



# Sustainability Report 2008



## Message from the President

**Nippon Mining & Metals Co., Ltd., is committed to contributing to the sustainable development of society. To that end, we will pursue innovation in the productivity of resources and materials and a harmonious relationship with stakeholders.**

### A global presence in resources and materials

Nippon Mining & Metals Co., Ltd., is the core metals subsidiary of its parent company, Nippon Mining Holdings, Inc., which operates in the metals and petroleum sectors.

Nippon Mining & Metals traces its roots back to the Hitachi Mine in Ibaraki Prefecture, which was put into operation in 1905 and used to be one of Japan's most important copper mines. Today, the Company is a comprehensive non-ferrous metal manufacturer that offers a full range of products and services—extending from upstream to downstream—centered on copper-related resources and materials. We are developing global operations in accordance with a policy of substantial, well-balanced growth spread across upstream

operations, such as resource development; midstream businesses, including smelting and refining; and downstream operations, such as metal manufacturing, electronics materials, and environmental and recycling businesses.

In recent years, our operating environment has undergone dramatic change. Around the world, concern about global warming is increasing, and companies are expected to act as global citizens working toward the sustainable development of society. Against a background of the rapid transition to borderless business activities and the growth of citizen awareness, companies need to take a new approach toward fulfilling their social responsibilities. In this setting, companies need to implement multifaceted initiatives to ensure harmony with a wide and diverse range of domestic and international stakeholders.

Since its founding, the Nippon Mining & Metals Group has conducted its business activities with a consistent focus on a harmonious relationship with society, in consideration of our impact on the environment. This approach is symbolized by our construction of the giant chimney stack at the Hitachi Mine to clean the air at ground level and our planting of *Oshimazakura* cherry trees, as described in Jiro Nitta's *Aru Machi no Takai Entotsu / A Tall Stack in a Town*, which was published in the Bunshun Bunko pocket book series.

In consideration of the underlying nature of these activities, which could be said to be the forerunners of today's corporate social responsibility (CSR) activities, we have been formally implementing CSR activities on a Groupwide basis. These activities are based on a shared perception of the need for growth in harmony with society on a global scale.

### **CSR activities are nothing more or less than our business activities**

The Group's corporate philosophy has two core elements—"innovation in the productivity of resources and materials" and "a harmonious relationship with our stakeholders." Our mission is to ensure a stable supply of the basic resources and materials that are indispensable in daily lives and industrial activities. Given that the earth's resources are



directly used as our raw materials, in fulfilling our social mission we need to take aggressive measures to reduce our environmental impact and to encourage the formation of a recycling-oriented society. In other words, we need to eliminate waste in the use of limited natural resources and ensure the continual implementation of efficient extraction, smelting and refining, manufacturing, and recycling. Accordingly, in our business areas of resources and materials, we will strive to implement innovative approaches to enhancing productivity in all processes and aspects of our operations.

In implementing these activities, we must fulfill a diverse range of responsibilities as a member of global society. These include compliance, safety and disaster prevention, environmental conservation, and social contribution. Specifically, we will act with respect for the diversity of all of our stakeholders in Japan and overseas, including shareholders, customers, local communities, and employees, and will strive to enhance harmony among them.

It is important that CSR activities are implemented as a matter of course in our daily business activities. In accordance with the belief that CSR activities are nothing more or less than our business activities, the Group will take steps to contribute to the sustainable development of society.

### **Raising corporate value from the perspectives of the economy, the environment, and society**

Based on this understanding, we have formulated the CSR Action Policy to ensure that our approach to CSR has reached the level of the individual employees who play the lead role in CSR activities. For each operational area, the policy spells out in detail how we will implement the elements of our corporate philosophy mentioned above—"innovation in the productivity of resources and materials" and "a harmonious relationship with our stakeholders."

In accordance with the policy, we will formulate an action plan each year and implement the PDCA (Plan - Do - Check - Act) cycle. In this way, we will continue to increase the level of our CSR activities, drawing on the special characteristics of our resource and materials operations.

In the 21st century, resources will become increasingly valuable. Accordingly, we believe that the Group's social responsibilities will become greater. Through our CSR activities, we will strive to achieve well-balanced gains in corporate value in the areas of the economy, the environment, and society and to fulfill our social mission.

### **Deepening your understanding, welcoming your opinions**

The Company has endorsed the sustainable development principles of the ICMM (International Council on Mining and Metals), which aims for the development of a sustainable society. We have participated in ICMM since July 2002. Moreover, in resource development, where we plan to lead growth in a proactive manner, we have endorsed the approach of EITI (Extractive Industries Transparency Initiative) and will move forward with mining development activities in accordance with global standards.

In a reflection of these initiatives, the Sustainability Report 2008 has been prepared in accordance with GRI (Global Reporting Initiative) G3 guidelines. In particular, started this year we have selected three important themes from the CSR activities reported to stakeholders and have covered them in a special feature. With consideration for our wide-ranging and multifaceted social responsibilities as a corporation, we undertake our own assessments of our sustainability activities, proactively provide details of the activities to the public, and ask interested parties to contribute their opinions. In this way, we are working to further deepen and expand our CSR activities. It is my wish that this report helps deepen readers' understanding of our activities while at the same time encouraging them to openly voice their opinions.



Masanori Okada  
President and Chief Executive Officer  
Nippon Mining & Metals Co., Ltd.



The Nippon Mining & Metals Group is an integrated producer engaged in the non-ferrous metals business.

The Nippon Mining & Metals Group offers comprehensive products and services in the non-ferrous metals field, from resource development, smelting and refining to manufacturing and marketing of electronic materials, and Recycling and Environmental Services. Pursuing technological rationality and efficiency, the Group strives to ensure more efficient use of the valuable metal resources needed by people in their daily lives, not only today but also in the future.



### Resource Development

Increasing the Group's ratio of equity based entitlement volume of ore



The Group is an active participant in high-quality mine development projects from the planning stage onward.



Los Pelambres Mine (Chile)

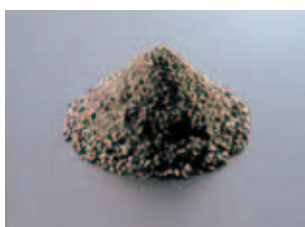


Ore shipment

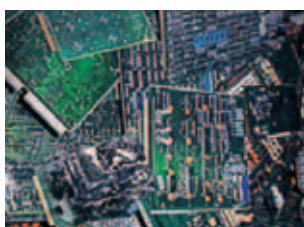
### Recycling and Environmental Services

We are aiming to achieve zero-emission operations and to offer the most competitive non-ferrous metal Recycling and Environmental Services in Japan

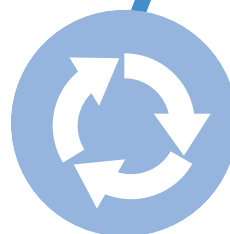
This business comprises recycling, in which valuable metals, such as copper and precious metals, are recovered from recycled materials, and environmental services, in which industrial waste materials are detoxified without generating secondary wastes.



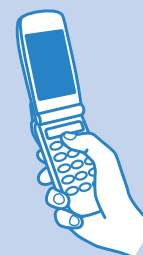
Detoxified slag



Used printed boards are recycled to recover precious metals



### Markets, Products





Saganoseki Smelter and Refinery, Nikko Smelting & Refining Co., Ltd.

## Smelting and Refining

Manufacturing capabilities and cost-competitiveness in the top tier worldwide

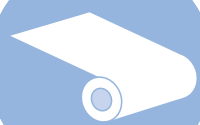
Smelting, refining, and marketing of non-ferrous metals, such as copper, gold, and silver



Refining plant at the Hitachi Works, Nikko Smelting & Refining Co., Ltd.



Anode casting wheel at the Tamano Smelter, Hibi Kyodo Smelting Co., Ltd.



Copper Foil Business

Metal Manufacturing Business

Thin Film Materials Business



Products using treated rolled copper foil

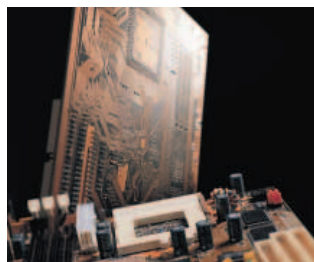
## Electronic Materials

Enjoying the world's top shares in a broad range of products by leveraging advanced technologies

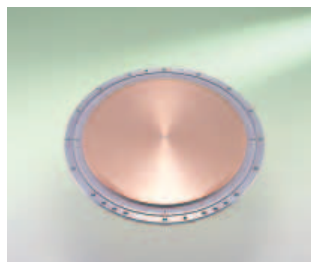
This business has three pillars: copper foil operations, in which we manufacture and market electro-deposited copper foil, treated rolled copper foil, and other products; thin-film materials operations, in which we handle sputtering targets, compound semiconductor materials, and other products; and metal manufacturing operations, in which we conduct precision rolling operations and precision fabricating operations, including gold plating and press processing.



Electro-deposited copper foil



Printed circuit board using electro-deposited copper foil



Sputtering target for semiconductors



InP (Indium Phosphide)

The Nippon Mining & Metals Group believes that CSR activities are nothing more or less than our business activities, and we implement those activities in accordance with our Corporate Philosophy and our Code of Conduct.

### Corporate Philosophy

**We are committed to assisting the sustainable development of society. Innovation in the productivity of resources and materials and a harmonious relationship with our stakeholders are our way of contributing to the achievement of this goal.**

Ensuring a stable supply of non-ferrous 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. In all aspects of our operations from development, production and marketing, we will continue to pursue technical rationality and efficiency and make improvements in quality & product properties and other matters. 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.

### Code of Conduct

As an integrated developer of non-ferrous resources and materials covering all areas ranging from resource development and smelting & refining of non-ferrous metals to electronic materials business, and environmental and recycling services, we will conduct our business operations in accordance with the following code of conduct. By doing so, we aim to obtain the satisfaction and trust of our customers and of society as a whole, and to become a respected corporation operating on a global scale that helps create a sustainable society.

#### Nippon Mining & Metals Co., Ltd. Code of Conduct

##### 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 respect employees' personality, human rights and individuality and will ensure a comfortable working environment that places top priority on safety and disaster prevention.

##### 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 reoccurrence, disclose information to the public promptly and accurately, and be held accountable for the event.

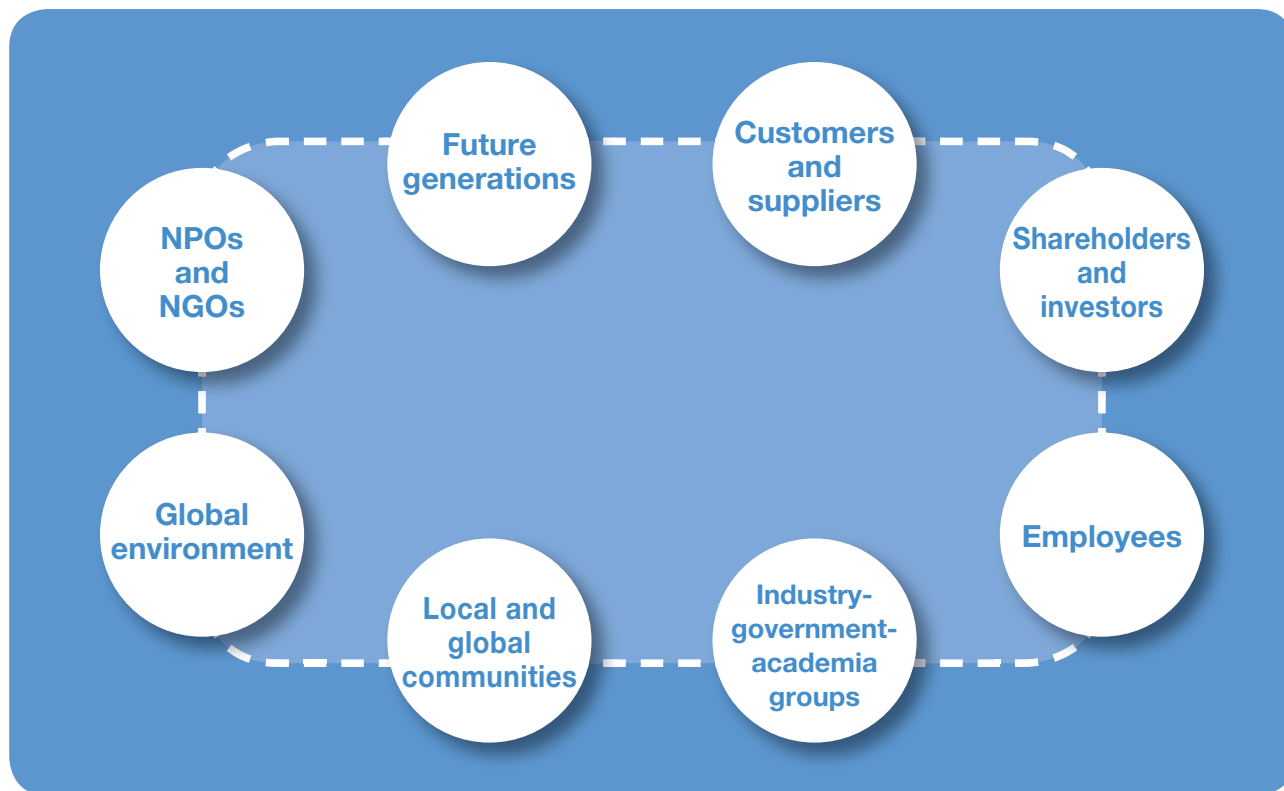
# CSR Action Policy

As part of the fundamental belief that “CSR activities are nothing more or less than our business activities,” the Nippon Mining & Metals Group formulated the CSR Action Policy, which clarifies how corporate policy can be developed into the Group’s daily activities. In line with the CSR Action Policy, the Group is moving ahead with CSR activities through detailed annual activity plans and by strictly following the PDCA (Plan, Do, Check, Act) cycle.

