances and relations with communities.

Twenty ICMM members compiled a sustainability report in accordance with the Sustainability Reporting Guidelines 2006 of the GRI and the GRI Mining and Metals Sector Supplement, as required by the 10 sustainable development principles of the ICMM and the ICMM's Assurance Procedures from the aspect of the transparency of business activities, thereby achieving an application level of A+.

ICMM Position Statements

- **Mining and Protected Areas**
- **Mining and Indigenous People**
- **Implementing a global solution to managing a Low Emissions Economy: Policy on Climate Change**
- **Transparency of Mineral Revenues**
- **Mining: Partnerships for Development**
- **Mercury Risk Management**

ICMM Principles

ICMM
International Council on Mining & Metals

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.

WEB ICMM website **http://www.icmm.com/**

EITI

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

The Extractive Industries Transparency Initiative (EITI) was first announced at the World Summit on Sustainable Development in Johannesburg, South Africa, in September 2002, by then British Prime Minister Tony Blair. This initiative calls for the revenues and flows of assets of companies in extractive industries such as the oil, natural gas and metals industries, to be made transparent. At the same time, the initiative encourages these companies to contribute to the development of sustainable society. Furthermore, it is expected to effectively tackle so-called "resource curse," which refers to a tendency that the national poverty levels of a resource-rich country actually rises because of their own natural resources. The number of candidate countries under the EITI in August 2013 was 16 and 23 countries were EITI compliant countries, meeting all the EITI standards. In 2005, the ICMM announced that it would continue to offer its support to the EITI. Additionally, the JX Nippon Mining & Metals Group 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 recognize that the benefits of resource extraction occur as revenue streams over many years and can be highly price dependent.
4. We recognize 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 recognize that achievement of greater transparency must be set in the context of respect for contracts and laws.
7. We recognize 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.

WEB EITI website **http://www.eiti.org/**

Participation in the United Nations Global Compact

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

The UN Global Compact's 10 Principles

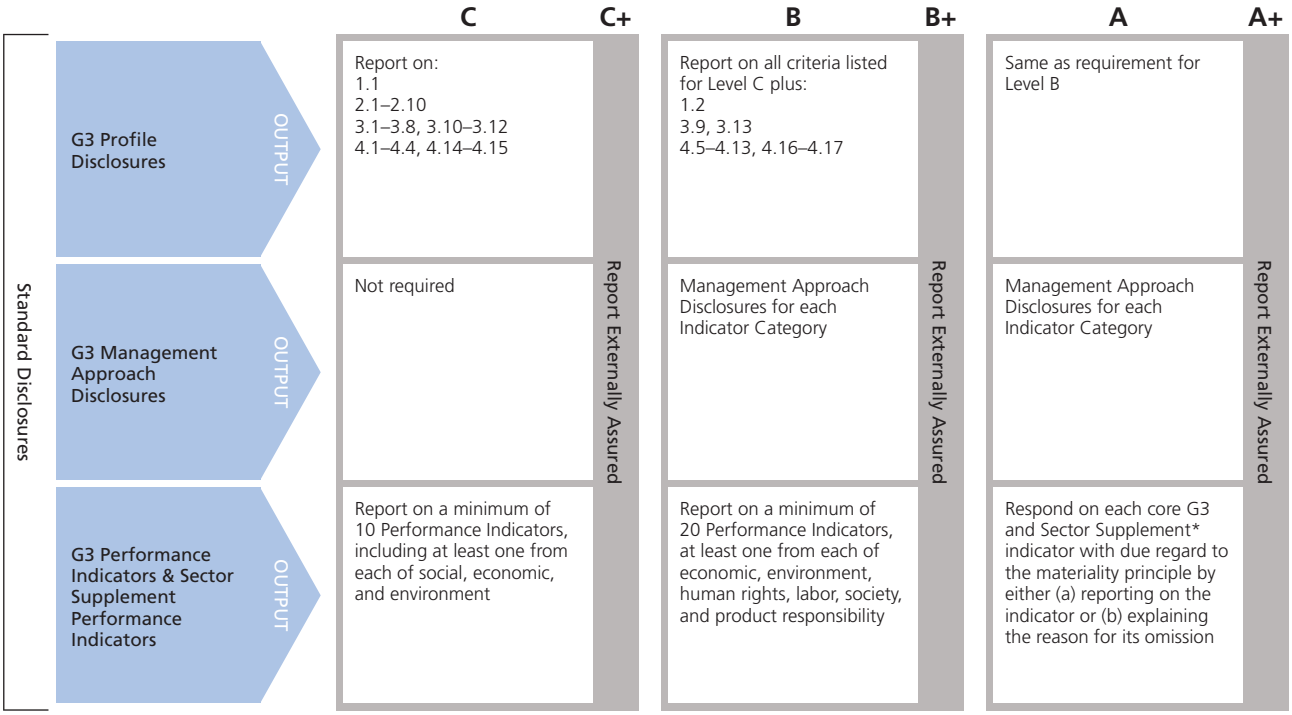
Human Rights	
Principle 1:	Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2:	make sure that they are not complicit in human rights abuses.
Labour	
Principle 3:	Businesses should uphold the freedom of association and the effective recognition 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.

Term	Explanation	Page(s)
Acid mine drainage	Drainage from closed mines, which comprises "pit water" gushing out from undergrounds and "effluent" discharged from mine facilities such as impoundments.	49, 73
Basel Convention	The official name is the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. The Basel Convention sets forth an international framework and procedures regarding the regulation of certain wastes that are transported beyond national borders.	56
BCP	A Business Continuity Plan (BCP) is an action plan for a corporation to continue its business operation. The plan states measures to continue minimum operation with limited management resources or resume operation within the target restoration hours in case of occurrence of a disaster or other unexpected incident.	61
Beyond compliance	The Company's proactive approach that goes beyond just satisfying compliance.	14
Bio-mining	Mining that takes advantage of a bioengineering technique; the same as "bio-leaching."	40
Biodiversity/biological diversity	The variation of life forms within a given ecosystem, biome, or on the earth. Covering biodiversities of genes, species, and ecosystems of a region.	10, 25, 27, 53, 54, 56, 81, 96, 103, 104
BOD	Biochemical Oxygen Demand: an index of water quality indicating the amount of oxygen needed to decompose organic substances in the water by the activities of microorganisms; it is a typical index used for measuring organic river pollution.	80
Caisson	A hollow concrete box used to make an underwater structure such as a breakwater.	78
Caisson filler	A filler to be poured into caissons, the hollow concrete boxes used for building breakwaters and other underwater structures, to prevent them from floating up by buoyancy.	78
Carrier	A protective layer for ultra-thin copper foil. Since ultra-thin copper foil is difficult to handle, the foil needs the protective layer called the Carrier to be shipped.	29
CFS	Conflict Free Smelter is a smelter that has been proven by auditing not to use conflict minerals.	62
COD	Chemical Oxygen Demand: an index of water quality indicating the amount of oxygen needed to decompose organic substances that are susceptible to oxidization; it is a typical index used for measuring ocean and lake pollution by organic substances.	80
Competency	Characteristic behavioral features commonly observed in people capable of achieving high operational achievement.	66, 85
Compliance	State in which someone or something is in accordance with established guidelines. Such guidelines include those by public organizations, such as laws, ordinances, regulations and treaties; those established within a company, such as various rules and the article of incorporation; and agreements and contracts made with organizations outside the company.	5, 13, 14, 15, 16, 17, 39, 45, 46, 47, 48, 51, 52, 53, 65, 105
Conflict minerals	Resources mined in regions where conflicts are occurring such as Africa. For example, tantalum, gold, tin and tungsten mined in the Democratic Republic of the Congo and surrounding countries and their derivatives are considered a source of funds for conflicts.	47, 62
Contract-type corporate pension	A type of defined benefit corporate pension plan in which a company entrusts pension fund investment management/operation to an external financial firm based on the pension provisions agreed upon by labor and management.	38
Copper concentrate and sulfuric acid carrier	A carrier for transporting copper concentrate produced in mines and sulfuric acid produced in smelters.	40
Defined benefit pension	A type of pension plan in which a company (employer) promises a predetermined monthly benefit upon retirement. If the company cannot afford the promised benefit or requires a larger amount of funds than reserved because of the longevity of recipients, the company may contribute additional funding to the benefit.	38, 103
Defined contribution corporate pension plan	A pension plan in which the amount an employee pays into the plan while he or she is working is fixed; although, after retirement the amount the employee receives as a pension benefit is not fixed as it reflects any losses or gains recognized as a result of fund management.	38
Defined contribution pension	A type of pension plan in which a company and its employees make monthly contributions of a predetermined amount, which the company invests for its business. After retirement, employees receive pensions whose amount varies depending on the company's profit/loss balance.	38
EITI	Extractive Industries Transparency Initiative: an initiative to increase the transparency of capital flows in the extractive industries engaged in the development of mining, oil, coal, and other natural resources. Former Prime Minister of the United Kingdom Tony Blair advocated this initiative at the Johannesburg Summit held in 2002.	8, 97
Electromagnetic exploration	An underground survey method in which electric current is allowed to flow artificially to measure the electromagnetic field generated in the ground.	28
FPD	Flat Panel Display: liquid crystal, plasma, and other types of planar displays.	36
Geological investigation	Investigation to determine the possibility of the presence of mineral deposits through creation of geological maps and analysis of stones sampled from prospective sites that have been narrowed down by resource exploration based on satellite images.	28
GHS	Globally Harmonized System of Classification and Labeling of Chemicals: a system that classifies chemicals by the type of hazard and proposes harmonized hazard communication elements.	80