| Innovation in the productivity of resources and materials                                                                                                                                                                                                                                                                                                                                                                                         |                                      | Harmonious relationship with our stakeholders                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Continuous innovation in productivity in all aspects of our operations, from exploration, mining, smelting &amp; refining, processing to recycling limited resources, in consideration of the nature of the Group’s activities, our direct use of such global resources as raw materials</li> </ul>                                                                                                        | Entire Group                         | <ul style="list-style-type: none"> <li>Compliance with the Company’s Code of Conduct for fair trade, compliance, environmental conservation, safety and disaster prevention, disclosure, and others</li> <li>Commitment to making social contributions in Japan and overseas<br/>(Developing social contribution programs tailored to the specific characteristics of the Group’s activities)</li> </ul> |
| <ul style="list-style-type: none"> <li>Developing technologies, such as bio-mining technologies, to recover copper from unused low-grade copper sulfide ores</li> </ul>                                                                                                                                                                                                                                                                           | Up stream<br>Resource Development    | <ul style="list-style-type: none"> <li>Mining development based on meeting global standards, such as World Bank Environment and Health and Safety Guidelines</li> </ul>                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Enhancing productivity, including streamlining operations and adopting advanced technologies, by strengthening cooperation among the Group’s smelting operations (Saganoseki, Tamano and LS-Nikko)</li> <li>Developing hydro-metallurgical technology—the Nikko Chloride Process (“N-Chlo Process”)—to efficiently recover copper, precious and other metals from low-grade copper concentrates</li> </ul> | Mid stream<br>Smelting and Refining  | <ul style="list-style-type: none"> <li>Developing sustainable smelting technology, without SOx emissions and other features</li> </ul>                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>Developing products with innovative qualities and unique features</li> </ul>                                                                                                                                                                                                                                                                                                                               | Down stream<br>Electronic Materials  | <ul style="list-style-type: none"> <li>Developing environment-friendly electronic materials</li> </ul>                                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>Promoting safe methods to dispose of waste that is subject to special controls, such as asbestos and equipment containing low-level PCB</li> <li>Recovering rare and precious metals, rare earth minerals, and other similar materials from recycled materials, and further developing “urban mines”</li> </ul>                                                                                            | Recycling and Environmental Services | <ul style="list-style-type: none"> <li>Promoting recycling with the goal of zero-emission</li> </ul>                                                                                                                                                                                                                                                                                                     |

## Stakeholders of the Nippon Mining & Metals Group

The Group considers its stakeholders to comprise customers and suppliers, shareholders and investors, employees, industry-government-academia groups (including industry associations), local communities, international communities, the global environment, non-profit organizations (NPOs) and non-government organizations (NGOs), and future generations. The Group aims to establish strong relationships of trust with its various stakeholders through close communications with them.



### Customers and suppliers

We consider it crucial to respond to the opinions and wishes of our customers and suppliers. We will strive to further expand our corporate value by improving product quality, further raising the level of services, and conducting operations with consideration for the environment.

### Shareholders and investors

Together with Nippon Mining Holdings, Inc., we undertake full and prompt disclosure and make every effort to ensure that shareholders and investors fully understand the Group's corporate value. The Nippon Mining & Metals Group re-acknowledges the importance of disclosure to stakeholders and will endeavor to heighten its corporate value with regard to the economy, the environment, and society.

### Employees

Employees play a central role in the Group's CSR activities, and accordingly we are taking steps to ensure a safe work environment. We are also creating frameworks for personnel training in order to effectively harness the capabilities of every employee.

### Industry-government-academia groups

We believe that these groups are good partners for finding future technology and developing future generations of human resources. We participate in various organizations and implement joint research and development with universities and research institutions.

### Local and global communities

Development of the Group's CSR activities needs the understanding of local and global communities. We are working to obtain a wide range of opinions by creating opportunities for periodic exchange. In developing our business activities in overseas countries, we always act with respect for each country's cultures and customs.

### Global environment

By exchanging information at international conferences, we clarify our policies for dealing with environmental problems and those policies are reflected in our business activities. In particular, Nippon Mining & Metals actively participates in various projects for assisting the sustainable development of society as a corporate member of the International Council of Mining and Metals (ICMM).

### NPOs and NGOs

We believe that cooperative relationships with NPOs and NGOs improve and enhance the content of our CSR activities. We are strengthening our links with NPOs and NGOs, and will discuss and carry out measures and policies to help them find ways to overcome current problems.

### Future generations

The Group considers future generations to be another important stakeholder. By arranging for members of the public to visit our business locations, we are highlighting the importance of manufacturing in contributing to the community, and encouraging them to show greater understanding for environmental preservation.



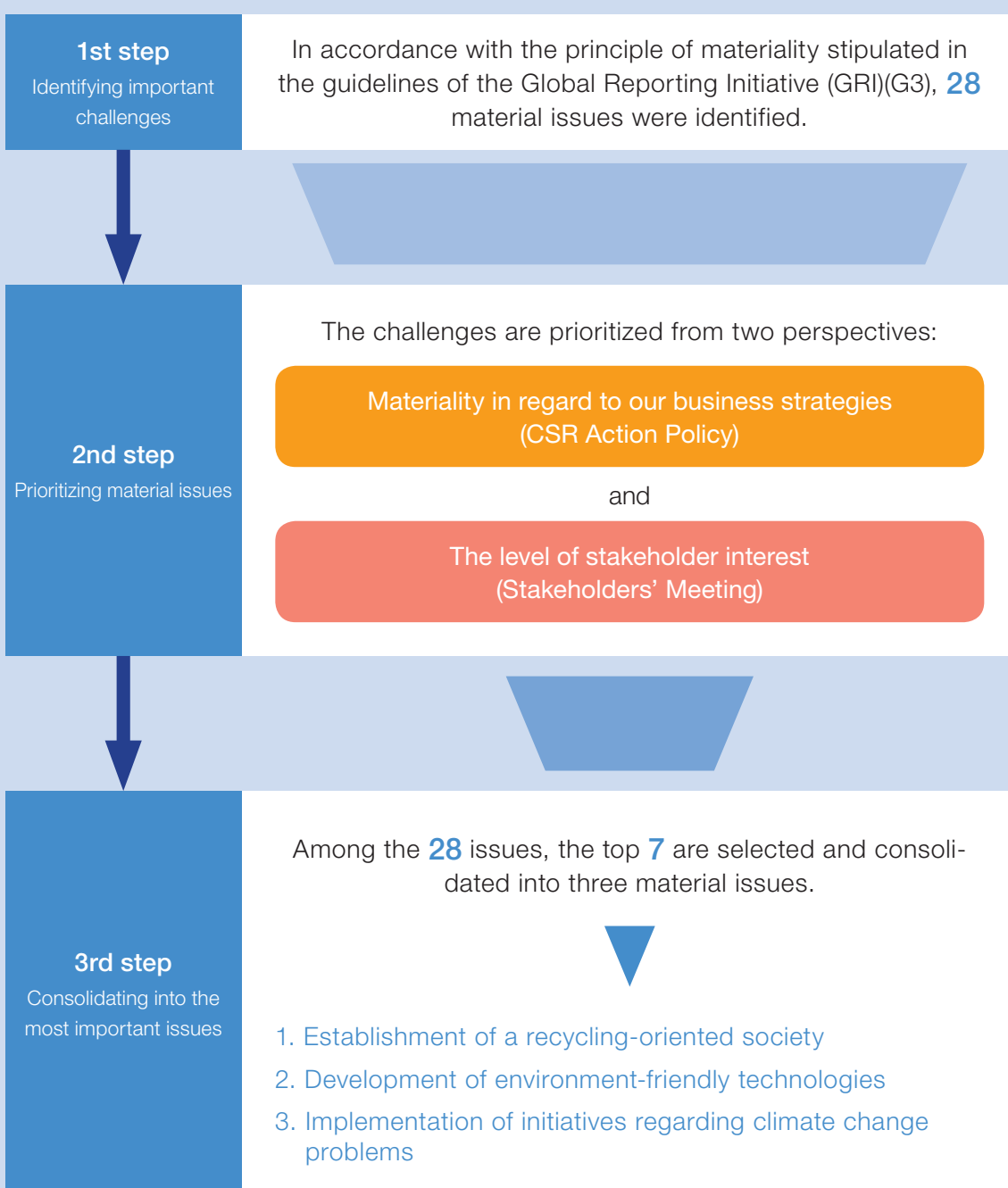
# Material Issues for the Nippon Mining & Metals Group

The Group confronts various challenges with regard to the economy, the environment and society. In accordance with the Group's belief that our CSR activities are nothing more or less than our business activities, we identified critical challenges, from which we selected three material issues that will be given priority in reporting to stakeholders.

These three issues are presented as a special feature:

- Establishing a recycling-oriented society—proactive approach to “urban mines”
- Developing environment-friendly technologies
- Implementing initiatives regarding climate change problems, including global warming

## Steps to select material issues



# Material Issues for the Nippon Mining & Metals Group

## Establishing a recycling-oriented society—proactive approach to “urban mines”

Against the backdrop of a sharp global increase in demand for non-ferrous metals, particularly in developing countries, stable supply of natural resources is of increasing concern. Under the circumstances, the ever-increasing importance of recycling valuable metals from used IT equipment, automobiles and consumer electronics is recognized. The Nippon Mining & Metals Group is enthusiastically engaged in creating an effective recycling system for the establishment of a recycling-oriented society, as well as promoting environment-friendly mining development.

Proactive approach to “urban mines” is a key issue for establishment of a recycling-oriented society. The Group is seeking to effectively utilize the urban mines through developing technologies to efficiently recover valuable metals in the urban mines and put the technologies into practical use, and creating a recycling system.

At the same time, we believe that energetically working on the issue will make “opportunities” to reinforce our business foundations and heighten our corporate value.

## What are “urban mines”?

Urban mines are a large volume of recyclable waste, including consumer electronics, mobile phones and other IT equipment. Abundant recyclable resources such as rare metals exist in the urban mine. Used mobile phones or mother boards in personal computers contain copper, precious metals such as gold and silver, and rare metals including indium or nickel. In view of effective utilization of the earth resources, recovery of metals from these urban mines is strongly encouraged. Japan, having the world's top urban mines,

can be a resources power due to the huge amount of metal reserves contained in the urban mines.

The urban mines have an advantage to have higher content percentages of metals in comparison with natural resources. For example, generally, approximately 150g of gold can be recovered from 1 ton of mobile phones, while approximately 5g from 1 ton of natural gold ore.

## The Nippon Mining & Metals Group's approach to urban mines

The Group is developing the urban mines by using technologies and expertise accumulated in its mining and smelting & refining operation, to promote the effective utilization of resources.

### The Hitachi Metal Recycling Complex (HMC) Project (Please see p.35 in full report for details.)

The Group is constructing the HMC Works with the hydro-metallurgical process, on the premises of the Hitachi Area Coordination Center in Hitachi City, Ibaraki Prefecture, adjacent to the Tokyo metropolitan area—Japan's largest potential urban mine. The HMC Works will recover various metals, through a combination of the pyro-metallurgical process including a copper recovery furnace of Nikko Environmental Services Co., Ltd., on the same premise.

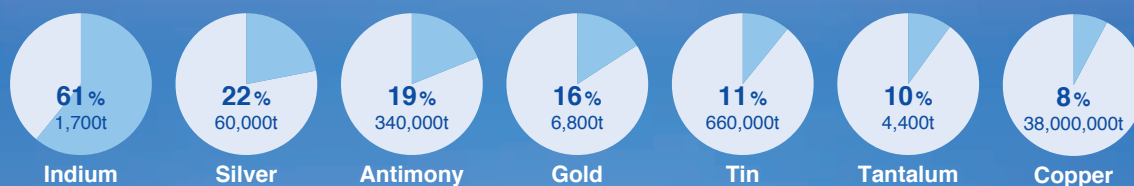


The building of the HMC Works in the first-phase construction

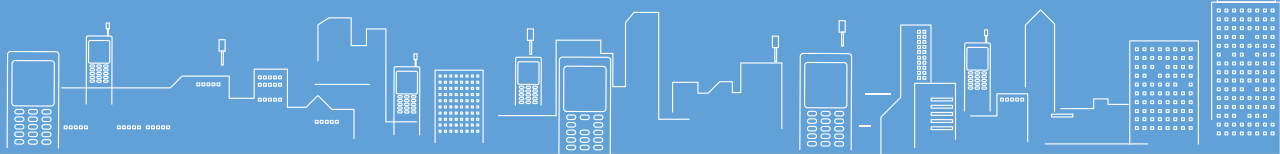
### Constructing a collection facility for recyclable materials in Taiwan (Please see p.36 in full report for details.)

Nikko Metals Taiwan Co., Ltd., our affiliated company in Taiwan, is constructing a collection facility for recyclable materials, to be treated at the HMC Works and other plants. For effective utilization of metal scraps, the Group is dedicated to setting a stable collection system of recyclable materials.

■ Ratios of amounts of reserves in the urban mines in Japan to ones in natural resources in the world (%) (upper figures)  
Estimated amounts of reserves in the urban mines in Japan (t) (lower figures)




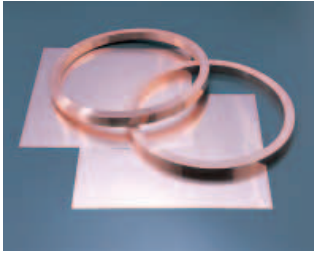

Source: publication in January 2008  
by National Institute for Materials Science



## Development of environment-friendly technologies

The Nippon Mining & Metals Group has always given priority to maintaining mutually beneficial relationships with its stakeholders and to the preservation of the environment since the commencement of operations at the Hitachi Mine. The Group is working on developing

technologies that incorporate customers' environmental demands into products. Our environment-friendly products are highly acclaimed by our customers. Appreciation of our efforts to address environmental issues encourages us to make a leap of our businesses.

| Businesses | Upstream: Resource Development<br>Midstream: Smelting & Refining                                                                                                                                                                                                                                        | Downstream: Electronic Materials                                                                                                                                                                                                                               | Downstream: Recycling and Environmental Services                                                                                                                                                               |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <p>Developing bio-mining technologies to recover copper from unused low-grade copper sulfide ores</p> <p>Developing environment-friendly smelting technologies, to realize copper smelting without SOx emissions</p>  | <p>Developing environment-friendly electronic materials, such as highly functional materials having improved recycling properties but without using any toxic materials</p>  | <p>Promoting zero-emission, as well as detoxifying industrial waste, to establish a highly efficient recycling system</p>  |

## Implementation of initiatives regarding climate change problems

Climate change problems including global warming were discussed as an imperative issue to all people at the Hokkaido Toyako Summit in 2008. Global warming does not only increase the temperature on the sea surface to cause abnormal weather, but also significantly affects the ecosystem. Under these circumstances, various regulations to reduce greenhouse gas emissions have become an issue to prevent global warming. Climate change has brought about new environment-friendly products including fuel cell hybrid cars and created new market accordingly. As a result, climate change will affect the financial performance of our businesses in addition to our business activities themselves.

The Nippon Mining & Metals Group has given top priority to reducing greenhouse gas emissions, among measures which business entities should carry out against climate change. In order to reduce emissions, it is necessary for us to make energy conservation efforts to realize direct and indirect effects. In addition to capital investment for energy conservation, the Group is proactively engaged in streamlining production processes to heighten product quality and production efficiency, as well as recovering waste heat in production processes. Further, we are moving ahead with using renewable energy such as hydroelectric power and a modal shift. (Please see p.47 in full report for details.)

We believe that our aggressive efforts to reduce the "risks" caused by climate change will create "opportunities" for our business.



Waste heat recovery plant of the Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.

# Stakeholder Meeting

Date and time: April 8, 2008, 3 - 5:30 pm  
Location: Nippon Mining Holdings Group, Roppongi Club



The Nippon Mining & Metals Group believes it is essential to incorporate the diverse viewpoints of our stakeholders in our CSR activities. At this year's stakeholder meeting, we brought together a panel of four experts currently active in the fields of the environment, resources, and CSR. The panel discussed and gave their opinions on our *Sustainability Report 2007*.

## Comments and opinions on Sustainability Report 2007

The panel provided us with a range of valuable opinions on our *Sustainability Report 2007*. While it highly evaluated the comprehensiveness of the report, which conforms to GRI 2002 guidelines, the panel felt there was still room for improvement in the areas of conveying a message and telling a story to the reader.

### Yoshito Izumi .....

On the whole, I was highly impressed that the report contents were excellent. However, I felt that some areas would require clearer explanations of the boundary of data, the meaning of indicators, and the calculation methods. For example, a term of "zero-emission" should be clearly defined, as it is sometimes misunderstood to include emissions of air pollutants. In addition, the report needs more carefully to clarify the definition of "intensity." I order for the reader to understand safety-related indicators, I would suggest introducing the number of accidents per employees, instead of total number of accidents in the Group, by taking into account the considerations of an expansion of its operations in the future.

Elsewhere, many graphs or other visual tools used in the report could help the reader recognize the Group performance how it is responding to the various types of regulation it faces. Furthermore, if some independently developed indicators will be used and the achievements will be identified in the report, the information could have been made easier to understand and more powerful to communicate with stakeholders.

### Chie Nakaniwa .....

I think that the CSR efforts made by the Nippon Mining & Metals Group are very impressive. However, I thought this fact may be hard for the reader to fully appreciate, as I felt the report lacked a logical explanation of the CSR background. It needs to explain to the reader the background of the situation and address why the Group chose to undertake specific initiatives. For example, the copper smelting process is unfamiliar to many people, and I think reader understanding would have benefited from a description with a story-like progression. Specifically, I would have liked an explanation on what level of operations environmental problems tend to occur as well as what measures are being implemented and what environmental technologies are being developed in response.

In addition, I wanted the data to go beyond basic numerical information and show what initiatives are resulting in improvements and also to provide benchmarks for evaluation, such as in-industry comparisons. For example, I would like to know not just the amount of reduction in CO<sub>2</sub> emissions, but also the reasons behind the reduction.

### Takeshi Mizuguchi .....

The report contains a lot of information, and it gave the impression it was created to faithfully comply with GRI guidelines. In particular, I liked the detailed quantitative data on the Group's main operations in the materials flow section. However, despite the importance given to recycling, such as for scrapped products, it was noticeable that there was no numerical data for this area. Also, I think that in the future biodiversity will become a key mining field, and felt the report did not cover it sufficiently. Based on the explanation received today, I understand that this is an area the Group has not been directly involved in; rather its role has been that of investor. Even so, from the perspective of accountability I think it is necessary for the Group to more fully explain its activities in this area.

### Kanna Mitsuta .....

I thought it was a technically detailed, professional report that included a lot of data and information on environmental technology. On the other hand, I felt that there was room to improve both the quantity and quality of information about environmental and social impact assessment (ESIA) on mining development, the Group's upstream business. For example, mining development requires the excavation of a large tract of land in order to produce a certain quantity of copper. This process creates large quantities of debris, such as rocks or low-grade sulfide copper ore, and also "tailings," which are concentrated piles of waste. I think by making these facts clearer then the importance of the Group's urban mine and recycling initiatives would be more strongly communicated, and the reader could also better understand the importance of the Group's innovative technology that uses microorganisms to extract copper from waste products and tailings. Furthermore, in the future I believe it is vital the Group demonstrates its positive commitment to ESIA in its mining development operations.



## Introducing the panel (job titles correct as of April 2008)



**Yoshito Izumi**

General Manager  
Corporate Social Responsibility Department  
Taiheiyō Cement Corporation



**Chie Nakaniwa**

Assistant Manager, LCA Development Office  
Center of Product and Environmental Aspects  
Department of Environmental Technologies  
Japan Environmental Management Association for Industry



**Takeshi Mizuguchi**

Professor  
Takasaki City University of Economics



**Kanna Mitsuta**

Deputy Director  
Planning and Research  
Global Environmental Forum

## What kind of CSR is required of the Nippon Mining & Metals Group?

### Yoshito Izumi .....

The Group deal with natural resources, and therefore I think the resources recycling performance is specifically important for its CSR activities. I would like the Company to express a clearer message on what areas it will focus and what kind of contributions it will make to establish a sustainable society. Furthermore, I would like to suggest to set the Group target based on the indicators, to identify processes how to reduce negative environmental impacts and effectively utilize resource, and to show what progress is feasible in these areas.

In the future, I would propose the Group to report the latest developments in environmental technology, as this area is also crucial. Furthermore, it is vitally important to further heighten awareness for all Group employees as to why the CSR is so important. I finally hope that the Group continues to increase its efforts in education and training to achieve this.

### Chie Nakaniwa .....

Concern about in CO<sub>2</sub> emissions continues to rise, for example, prevalence of carbon footprints. Of course, efforts to reduce actual levels of CO<sub>2</sub> are vital. However, it is also important for the Group to fully explain the measures it will undertake to reduce emissions even when output expansion results in increased energy consumption. It must prepare answers to questions on this issue.

Generally speaking, the reality is that a smoothly functioning system for companies around the world to disclose CSR information does not yet exist. Accordingly, a company can create a good impression by honestly and accurately providing answers to CSR-related questions from an outside party, including non CO<sub>2</sub>-related questions. I think it would be a good idea for the Group to consider this in its CSR efforts in the future.

### Takeshi Mizuguchi .....

At the Heiligendamm G8 summit and elsewhere, it has been proposed to cut the global CO<sub>2</sub> emissions by half from the 2000 level by 2050. To achieve this goal, it has been estimated that the leading carbon-emitting developed nations must reduce their current CO<sub>2</sub> levels by 80% to 90%. This poses a question: Can one company contribute to environmental protection in a situation where such a dramatic change of direction is required? I want the Group to take up this challenge both in the way it thinks and the way it acts.

Take the urban mine example. In addition to current information, I would like the Group to outline what kind of scale and percentages it anticipates for this initiative 20 years in the future. Going forward, I think the Group should try to demonstrate a grand vision that is capable of really surprising its stakeholders.

### Kanna Mitsuta .....

I definitely think the Group should learn from the past as it pursues its mining development businesses. Furthermore, I would like it to conduct a thorough ESIA for all its activities and reflect the results in its decision making. I also believe societal elements need to be given full consideration, such as the rights of indigenous people. If it is difficult for local people to make their voices heard, then I would like the Group to actively gather information from multiple sources, such as non-government organizations (NGOs), and work to build bonds of trust with local communities.

Today's industrial society built on mining development, which has had a considerable impact on the environment. We in Japan are prone to forget this, so as a reminder I believe the Group needs to be very proactive in releasing information on its mining development operations.

## Closing remarks

We thank everyone for sharing their valuable opinions with us today. As a company, we are directly involved in the use of limited resources, and consequently we are strongly aware of our role in reducing environmental impact and helping to create a recycling-oriented society. We aim to build a fundamental awareness among our employees that CSR activities are nothing more or less than our business activities, and also to contribute to the development of a sustainable society.