Term	Explanation	Page(s)
Global Compact	A program regarding autonomous codes of conduct of companies, which was officially launched at the United Nations Headquarters in New York in 2000. Participating companies in the world adhere to the 10 principles of the Global Compact with respect to human rights, labor, the environment, and anti-corruption.	8, 65, 97
Governance	Governance refers to corporate governance, which is a corporate management system designed to improve competitiveness, prevent fraudulent acts, and enhance corporate value.	2, 5, 6, 16, 39, 45, 46, 102
Green purchasing/ purchase	Purchase of products and services with the smallest possible environmental impact, with reference to suppliers dedicated to reducing the environmental impact.	11, 56, 62
GRI	Global Reporting Initiative: an institution established in 1997 by the United Nations Environment Program (UNEP), Coalition for Environment Responsible Economies (CERES), and other entities, for the purpose of developing and disseminating globally applicable sustainability reporting guidelines. Its secretariat is located in Amsterdam, the Netherlands.	1, 2, 8, 12, 52, 96, 101, 102
GRI Mining and Metals Sector Supplement	A guideline supplementing the Sustainability Reporting Guidelines 2006 with issues that it does not cover.	1, 8, 96
ICA	International Copper Association	95
ICMM	International Council on Mining and Metals	1, 8, 11, 95, 96, 97
IGZO	Indium Gallium Zinc Oxide: a kind of transparent, conductive material used in FPDs.	93
Internal control	Control process incorporated in an organization's operations so that all members in the organization are expected to enhance work effectiveness and efficiency, increase the reliability of financial reporting, ensure compliance, and protect assets.	2, 5, 8, 12, 13, 14, 15, 16, 45, 46, 48
Iron concentrate	Powdered materials with high-ferrous content, obtained from the treatment of converter slag.	78
Kyoto protocol	An international agreement concerning the United Nations Framework Convention on Climate Change (UNFCCC) that was adopted by the 3rd Session of the Conference of the Parties to the UNFCCC (COP3) held in Kyoto in December 1997.	56, 75
LBMA	London Bullion Market Association is a self-regulated organization of gold/silver market participants.	62
Lockout	A countermeasure taken by management in response to a labor dispute, including a strike that a labor union calls. Management temporarily shuts down offices and plants to lock out workers participating in the labor dispute to reject wage payment.	66
Low profile	The back side of circuit-pattern-generated copper foil surface is subject to roughing treatment to increase adhesiveness to resin to ensure firm bonding to substrates. The Company's treated rolled copper foil with ultra-low profile provides minimum surface roughness without sacrificing adhesiveness to resin.	29
Materials stewardship	The range of activities required to ensure the optimal and appropriate use of minerals and metals in society promoted by ICMM.	21, 105
Mineral purchasing condition	Copper-concentrate procurement condition, which is determined through negotiations with each mining company. Negotiations are carried out at the end and middle of the year.	34, 35
N-Chlo Process	Nikko Chloride Process: a hydro-metallurgical technology that efficiently extracts copper and gold, silver, and other precious metals from low-grade copper concentrates.	40
Neutralized slag	Waste produced by a neutralization reaction in the smelting process.	78
NPM Activity	NPM refers to the JX Nippon Mining & Metals Group's version of Total Productive Management (TPM), which the Japan Institute of Plant Maintenance advocates with the aim of pursuing the utmost-level collective efficiency of production systems through constitutional "kaizen" (continuous improvement) of humans and equipment. The objective is to attain "zero disasters, zero defects, and zero failures."	60
OEM	Original Equipment Manufacturer manufactures products that another company outsources and were sold under the outsourcing company's brand.	32, 36, 39, 41
PCB	Polychlorinated Biphenyl: a collective term that denotes biphenyl compounds having two connected phenyl groups, to which numerous chlorines are added. This chemical compound is chemically stable and has been widely used as insulating oil, a heating medium, a plasticizer and lubricating oil but is currently forbidden to be used because its accumulation inside the body is harmful to living organisms.	41, 81
PDCA cycle	The "Plan," "Do," "Check," and "Act" cycle: a management method to continuously improve quality and business through repetition of this process.	8, 54, 60, 79
Permanent cathode method	A method for producing refined copper in which stainless steel plates are used as the cathodes in the refining process, to improve current efficiency in comparison to conventional processes and produce higher-quality refined copper.	75
Precipitate	Concentrates of gold, silver, and other value-bearing metals that precipitate at the bottom of refining tanks during copper refining.	80
PRTR	Pollutant Release and Transfer Register: a system under which information on the release of pollutants into the air, water, and soil, as well as transfers of waste and pollutants, is reported to a nation, which compiles the information and publishes the results.	1, 80