Amid the growing awareness of global environmental issues, everybody here today has positively expressed their opinion on the need to base our message on characteristics of the Group's businesses and to try to make our reporting easier to understand. Once again, we recognize the importance of not becoming complacent, but rather making steady efforts to accumulate the kind of results that we are uniquely capable of achieving. We greatly appreciate the advice and guidance you have given us today.



**Kazuo Kagami**

Senior Executive Officer  
Nippon Mining & Metals Co., Ltd.

## Targets, Performance and Future Plans for the CSR Activities

### Targets, performance and evaluations in fiscal 2007 and plans in fiscal 2008 and onward

The Nippon Mining & Metals Group sets medium-term targets in each activity field. We will further effectively promote our CSR activities through precisely recognizing performances of activities, identifying tasks needing further challenge, and reviewing targets.

|             | Activity fields                               | Actual issues                                                            | Targets in fiscal 2007                                                                                                                                                       |
|-------------|-----------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Management  | Corporate governance                          | Audits conducted by corporate auditors, safety and environmental audits  | Consistently implementing audits by corporate auditors and safety and environmental audits, and following up on them in appropriate ways                                     |
|             |                                               | Enhancing internal control                                               | Preparing for implementation of the full-scale internal control system                                                                                                       |
|             | Compliance                                    | Promoting compliance activities                                          | Compliance workshop programs for employees                                                                                                                                   |
|             | Promoting various improvement activities      | Innovating productivity through TPM and Six Sigma activities, etc.       | Implementing various improvement activities at each operating base                                                                                                           |
|             | Enhancing management systems                  | Obtaining public certifications                                          | Obtaining and renewing ISO14001 certification at each operating base                                                                                                         |
| Environment | Environmental conservation                    | Promoting energy saving                                                  | Reduction in energy consumption intensity<br>Reducing by 2% from the BM, the average of figures from fiscal 2003 to 2005 (Please see p.45 in full report for details.)       |
|             |                                               | Reducing CO <sub>2</sub> emissions                                       | Reduction in CO <sub>2</sub> emission intensity<br>Reducing by 3% from the BM, the average of figures from fiscal 2003 to 2005 (Please see p.45 in full report for details.) |
|             |                                               | Reducing waste volume                                                    | Reduction in waste final disposal intensity<br>Reducing by 12% from the BM, the average of figures from fiscal 2003 to 2005 (Please see p.45 in full report for details.)    |
| Society     | Reliance from customers and business partners | Maintaining and improving quality                                        | Heightening customer satisfaction                                                                                                                                            |
|             | Contributing to local communities             | Promoting contribution to local communities                              | Implementing contribution activities at each operating base                                                                                                                  |
|             | Responsibilities for employees                | Enhancing diversity of employees                                         | Promoting employment of the elderly and physically challenged, and the use of women employees' abilities                                                                     |
|             |                                               | Promoting human resource development                                     | Promoting competency development in individuals                                                                                                                              |
|             |                                               | Securing a safe working environment                                      | Zero occurrence of accidents with or without lost work days<br>Zero occurrence of explosion and/or fire accidents                                                            |
|             |                                               | Eliminating occupational diseases                                        | Zero occupational diseases                                                                                                                                                   |
|             | Communication                                 | Communicating with stakeholders                                          | Conducting a stakeholder meeting                                                                                                                                             |
|             |                                               | Compiling a sustainability report in accordance with GRI Guidelines (G2) | Compiling a sustainability report and issuing its digest version                                                                                                             |

◎ : Improving from previous year   ○ : No change from previous year  
△ : Almost no change from previous year (some targets missed)   × : Deteriorating from previous year

| Major performances in fiscal 2007                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                    | Evaluations | Plans in fiscal 2008 and onward                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Implementing as planned at each operating base responsible for the audits                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| In line with the policies of Nippon Mining Holdings Group, preparing for implementation                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                    | ◎           | Consistently implementing the internal control system                                                                                                                                                |
| Implementing compliance workshop programs for employees as well as issuing and distributing the Nippon Mining & Metals Group Compliance Guidebook                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| Implementing various improvement activities including the NPM activities at each operating base<br><Winning the TPM awards><br>Award for Excellence in Consistent TPM Commitment 1st Category: Pan Pacific Copper Co., Ltd. (Hibi Smelter), Hibi Kyodo Smelting Co., Ltd., Nikko Smelting & Refining Co., Ltd. (Saganoseki Smelter & Refinery), Nissho Ko-un Co., Ltd., Japan Copper Casting Co., Ltd. Award for TPM Excellence: Nikko Metals Philippines, Inc. |                                                                                                                                                                    | ◎           | Continuing implementation                                                                                                                                                                            |
| Nikko Shoji Co., Ltd., at its Headquarters, Takatsuki Plant, Nagoya Office, Kyushu Office, Oita Sales Office, Niigata Office, Hitachi Office and Takaoka Sales Office obtained certifications of ISO14001.                                                                                                                                                                                                                                                      |                                                                                                                                                                    | ◎           | Continuing implementation<br>Planning to obtain certifications of Occupational Health and Safety Management System (OHSAS) 18001, at each operating base, in order of precedence                     |
| Reducing by 4.4%                                                                                                                                                                                                                                                                                                                                                                                                                                                | Recovering waste heat at Metals Group, and streamlining operation processes at Metals and Electronic Materials Groups                                              | ◎           | Early achievements of targets in fiscal 2010<br><Targets in fiscal 2010><br>·Reducing energy consumption intensity by more than 5%<br>·Reducing CO <sub>2</sub> emission intensity by more than 7.5% |
| Reducing by 6.3%                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                    | ◎           |                                                                                                                                                                                                      |
| Reducing by 53%                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Ceasing landfill disposal in smelters' sites at Metals Group, and reducing volume of waste acids by streamlining operation processes at Electronic Materials Group | ◎           | Continuously achieving the target in fiscal 2010, to reduce waste final disposal intensity by more than 30%                                                                                          |
| Commendations by customers (totally 9 awards, please see p.71 in full report for details.)                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>Implementing various events such as plant tours and summer festivals at each operating base</li> <li>Cleanup activities in local communities and participating in local initiatives to prevent crime and disasters</li> </ul>                                                                                                                                                                                            |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| Reemploying retirees at the age limit, and fulfilling the legal requirement of the ratio of employment of physically challenged                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| Beginning human resource development program for managerial personnel                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                    | ○           | Continuing implementation                                                                                                                                                                            |
| Making ingenious attempts and implementing safety audits at each operating base<br>In Japan: 21 accidents with or without lost work days, 1 explosion and/or fire                                                                                                                                                                                                                                                                                               |                                                                                                                                                                    | ◎           | Continuing activities to realize zero accidents and disasters                                                                                                                                        |
| Overseas: 13 accidents with or without lost work days                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                    | ◎           | Continuing activities to realize zero accidents and disasters                                                                                                                                        |
| In Japan: 1   Overseas: 0                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                    | ×           | Continuing activities to realize zero occupational diseases                                                                                                                                          |
| Conducting a dialogue with experts<br>Holding stakeholder meetings, as shown in our <i>Sustainability Report 2007</i>                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                    | ○           | Continuing implementation<br>*Considering diverse styles of dialogues                                                                                                                                |
| Issuing a digest version of Sustainability Report written in Japanese and English                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                    | ◎           | Continuing implementation                                                                                                                                                                            |

## Major Topics in Fiscal 2007

• Economic • Environmental • Social

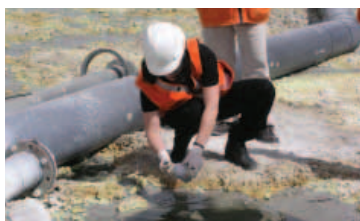
This page shows major topics of the Group in fiscal 2007.

### Entire Group

- Conducting a stakeholder meeting (July, 2007)  
▶ p.11 in full report
- Fulfilling our compliance program, including compliance workshops  
▶ p.23 in full report
- Conducting a matching gift program  
▶ p.83 in full report
- Issuing "Sustainability Report 2007"  
(the news released in October, 2007)

### Resource Development

- Participating in a joint program for technological development, production and sale of robots used in mining and smelting operations in Chile (the news released in September, 2007)
- Promoting the Caserones copper deposit development project in Chile  
▶ p.30 in full report
- Strengthening the R&D activities at BioSigma S.A. in Chile (the news released in October, 2007)  
▶ p.31 in full report



Heap leaching

- Acquiring mining concessions of the Quechua copper deposit development project in Peru (the news released in November, 2007)  
▶ p.30 in full report



Quechua copper deposit

- Making a contribution to the International Institute for Mining Technology (the news released in November, 2007)

### Recycling and Environmental Services

- Promoting the Hitachi Metal Recycling Complex (HMC) Project (the news released in July, 2007)  
▶ p.35 in full report



Copper recovery furnace (Nikko Environmental Services Co., Ltd.)

- Consolidating three affiliated companies in Taiwan (the news released in February, 2008)  
▶ p.36 in full report

- Starting construction of a collection facility for recyclable materials in Taiwan (the news released in February, 2008)

▶ p.36 in full report



Collection facility for recyclable materials (Chiongpin Recycling Center)

### Smelting & Refining

- Promoting energy conservation at the Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.  
▶ p.31 in full report
- Setting up a shared-service company in China (the news released in March, 2008)

### Electronic Materials

- Commencement of a full-scale marketing activities of a new alloy designed for electric and electronic components installed in automobiles (June, 2007)
- Establishing an affiliated company in Malaysia (the news released in October, 2007)
- Developing 450mm diameter polycrystalline silicon wafer for handling tests (the news released in October, 2007)
- Developing super high-purity copper successfully, with purity of 9N (99.9999999%) (November, 2007)
- Receiving Intel's prestigious Supplier Continuous Quality Improvement (SCQI) award for the third consecutive year (the news released in March, 2008)  
▶ p.71 in full report, p.33 in excerpted version

### Other

- Becoming an official supporter of the 63rd National Sports Festival and the 8th "Zenkoku-Shougaisha-Sports-Taikai" (a sports event for physically challenged), held in Oita Prefecture (the news released in April, 2007)



Official mascot "Mejiron"



## Corporate Governance and Management

The Nippon Mining & Metals Group strives to establish an appropriate corporate governance system, in order to implement sound business activities based on its Corporate Philosophy and heighten its corporate value.

### Management structure of the Nippon Mining Holdings Group

Nippon Mining & Metals Co., Ltd. is wholly owned by Nippon Mining Holdings, Inc., which is listed on the first section of the Tokyo Stock Exchange.

The Nippon Mining Holdings Group engages in two core businesses: metals, through Nippon Mining & Metals Co., Ltd., and petroleum, through Japan Energy Corp. These core operating companies conduct business operations, including strategic planning, in each business field. On the other hand, Nippon Mining Holdings, Inc., has responsibility for monitoring of the business operations and management on behalf of the Group as a whole, such as managerial strategies for the Group, planning of financial strategies, financing, and investor relations (IR) activities. This holding company system maintains efficient control over the Group and ensures management transparency, by keeping operations separate from Group management.

The board of director of Nippon Mining Holdings, Inc. is com-

posed of a total of 10 directors—6 full-time directors of the Nippon Mining Holdings, the presidents of Nippon Mining & Metals and Japan Energy, and 2 external directors. Nippon Mining Holdings has 5 corporate auditors, 3 of whom are outside auditors.

For the purpose of information-sharing between the holding and the core operational companies, and discussion and decision of policies on behalf of the Group as a whole, the Nippon Mining Holdings Group regularly convenes the Group Compliance Meeting for reviewing compliance commitment, etc., the Group Internal Control Committee for establishment of propulsion programs for its internal control systems regarding financial reports and evaluation of the programs, and other meetings. Members for these meetings are selected from directors and executive officers of Nippon Mining Holdings, Nippon Mining & Metals and Japan Energy.

### Outline of the management structure of the Nippon Mining & Metals

Given the supervisory of Nippon Mining & Holdings, Inc., Nippon Mining & Metals Co., Ltd., does not have a board of directors in the interests of faster decision-making and greater operational simplicity. However, the Group follows a management model in which executive officers take responsibility for conduct of operations in each business division, under the direction of the president. Important management matters are discussed and decided by the Executive Committee comprising two directors, who double as executive officers and one of whom is the President, and other executive officers. The Executive Committee also monitors financial and operational performance throughout the Nippon Mining & Metals Group.

The Group ensures appropriate execution of operations at business divisions including subsidiaries of Nippon Mining & Metals Co., Ltd.,

through independent auditing undertaken jointly by corporate auditors and the internal auditing divisions of Nippon Mining & Metals and Nippon Mining Holdings. One of the four internal auditors of Nippon Mining & Metals doubles as the internal auditor of Nippon Mining Holdings.

In compliance with the Corporation Law, Nippon Mining & Metals and its major subsidiaries, "large companies" defined in the Corporation Law, select Ernst & Young ShinNihon LLC as their independent auditor to audit their financial documents. No significant conflict of interest exists between the independent auditors, the companies and their executive-level employees working on our audit operations.

The Group is improving the internal control system to enhance the soundness and transparency of management.

#### Directors (2):

In addition to approving appointments of representative directors and other matters laid down in laws and the Article of Incorporation, they participate as members of the Executive Committee in decision-making relating to management policy and major issues in the conduct of operations.

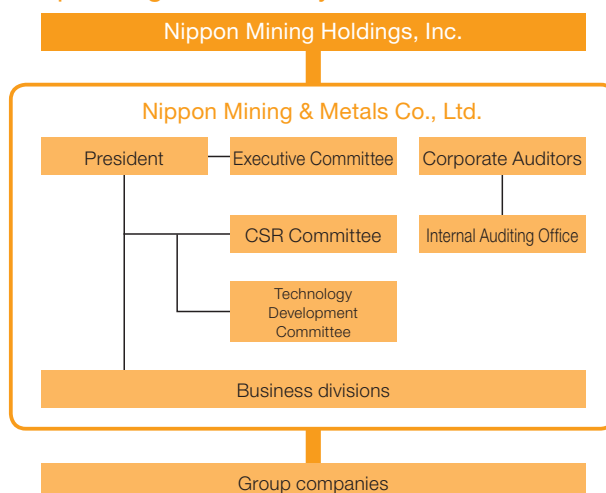
#### Executive Officers (16, excluding 2 who double as directors)

In addition to participating in decision making with regard to management policy and major matters affecting conduct of business, as members of the Executive Committee, they have specific area of duty to be executed based on decisions made by the Executive Committee.

#### Corporate Auditors (4):

They attend meetings of the Executive Committee, carry out regular audits, and independently audit the conduct of operations by operational divisions.

### Corporate governance system



\*Please see the web-site (<http://www.shinnikko-hd.co.jp>) for details of the management structure of Nippon Mining Holdings, Inc.

## CSR Organizations

In order to fulfill its corporate social responsibilities (CSR), the Nippon Mining & Metals Group is continuously conducting activities based on our corporate philosophy, in “economic,” “environmental” and “social” aspects. On April 1, 2006, the Group established the CSR Committee, with a view toward developing and further strengthening these activities as part of our corporate strategy. The CSR Committee is an advisory body to the president, responsible for determining basic policies and action plans for the promotion of CSR, assessing progress in target achievement, and evaluating CSR performance from economic, environmental and social perspectives. We have also established compliance and risk management subcommittees under the CSR Committee. On April 1, 2008, the CSR Office was newly set up to effectively promote our CSR activities, under the CSR Action Policy compiled based on the Corporate Philosophy.

### CSR organization



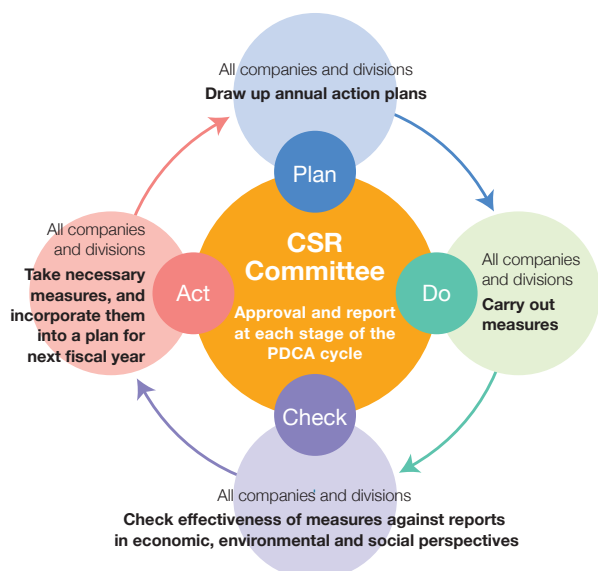
The Nippon Mining & Metals Group CSR “Kick-Off” convention

## Promotion of CSR activities

The Group is evaluating its CSR activities in consideration for whether we could conduct them in line with the Corporate Philosophy and the Code of Conduct. Also, we identify key CSR

issues through making a sustainability report for further promoting CSR activities. Implementing the PDCA (Plan-Do-Check-Act) cycle enables us to implement more effective activities.

### Promoting our CSR activities by implementing the PDCA cycle



### For further integration of CSR activities into the entire Group in fiscal 2007

#### • Expanding the boundary of Sustainability Report to newly include some overseas affiliated companies

Four overseas affiliated companies, which have relatively large impacts on the environment, were newly included in the boundary of the 2007 report. In order to familiarize the Corporate Philosophy and the Code of Conduct with all staff of overseas affiliated companies, they were translated into five foreign languages including English and Chinese, and panels of them were posted at every overseas affiliate.

#### • Issuing Sustainability Report 2007

The Group issued the sustainability report showing our CSR activities in fiscal 2006. With the report, we conducted a CSR educational program at every operating base in Japan. The program covered performance, tasks needing further challenges on CSR activities in fiscal 2006 and plans in fiscal 2007 and onward, to help promote awareness of the CSR activities.

# Compliance and Risk Management

The Nippon Mining & Metals Group has established the Compliance Subcommittee and the Risk Management Subcommittee under the CSR Committee, to consider and decide on policies and tasks and assess progress on each theme. These subcommittees are comprised of executive officers and general managers working in the head office. We view compliance as a vital issue forming the foundation of our CSR activities. The Compliance Subcommittee identifies priority issues and CSR programs each fiscal year to realize thorough compliance with laws and regulations and societal norms. On the other hand, we identify risks inherent in operations in the Group, formulate countermeasures and evaluate their effectiveness and also implement practices for risk management. We upgrade our risk management practices through regularly reporting to the Risk Management Subcommittee.

## Compliance

The Compliance Subcommittee meets regularly twice a year and whenever necessary to discuss and decide basic policies regarding compliance, priority issues for each fiscal year, plans for practices including compliance programs. In April, the subcommittee is held to hear progress reports with regard to compliance matters from all operating bases, and summarizes the results. At the meetings, the subcommittee considers the effectiveness of remedial actions for each issue, and establishes additional measures when needed. Also, the subcommittee assesses risks of fraud and law violations, etc., to reflect the results of the assessment in formulating priority issues and compliance programs. Reports of these priority issues and compliance status are also made to the Nippon Mining Holdings Group Compliance Committee, chaired by the president of Nippon Mining Holdings, Inc., a compliance organ for the entire Group.

The Nippon Mining & Metals Group organizes compliance education programs every year in induction courses for new recruits and training programs for newly-promoted managers and assistant managers, to deepen their understanding of compli-

ance, in Japan. The Group also provides information regarding relevant laws and regulations through our intranet, to ensure full compliance with all applicable laws and regulations.

In May 2007, we issued the Nippon Mining & Metals Group Compliance Guidebook, which was distributed to executives and employees of all Group companies in Japan. The guidebook explains important points on each item and field described in the Code of Conduct, thereby acting as a compliance manual in the practice of the Code. Also, with the aim of increasing awareness about compliance and improving the level of understanding about basic points of concern, 18 workshops were held at 11 major operating bases in Japan, from July through December, 2007. A total of 673 executives and employees attended the workshops.

Further, compliance programs with special themes such as antitrust laws or export management are designed and offered to employees of relevant departments, as needed.



Studying compliance

The Nippon Mining & Metals Group distributes booklets describing its Corporate Philosophy, its Code of Conduct, its Basic Environmental Policy, the hotline number and other information, to all its employees, in Japan.



A booklet describing the Corporate Philosophy and other information distributed to all employees



Compliance Guidebook

## Risk management

Risk management issues are handled primarily by the Risk Management Subcommittee. In line with a basic policy and a progress plan decided by the subcommittee, risks are identified and evaluated at major operating bases, and countermeasures are being planned and carried out. The subcommittee is convened to review the plans for risk management

and assess the progress of the plans, twice a year. Also, each operating base undertakes self-assessments of progress and identifies risks once a year. The Group intends to continuously improve our risk management system by implementing the PDCA cycle.

## Improvement Activities at Domestic and Overseas Operating Bases

The Nippon Mining & Metals Group is conducting NPM and other improvement activities to increase quality and enhance productivity at our operating bases. Accumulation of daily ambitious efforts based on each business feature has realized robust achievement. Examples of the activities playing a part of “innovation in the productivity” are shown in pp.19 and 20.

### Domestic

#### • What are NPM activities?

The Total Productive Maintenance (TPM) concept was developed by the Japan Institute of Plant Maintenance in 1971, as “production methods that seek to maximize overall production system efficiency by improving personnel and facility quality.” In joining this movement, the Group decided to take it beyond its conventional framework and transformed it into the “Nippon Mining & Metals TPM” (NPM) concept for continuous

innovation through a dynamic approach. The NPM method seeks to minimize economic losses through a zero-accident, zero-defect (product quality) and zero-failure (equipment) approach.

We now proactively apply NPM at our major operating bases.

#### Kurami Works

The Kurami Works has won the Award for TPM Excellence in 1997, the Award for Excellence in Consistent TPM Commitment in 2000, and the Special Award for TPM Achievement in 2004, after the introduction of the NPM activities in 1994. Adding our unique objectives, such as “market development,” “customers satisfaction,” “optimization across the organization” and “prevention of global warming,” to the 8 pillars of TPM. Under the slogan of “World leader in material business for the electronics industry” and “Operation in an urban area to beat the competition in the 21st century,” it is also making every endeavor to enhance individual skills and organizational strength by improvement through the NPM activities.



NPM activities at the Kurami Works (Kanagawa Prefecture)

#### Isohara Works

Adopting the Six Sigma program and the Toyota KAIZEN activities, the Isohara Works carefully selects focal issues and sets clear and concrete goals for its improvement activities. The activities focus on the significant enhancement of business solution capability and standardization of problem-solving techniques.

In fiscal 2007, the second fiscal year since the introduction of the activities, the Isohara Works made a full-fledged start in improving productivity and shortening production lead times, and tried to increase capability in the entire production fields. As a result, the Works reached the goals set in the fiscal 2007 plan. The Works has extended the scope of the activities to involve its subcontractors working on site.



Improvement activities at the Isohara Works (Ibaraki Prefecture)



## The Hibi Smelter, Pan Pacific Copper Co., Ltd., and the Tamano Smelter, Hibi Kyodo Smelting Co., Ltd., .....

The two companies in the Hibi area (Tamano City, Okayama Prefecture) are conducting improvement activities, by eliminating waste and loss on production lines and putting effective utilization of the result of the improvement activities in minds. The result of “some improvements for comprehensive streamlining plans for steam dryer facilities” was presented at a Chugoku-Shikoku TPM conference 2008 to receive a TPM award to encourage improvements.



Certificate of merit and plaque of the TPM Award

## Overseas

### Changzhou Jinyuan Copper Co., Ltd., and Nikko Metals Philippines, Inc. ....

Changzhou Jinyuan Copper Co., Ltd., and Nikko Metals Philippines, Inc., which attended the 5th TPM Exchange of Nippon Mining Holdings Group, reported on themes of “Increase of total manufacturing efficiency through TPM activities” and “The TPM activities at Nikko Metals Philippines—Happy Workplace,” respectively. Both companies made the best use of inventiveness to report their accomplishments sometimes using English or Chinese.

Nikko Metals Philippines started its TPM activities, with the themes of “production of high-quality and highly functional

copper foil” and “happiness of the employees,” in April 2001. Though experiencing two setbacks of a slowdown in improvements, Nikko Metals Philippines received the Award for TPM Excellence from the Japan Institute of Plant Maintenance in March 2008, after six years from the kick-off of the activities. Its activities, including 5S, achieve steady results in the reduction of waste, elimination of disasters, and increase in yields, and now enables it to produce high-quality and highly functional copper foil for high-end customers.