Term	Explanation	Page(s)
Qualified retirement pension	A type of pension plan in which a company entrusts employees' retirement benefit contributions to an external financial firm for savings.	38
Ratio-of-equity-entitlement copper mine production	The ratio of copper concentrate obtained from sources where a company owns mining rights to its total copper concentrate required for its smelting and refining operation.	25, 35
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals: a system of registration requiring all manufacturers and importers of chemicals in quantities of 1 ton or more per year to identify and manage the risks related to the substances they manufacture and market.	81
Recycled (raw) resources	Waste, etc. containing copper, gold, silver and other value-bearing metals.	58, 78
Release layer	A chemical-component layer laid between the carrier and the ultra-thin copper foil to facilitate separation of the carrier from the ultra-thin copper foil.	29
Sandblasting material	An abrasive used to repair or remove rust from vessels in the shipping industry. With the use of compressed air, centrifugal force, or other such force, it is sprayed for abrasion.	78
SDS	Safety Data Sheet: a data sheet supplied by the chemical substance supplier to provide information on the chemical substances used with the materials, to ensure the health and safety of the users who handle these chemical substances.	60, 80
Silver and gold slag	Industrial waste that contains gold and silver.	78
Slag	Iron silicate , which is a composite oxide of iron, silicate, etc. produced in each refinery process.	37, 78
Sludge	Sediment containing putrescible organic matter, which is produced in sewage or industrial effluent treatment processes.	104
Solvent extraction	Method to separate mixtures and extract certain substances by adding such solvents as non-water soluble benzene and chloroform to a water solution containing various chemical substances and dissolving designated ingredients in such solvents.	40
SPC	Statistical Process Control: a statistical method to evaluate performance of production lines and project a significant deviation on occurrences of rejected products.	59, 60
Specific-scale electric power supplier	Of electric power suppliers, those engaged in retailing electricity to consumers that require 50 kW or larger high-tension power.	76
SQC	Statistical Quality Control: a statistical method to control product quality with variability of qualities of entire manufacturing lines, including raw materials, equipment and facilities, operations and finished products, rather than with qualities of individual products.	60
Stakeholder	Persons who have direct and/or indirect stakes with a corporate behavior or management. The Group identifies customers, suppliers, shareholders and investors, employees, Industry-government-academia groups, local and global communities (global environment), and nonprofit organizations (NPOs) and nongovernmental organizations (NGOs) as its stakeholders.	1, 2, 8, 10, 11, 12, 38, 45, 53, 55, 59, 96, 97, 103
Sustainability	Sustainability for company refers to the possibility that society as a whole can continue to develop in the future in economic, environmental, and social aspects.	1, 8, 12, 52, 96, 101, 102
Sustainability Reporting Guidelines 2006	Version 3 of the GRI (G3) published in October 2006: G3 particularly encourages a company to determine what information to disclose by taking into account the materiality of each piece of information, as well as a boundary to be reported by considering control and significant influence to entities that could be involved in the boundary.	1, 8, 52, 96, 101
SX-EW	The SX-EW is the Solvent Extraction-Electrowinning method to selectively collect copper ions from copper leach solution (solvent extraction) and produce refined copper by electrowinning copper sulfate solution.	6, 22, 27, 35, 39
Tailing	Residual dross that remains after the recovery of value-bearing metals out of ore.	49, 50, 104
Total material input	Total amount of recycled resources and primary raw materials such as copper concentrate, input into the smelting process.	78
Type 2 Designated Energy Management Factory	A production plant consuming more than 1,500kl of crude oil equivalent per annum as stipulated by the Act on the Rational Use of Energy (energy-saving law).	1, 56
Urban mine	A collective term that denotes all the metals able to be recycled and classified from among the nonferrous metals that were originally extracted from natural ores and made into various forms after going through smelting and refining processes and that were once used in human economic activities.	7, 21
Visibility	A special high-sensitivity camera is used when bonding a liquid-crystal glass substrate to fine FPC. The insulation layer of the FPC from which copper foil has been removed by etching is viewed through the camera to accurately position the glass substrate. The visibility refers to the definition of the image viewed through the camera.	29
Work-life balance	A concept of proper prioritizing between work and daily life, in which people work with a sense of sufficiency to accomplish their job responsibilities while realizing their desired lifestyle selected from diverse lifestyles in the child-raising, middle-age, and older stages at home and in the community.	65
Zero emission	A structure where no waste subject to landfill disposal is discharged.	10, 37, 41, 77