Presentation by Changzhou Jinyuan Copper at the 5th TPM Exchange of the Nippon Mining Holdings Group



TPM Awards Ceremony for Nikko Metals Philippines, Inc.

### Nippon Precision Technology (Malaysia) Sdn. Bhd. ....

Nippon Precision Technology (Malaysia) Sdn. Bhd. is developing its improvement activities mainly for quality control. The QCC\* Activities, which have been promoted across the organizations since its commencement in 2005, have produced a steady flow of successful results.

Meetings to announce the results of the QCC activities are regularly held to recognize the high accomplishments of groups. Vying with each other group for its accomplishment has spread and penetrate the concept of the activities.

\* QCC Quality Control Circle



An awarding ceremony to the QCC activities in November 2007

### Nikko Fuji Electronics Dongguan Co., Ltd. ....

Nikko Fuji Electronics Dongguan Co., Ltd. started Q-UP\* activities in August 2007 as its quality control activities. Nikko Fuji Electronics Dongguan will further promote these activities, which have brought about the reduction of production costs.

\* Q-UP Quality and Quantity-UP



Improvement activities at Nikko Fuji Electronics Dongguan Co., Ltd.

## Business Performance in Fiscal 2007

(From April 1, 2007 through March 31, 2008)

In the fiscal year ended March 31, 2008, the Nippon Mining & Metals Group recorded a 9.3% year-on-year increase in net sales, to ¥1,119.6 billion, and a 15.4% year-on-year decline in income before special items, to ¥113.4 billion.

The average exchange rate of the Japanese yen for the period under review was ¥114 per U.S. dollar, compared with ¥117 during the previous fiscal year. Meanwhile, due to strong demand growth in China and other parts of Asia, the average copper price on the London Metal Exchange (LME) for the period was buoyed to approximately 344 cents per pound, compared with approximately 316 cents during the previous period.

### Resources and Metals

In the core copper business, international copper prices trended at high levels, leading to higher product prices compared with the previous fiscal year. Copper smelting and refining margins applied to copper concentrates purchased during the period under review deteriorated, reflecting a further tightening of supply and demand in the copper concentrate market. Based on these market conditions, net sales of the Resources

and Metals Business grew 12.7%, to ¥999.5 billion, and income before special items decreased 10.4%, to ¥114.4 billion. Despite an improvement in profitability in the Recycling and Environmental Services Business, deteriorating copper smelting and refining margins conditions for copper concentrates and rising costs at overseas mining development projects led to a fall in income.

### Electronic Materials

For such mainstay products as electro-deposited copper foil, treated rolled copper foil and thin film forming materials such as sputtering targets, accompanying the completion of inventory adjustments in the first half of the fiscal year for major end-use products—including mobile phones, liquid crystal displays and other items—sales volume generally increased. Among product prices, sputtering targets for FPDs experienced a price decline, reflecting the price of indium. The price of electro-deposited copper foil rose. Prices for other products were generally flat. As a result, net sales of Electronic Materials Business declined

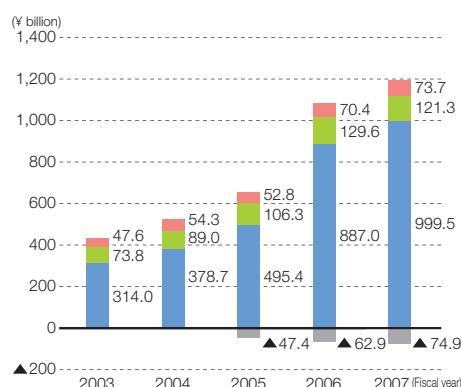
6.3%, to ¥121.3 billion, partly due to the effect of changes in the accounting period of overseas subsidiaries. Loss before special items was ¥6.4 billion, compared with a loss of ¥2.2 billion in the previous fiscal year. Despite an improvement in the price of electro-deposited copper foil and an increase in sales volumes for semiconductor sputtering targets, this loss reflected the negative impact on inventory valuations from the further fall in the price of indium, a key raw material used in the manufacture of sputtering targets for FPDs.

### Metal Manufacturing

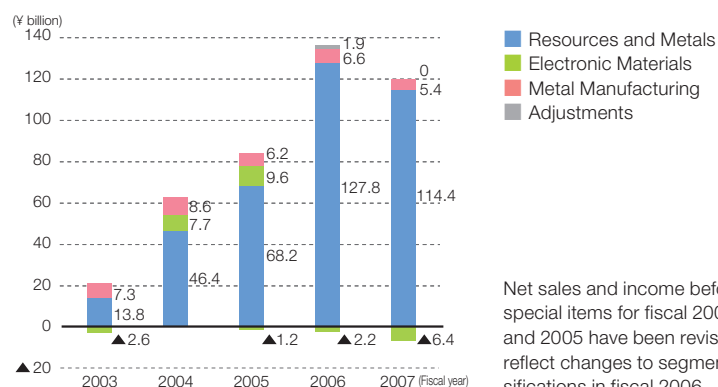
In the precision rolling business, accompanying the completion of inventory adjustments for digital and IT-related products, main products within the rolled copper and copper alloy products, such as copper foil and Corson alloys, saw growth in sales volumes. In contrast, reflecting the continued shift toward liquid crystal displays (LCDs) for use in televisions and PC monitors, special steel products used in cathode ray tube (CRT) components experienced a decline in sales volumes.

In the precision fabrication business, demand was generally strong for such surface treatment materials as gold plating, underpinned by demand for digital and IT-related products. Under these conditions, net sales from Metal Manufacturing Business rose 4.7%, to ¥73.7 billion. Income before special items decreased 18.7%, to ¥5.4 billion, mainly owing to such factors as a decline in sales of special steel products.

Net sales by segment (consolidated)



Income before special items by segment (consolidated)



Net sales and income before special items for fiscal 2003, 2004 and 2005 have been revised to reflect changes to segment classifications in fiscal 2006.

## Economic Impact on Stakeholders

The Nippon Mining & Metals Group conducts its business in association with various stakeholders. The economic impact of the business activities on them is shown below in table form, with details of how much revenues deriving from customers and other sources is paid out to specific stakeholder groups.

### Economic impact

Figures for economic impact on stakeholders are given in the table below.

A total of ¥1,034.6 billion was paid to suppliers for procurement of materials and services. The added value, the amount of net sales less the above figure, was ¥84.9 billion.

Personnel expenses including statutory welfare benefits totaled ¥38.4 billion. The sum of severance indemnity and the projected benefit obligation for defined benefit plans was approximately ¥20.3 billion, of which approximately ¥3.6 billion was contributed as pension assets and approximately ¥16.5 billion was treated as allowance for retirement benefits.

The remaining amount of approximately ¥0.2 billion was unrecognized net transition liabilities.

A total of ¥19.2 billion was paid to shareholders and creditors in the forms of shareholder dividends and interests on borrowings for funding purposes.

In fiscal 2007, the Group's paid a total of in income taxes for financial accounting purposes was ¥17.9 billion. A total of ¥2.8 billion in public taxes and dues recorded as expenses was disbursed.

A total of ¥0.15 billion was contributed to community activities.

### Financial flows, by stakeholder group

| IN                                          |                   |                      | OUT                                  |                   |                                                                                                                                                 |
|---------------------------------------------|-------------------|----------------------|--------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Stakeholders                                | Total (¥ billion) | Basis of calculation | Stakeholders                         | Total (¥ billion) | Basis of calculation                                                                                                                            |
| Customers                                   | 1,119.5           | Net sales            | Suppliers                            | 1,034.6           | Total of costs of net sales, and selling, general & administrative expenses, excluding personnel costs, taxes and dues and charitable donations |
| Figures for customers, by geographical area | 700.6             |                      | Personnel                            | 38.4              | Personnel costs                                                                                                                                 |
| Japan                                       |                   |                      |                                      |                   |                                                                                                                                                 |
| Asia                                        | 399.7             | Including Oceania    | Shareholders and creditors           | 19.2              | Dividends and interest paid                                                                                                                     |
| North America                               | 10.1              |                      |                                      |                   |                                                                                                                                                 |
| Europe                                      | 7.9               |                      | Government and administrative bodies | 20.7              | Income taxes in the statement of income, and public taxes and dues recorded as expenses                                                         |
| Central and South America, others           | 1.2               |                      |                                      |                   |                                                                                                                                                 |
| Government and administrative bodies        | 0.53              | Subsidies, others    | Community                            | 0.15              | Charitable donations                                                                                                                            |

\*Because the above figures refer only to consolidated subsidiaries of the Group covered in the boundary of the report, they may differ from the figures presented for consolidated net sales by segment on the previous page.

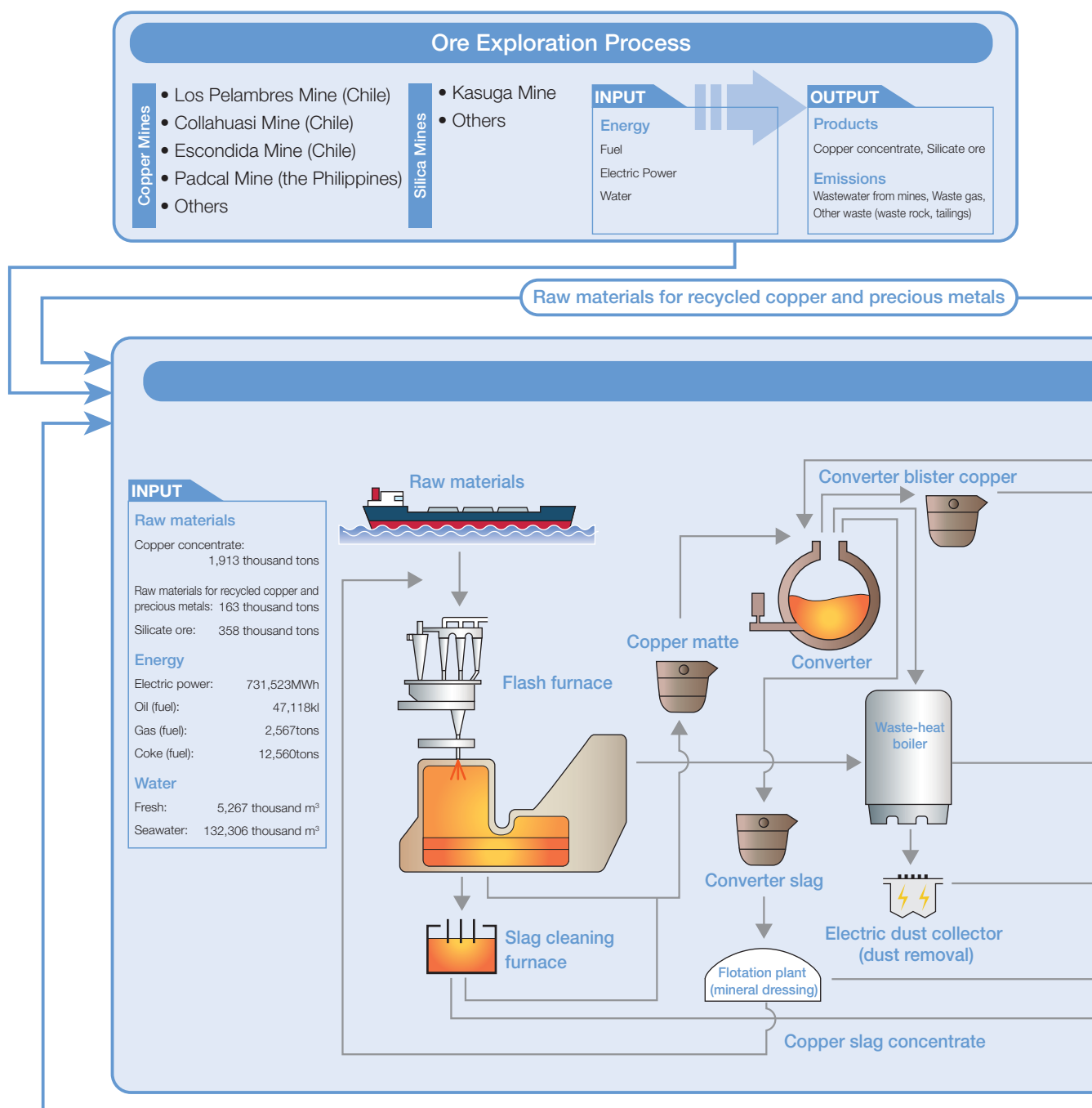
>>> For detailed financial statements of the Nippon Mining & Metals Group, please see the website of Nippon Mining Holdings, Inc. (<http://www.shinnikko-hd.co.jp/english>)

## Our Business Activities and the Environment

The Nippon Mining & Metals Group recognizes that its business activities impact the environment in a variety of ways, including the following: consumption of raw materials and energy in production; releases of waste gas, effluents and waste materials such as waste liquids into the environment; consumption of energy and emission of waste gas in connection with the procurement of raw materials and the shipping and transportation of products, and the generation of noise and vibration in production processes. The Group acknowledges these environmental impacts and spares no effort to reduce them.