This report has an A+ application level as defined by the Sustainability Reporting Guidelines 2006.



* Sector supplement in final version

Number	Item	Content to be included	Page(s)
Strategy and Analysis			
1.1		Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy	4–8
1.2		Description of key impacts, risks, and opportunities	5, 7–8, 12–38, 46–48, 53, 56, 63, 66
Organizational Profile			
2.1		Name of the organization	42
2.2		Primary brands, products, and/or services	35–37
2.3		Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	1–2, 42–44
2.4		Location of organization's headquarters	Back cover, 42
2.5		Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	42–44
2.6		Nature of ownership and legal form	42
2.7		Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	35–38
2.8		Scale of the reporting organization	33–37, 42
2.9		Significant changes during the reporting period regarding size, structure, or ownership including: ■ The location of, or changes in operations, including facility openings, closings, and expansions; and ■ Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations)	6, 27–28 (The Caserones Copper and Molybdenum Deposit will start its full-fledged operation in 2014)
2.10		Awards received in the reporting period	94–95

Number	Item	Content to be included	Page(s)
Report Parameters			
3.1	Report Profile	Reporting period (e.g., fiscal/calendar year) for information provided	2
3.2		Date of most recent previous report (if any)	2
3.3		Reporting cycle (annual, biennial, etc.)	2
3.4		Contact point for questions regarding the report or its contents	Back cover
3.5	Report Scope and Boundary	Process for defining report content	1, 11–12
3.6		Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers) See GRI Boundary Protocol for further guidance	1
3.7		State any specific limitations on the scope or boundary of the report	1–2, 56, 80
3.8		Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	1
3.9		Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report	38, 56, 63, 75–76, 78–81, 86–87, 94
3.10		Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods)	80
3.11		Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	Not applicable
3.12	GRI Content Index	Table identifying the location of the Standard Disclosures in the report	101–105
3.13	Assurance	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s)	106
Governance, Commitments, and Engagement			
4.1	Governance	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	45–46
4.2		Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement)	45–46
4.3		For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members	45
4.4		Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	46, 66
4.5		Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance)	45
4.6		Processes in place for the highest governance body to ensure conflicts of interest are avoided	Based on laws and statutory regulations and the articles of incorporation, for transactions in which there is a conflict of interest between a director and the Company, approval is sought from the General Meeting of Shareholders, which in the Company's case is JX Holdings, Inc.
4.7		Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity	This has not been included because the Company does not have a process in writing for electing directors.
4.8		Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation	9–10, 54
4.9		Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	51
4.10		Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	45–46, 51, 54

Number		Item	Content to be included	Page(s)
4.11		Commitments to External Initiatives	Explanation of whether and how the precautionary approach or principle is addressed by the organization	81, 97
4.12			Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	8, 65, 96–97
4.13			Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization:	88, 95
4.14		Stakeholder Engagement	List of stakeholder groups engaged by the organization	11
4.15			Basis for identification and selection of stakeholders with whom to engage	11
4.16			Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	11, 13–16, 21–24, 52, 88–94
4.17			Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	13–16, 21–24
Economic				
Disclosure on Management Approach				4–8, 33–41, 51
EC1	CORE	Economic Performance	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	38, 94
EC2	CORE		Financial implications and other risks and opportunities for the organization's activities due to climate change	76
EC3	CORE		Coverage of the organization's defined benefit plan obligations	38
EC4	CORE		Significant financial assistance received from government	38
EC6	CORE	Market Presence	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	The Group purchases copper concentrates from overseas mines. Except for copper concentrates, the Group consigns purchasing to JX Nippon Procurement Corporation. Therefore, the purchasing policy of JX Nippon Procurement Corporation is used.
EC7	CORE		Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	86
EC8	CORE	Indirect Economic Impacts	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	92
Environment				
Disclosure on Management Approach				10, 47, 55–57, 75, 77–78, 82
EN1	CORE	Materials	Materials used by weight or volume	58, 78
EN2	CORE		Percentage of materials used that are recycled input materials	58, 78
EN3	CORE	Energy	Direct energy consumption by primary energy source	75
EN4	CORE		Indirect energy consumption by primary energy source	75
EN8	CORE	Water	Total water withdrawal by source	77
EN11	CORE	Biodiversity	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	27, 81
EN12	CORE		Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	27, 81
EN13	ADD		Habitats protected or restored.	27, 81
EN14	ADD		Strategies, current actions, and future plans for managing impacts on biodiversity	27, 73, 81

Number		Item	Content to be included	Page(s)
EN16	CORE	Emissions, Effluents, and Waste	Total direct and indirect greenhouse gas emissions by weight	57, 76
EN17	CORE		Other relevant indirect greenhouse gas emissions by weight	76
EN19	CORE		Emissions of ozone-depleting substances by weight	Not applicable
EN20	CORE		NOx, SOx, and other significant air emissions by type and weight	79
EN21	CORE		Total water discharge by quality and destination	77
EN22	CORE		Total weight of waste by type and disposal method	78
EN23	CORE		Total number and volume of significant spills	57
EN26	CORE	Products and Services	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	31, 37
EN27	CORE		Percentage of products sold and their packaging materials that are reclaimed by category	Not applicable
EN28	CORE	Compliance	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	57
MM1		Biodiversity	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated	27
MM2			The 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	27, 73, 81
MM3		Emissions, Effluents, and Waste	Total amounts of overburden, rock, tailings, and sludges and their associated risks	49, 50
Labor Practices & Decent Work				
Disclosure on Management Approach				17–20, 47, 51, 63, 65–66, 83–84
LA1	CORE	Employment	Total workforce by employment type, employment contract, and region, broken down by gender.	86
LA2	CORE		Total number and rate of new employee hires and employee turnover by age group, gender, and region.	86–87
LA4	CORE	Labor/Management Relations	Percentage of employees covered by collective bargaining agreements	66, 87
LA5	CORE		Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	66
LA7	CORE	Occupational Health and Safety	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region	63
LA8	CORE		Education, training, counseling, prevention, and risk-control programs in place to assist workforce members and their families or community members regarding serious diseases	64
LA9	ADD		Health and safety topics covered in formal agreements with trade unions.	66
LA10	CORE	Training and Education	Average hours of training per year per employee by employee category	66
LA11	ADD		Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	20, 66, 85
LA13	CORE	Diversity and Equal Opportunity	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	65, 86–87
LA14	CORE		Ratio of basic salary of men to women by employee category	65
MM4		Labor/Management Relations	Number of strikes and lockouts exceeding one week's duration, by country	66
Human Rights				
Disclosure on Management Approach				10, 47, 52, 62, 65–66, 96–97
HR1	CORE	Investment and Procurement Practices	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	Not applicable
HR2	CORE		Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	62
HR4	CORE	Non-discrimination	Total number of incidents of discrimination and corrective actions taken	47