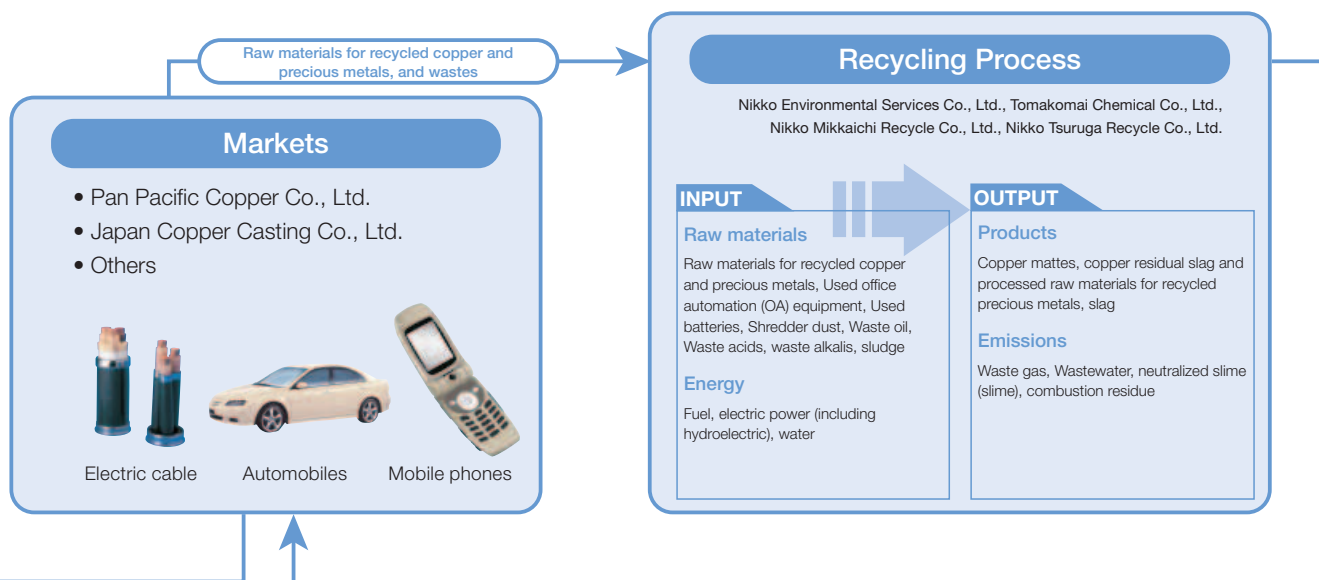
### Copper Business, Recycling and Environmental Services, Metals Group

#### Principal material flows in business activities



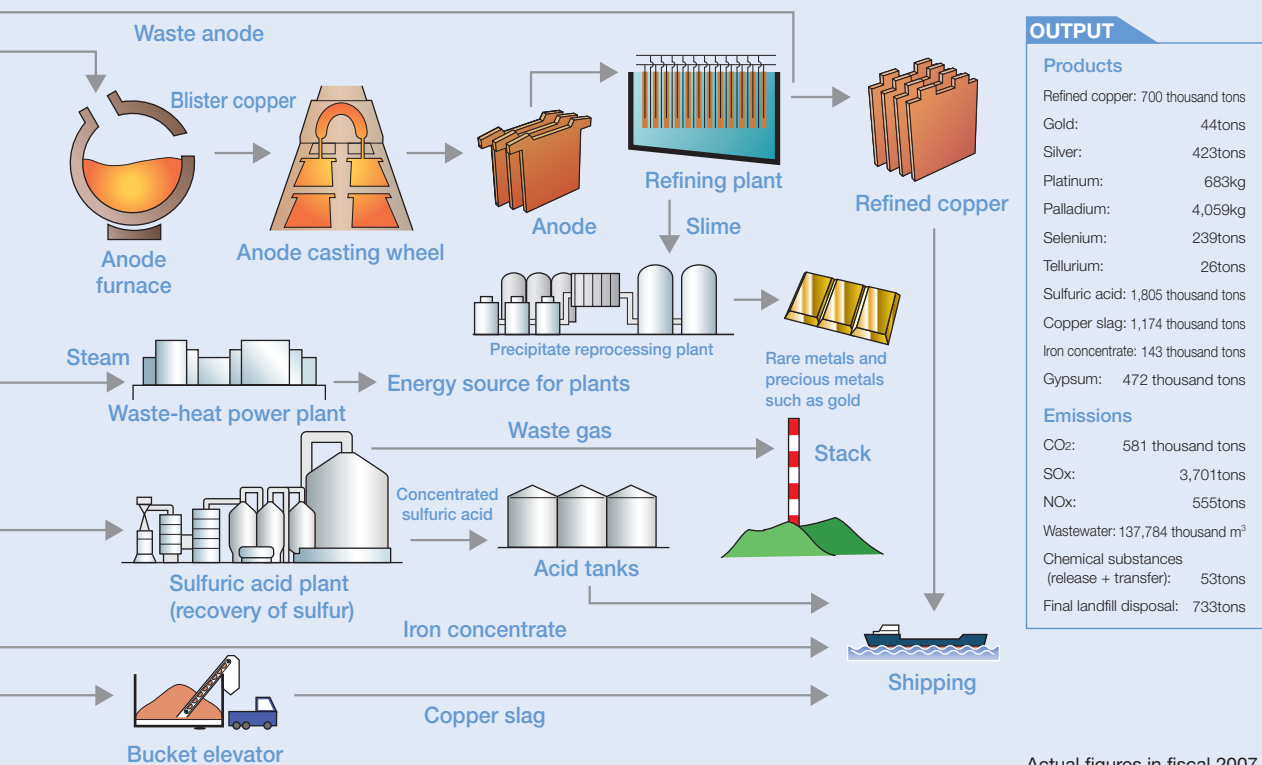


In particular, we are striving to save energy and resources and minimize the use of chemical substances by enhancing yields and extraction percentages, improving quality levels, streamlining production processes, and promoting recycling and re-use. Our environmental management system covers reduction of CO<sub>2</sub> emissions, prevention of atmospheric and water pollution, and waste minimization through slag conversion and other measures.



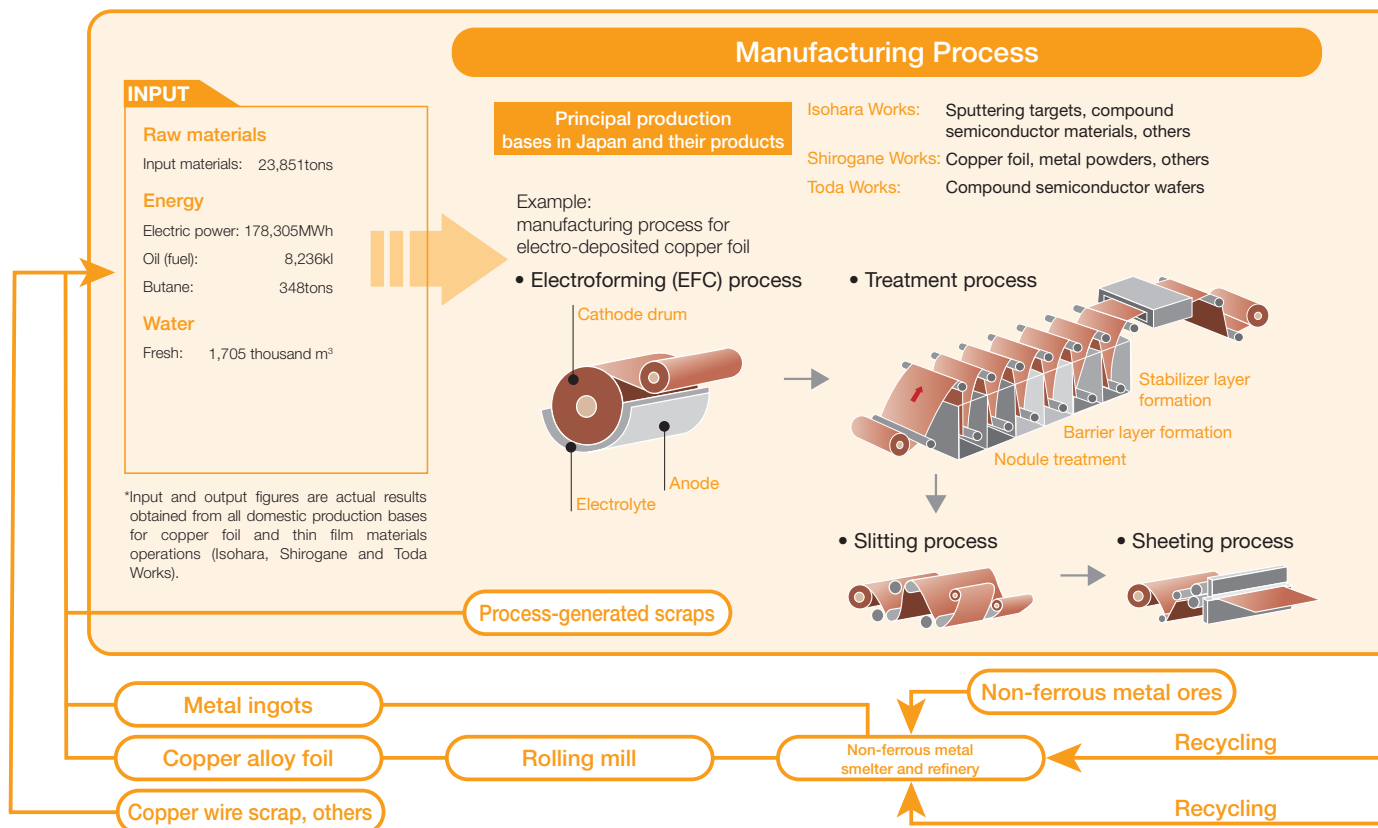
## Smelting and Refining Process

Saganoseki Smelter & Refinery and Hitachi Works, Nikko Smelting & Refining Co., Ltd., Tamano Smelter, Hibi Kyodo Smelting Co., Ltd.



## Copper Foil Business, Thin Film Materials Business, Electronic Materials Group

### Principal material flows in business activities



Sheeting facility for copper foil (Shirogane Works)



MAQINAS®: A dual-layer CCL material for circuit boards for mounting of driver ICs for LCD devices



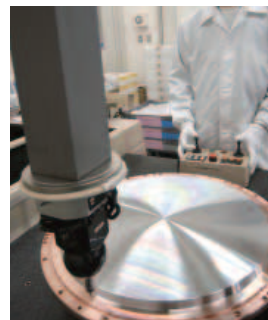
MOCVD facility for epitaxial growth on compound semiconductor wafers (Toda Works)



Composition analyzer for sputtering targets (Isohara Works)



Sintering furnace for sputtering targets for semiconductors (Isohara Works)

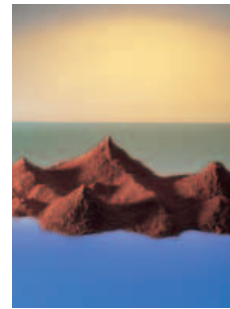


Three-dimensional measuring device for surfaces of sputtering targets for semiconductors (Isohara Works)

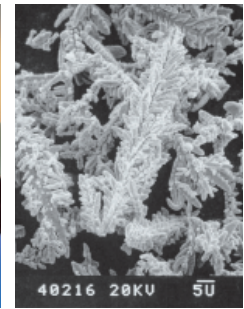
## Pioneering the development of lead-free electrolytic copper powder

With the increasing importance of environment-friendly manufacturing, there is a growing need for reduction of harmful substances in raw material powders used in the powder metallurgy and in conductive pastes and other electronic materials. Lead impurities in electrolytic copper powder are a particular concern.