Number		Item	Content to be included	Page(s)
HR5	CORE	Freedom of Association and Collective Bargaining	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights	66
HR6	CORE	Child Labor	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	62, 65
HR7	CORE	Forced and Compulsory Labor	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	62, 65
MM5		Indigenous Rights	Total number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples' communities	There are no operating sites in or adjacent to Indigenous Peoples' territories.
Society				
Disclosure on Management Approach				10, 46, 52, 62, 74
SO1	CORE	Community	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	26–27, 49–50, 73, 88–94
SO2	CORE	Corruption	Percentage and total number of business units analyzed for risks related to corruption	47
SO3	CORE		Percentage of employees trained in organization's anti-corruption policies and procedures	47
SO4	CORE		Actions taken in response to incidents of corruption	48
SO5	CORE	Public Policy	Public policy positions and participation in public policy development and lobbying	62, 96–97
SO8	CORE	Compliance	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	There were no fines or non-monetary sanctions for non-compliance with laws and regulations.
MM6		Community	Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples	There were no significant disputes relating to land use, customary rights of local communities and Indigenous Peoples.
MM7			The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes	There were no significant disputes relating to land use, or the customary rights of local communities and Indigenous Peoples.
MM8		Artisanal and Small-scale Mining	Number (and percentage) of company operating sites where artisanal and small-scale mining (ASM) takes place on, or adjacent to, the site; the associated risks and the actions taken to manage and mitigate these risks	There are no operating sites on, or adjacent to, ASM sites.
MM9		Resettlement	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process	There were no operating sites where resettlements took place
MM10		Closure Planning	Number and percentage of operations with closure plans	Not applicable (The full-fledged operation of the Caserones Copper and Molybdenum deposit will start in 2014.)
Product Responsibility				
Disclosure on Management Approach				46–48, 59–60, 62
PR1	CORE	Customer Health and Safety	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	60
PR2	ADD		Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	60
PR3	CORE	Product and Service Labeling	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	60
PR6	CORE	Marketing Communications	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Promoted as an issue of compliance relating to business activities in accordance with the *Compliance Guidebook*.
PR9	CORE	Compliance	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	60
MM11		Materials Stewardship	Programs and progress relating to materials stewardship	21–24, 37

Independent Assurance Report

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

Purpose and Scope

We were engaged by JX Nippon Mining & Metals Corporation (the "Company") to provide limited assurance on its Sustainability Report 2013 (the "Report") for the fiscal year ended March 31, 2013. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether:

- the environmental, social and economic performance indicators marked with ☑ (the "Indicators") for the period from April 1, 2012 to March 31, 2013 included in the Report are prepared, in all material respects, in accordance with the Company's reporting criteria;
- the Company's self-declaration on the Global Reporting Initiative (the "GRI") application level (A+) conforms to the application level criteria stipulated by the GRI;
- the Company's policies are aligned to the International Council on Mining and Metals (the "ICMM")'s 10 Sustainable Development ("SD") Principles and the applicable mandatory requirements set out in ICMM position statements as described on page 96;
- the Company has identified and prioritized its material issues as described on page 12; and
- the Company has approached and managed its material issues as described on pages 21, 27–32, 46–48, 63–64, and 66.

The content of the Report is the responsibility of the Company's management. Our responsibility is to carry out a limited assurance engagement and to express our conclusion based on the work performed.

Criteria

The Company applies its own reporting criteria as described in the Report. These are derived, among others, from the Sustainability Reporting Guidelines version 3.0 of the GRI. We used these criteria to evaluate the Indicators. For the GRI application level, we used the criteria stipulated by the GRI.

Procedures 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' issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines for the Assurance of Sustainability Information' of the Japanese Association of Assurance Organizations for Sustainability Information (the "J-SUS").

The limited assurance engagement on the Report consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviews with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report.
- With respect to the Indicators,
  - Reviews of the Company's reporting criteria.
  - Inquiries about the design of the systems and methods used to collect and process the Indicators.
  - 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 a recalculation of the Indicators.
  - Visit to a domestic site selected on the basis of a risk analysis.
  - Evaluating the overall statement in which the Indicators are expressed.
- Evaluating the Company's self-declared GRI application level against the application level criteria.
- An assessment of 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.
- Interviews and documentation reviews of the Company's process of identifying and prioritizing its material issues.
- Interviews and documentation reviews of 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 on the GRI application level does not conform to the application level criteria stipulated by the GRI;
- 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 96;
- the Company has not identified and prioritized its material issues as described on page 12; and
- the Company has not approached and managed its material issues as described on pages 21, 27–32, 46–48, 63–64, and 66.

We have no conflict of interest relationships with the Company that are specified in the Code of Ethics of J-SUS. We conducted our engagement with a team with expertise in environmental and social aspects as well as assurance engagements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
November 27, 2013

The Future of Energy, Resources and Materials

JX Nippon Mining & Metals Corporation

Please feel free to give us your frank opinions about *Sustainability Report 2013* to help us make the next report even better.
We welcome any suggestions for improving this report.

Send your reviews on this report to:

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Printed in Japan