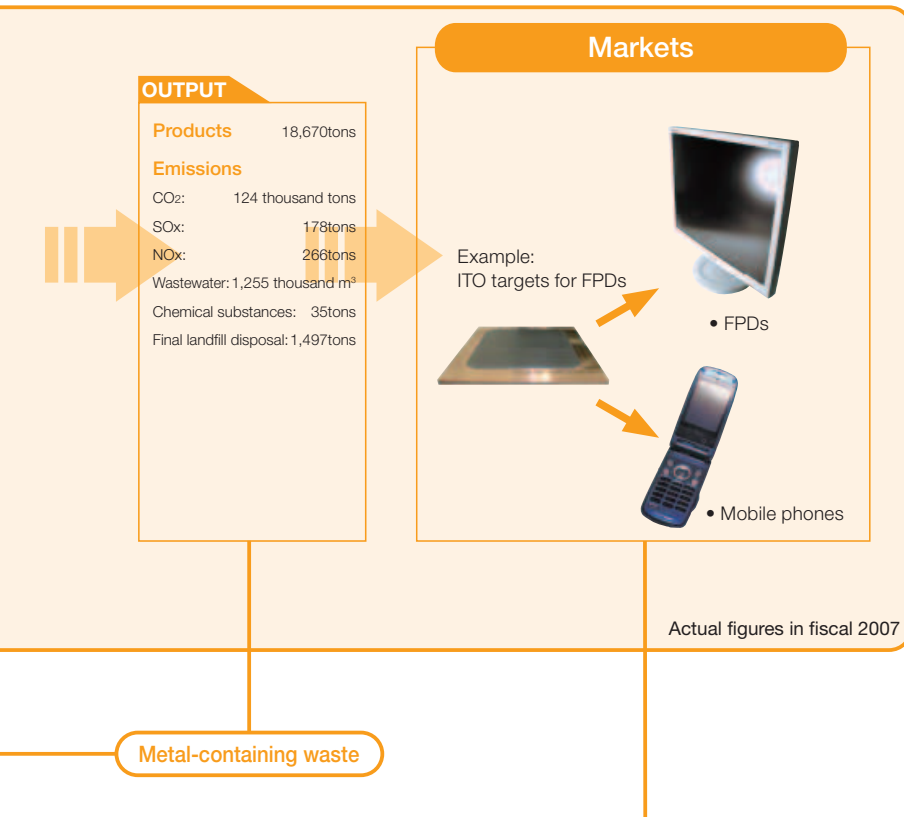
In the conventional electro-deposition method, the copper powder contains approximately 100 to 1,000 ppm of lead impurities. By using titanium coated with precious metals as an indissoluble positive electrode in the electrolytic copper-removal process, the Nippon Mining & Metals Group has developed technology that enables us to provide a stable supply of lead-free electrolytic copper powder with less than 1 ppm of lead content. In this way, we are meeting customer needs for lead-free products.



Electrolytic copper powder



An electron microscope picture of electrolytic copper powder



## Reducing energy used in manufacturing processes and using recycled resources

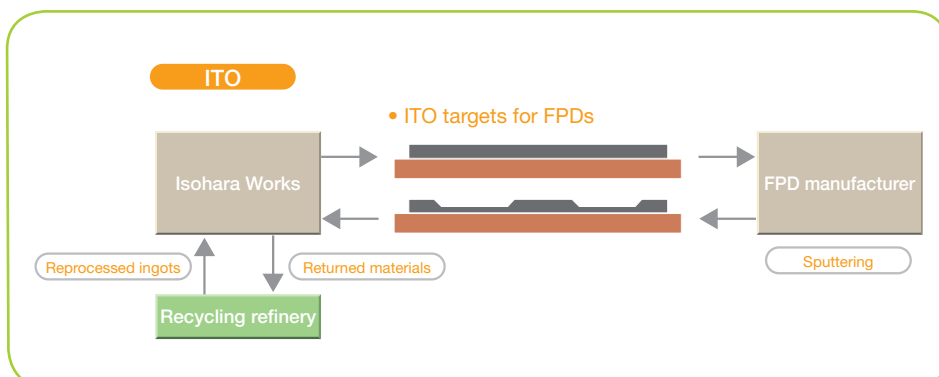
In electro-deposited copper foil production processes, which account for more than 70% of the energy used in all copper foil and thin film forming materials operations, the Group's principal raw material consists of remnants from copper wire and cable production. In addition, the Group saves energy by re-using as a raw material the mill ends and others generated in the production of electro-deposited copper foil. In ITO targets for FPDs, we also efficiently use resources by recycling materials returned to us by customers and refining them into raw material ingots.



Raw materials for electro-deposited copper foil



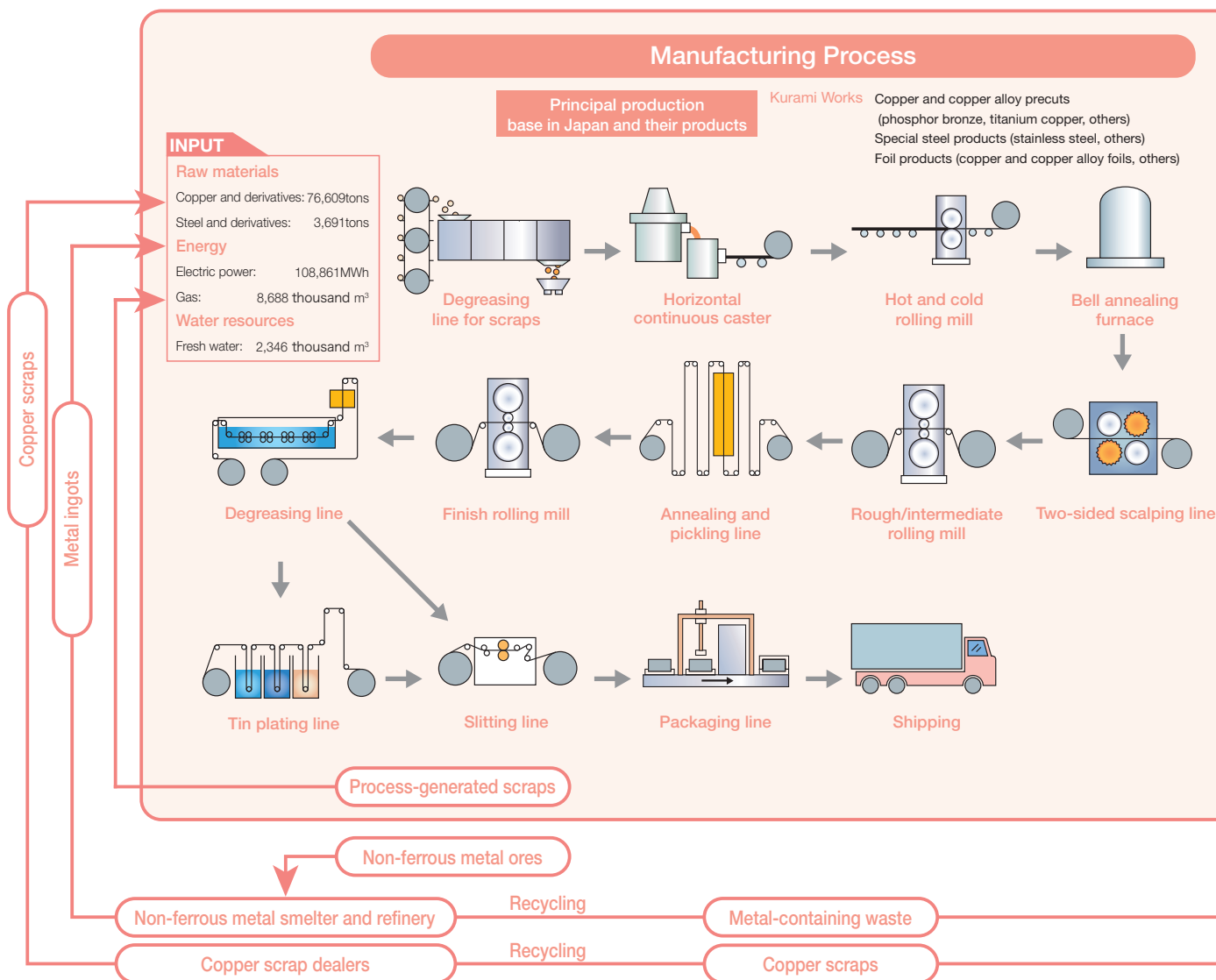
Re-usable boxes for sputtering targets for semiconductors (Isohara Works)



Re-usable boxes for sheet copper foil (Shirogane Works)  
Based on our discussions with customers, we increasingly utilize re-usable boxes for product packaging.

## Metal Manufacturing Business, Electronic Materials Group

### Principal material flows in business activities



Horizontal continuous caster (Kurami Works)



Hot and cold rolling mill (Kurami Works)



Rough/intermediate rolling mill (Kurami Works)



Actual figures in fiscal 2007

## OUTPUT

### Products

Strips and foils of copper, copper alloys, special steels, and plated strips and foils: 55,755tons

### Emissions

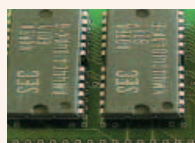
CO<sub>2</sub>: 80 thousand tons  
NO<sub>x</sub>: 6tons  
Wastewater: 2,103 thousand m<sup>3</sup>  
Chemical substances: 162tons  
Final landfill disposal: 49tons



## Markets



Treated rolled copper foil for FPCs (for mobile phones)



Corson alloys for LSI lead frames



Phosphor bronze and titanium copper for terminals and connectors

## Recycling of waste materials

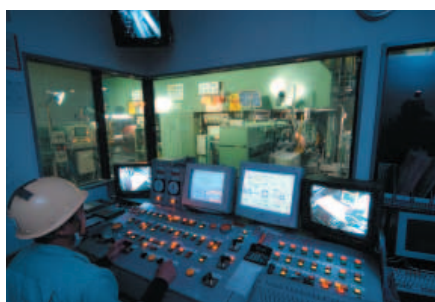
Previously, certain waste materials generated in the manufacturing operations at the Kurami Works were landfilled after necessary treatment. These waste materials contained copper, silica and other substances that can be re-used. Using the networks of the Group's Recycling and Environmental Services business, the Kurami Works is working to promote the effective utilization of limited resources by re-using these waste materials as raw materials for smelting or for cement.

## Effluent treatment facilities

At the Kurami Works, effluent treatment facilities are used to treat waste liquids and wastewater generated at the Works. Valuable metals contained in the water and liquids are recovered as sludge by the facilities, and are re-used. Equipment newly employed in 2007 has allowed us to reduce the amount of water contained in the sludge by 10%. This improvement has brought about a reduction in the volume of waste and energy used for recycling.

## Carbonization of used pallets and other wood materials

At the Kurami Works, wooden pallets are used for the shipping of certain products and for the handling of raw materials. On average, 10 tons of used wooden pallets, crossties and other wooden materials are generated each month. We pass on the used wooden pallets to charcoal processors, who recycle them into wood biomass, which is then re-used as a charcoal substitute for preventing oxidization during copper processing. Approximately 30% of used wooden materials are converted into charcoal, accounting for about 20% of all charcoal used by the Works. This recycling system contributes to waste minimization and cost reduction.



Operation room for finish rolling mill (Kurami Works)



Storage location for used wooden pallets and other wooden materials



Charcoal preventing oxidization during copper processing

## Basic Environmental Policy

As a global manufacturer of non-ferrous resources and materials, the Nippon Mining & Metals Group will drive forward the following activities based on the basic policy that we will contribute to environmental conservation on a global scale through innovation in the productivity of resources and materials.



## 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. In accordance with the belief that responsibility for ensuring environmental conservation resides in the workplace, the top managers at operating bases and affiliate companies serve as supervisory environmental managers. We will further activate the Environmental Measures Committee, and deepen the mutual understanding between labor and management on environmental preservation.

#### 2. Environmental management system

Through Groupwide commitment, from top management to employees, and through appropriate application of the ISO14001 framework, we will continuously strengthen environmental conservation measures and reduce environmental risks.

#### 3. Environmental auditing

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

### Measures to be taken

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

- Action to help prevent global warming
- Reduction of waste materials
- Promotion of our recycling businesses
- Promotion of green purchasing
- Promotion of resource efficiency and recycling
- Better management of chemical substances
- Promotion of technology and product development and introduction of new technologies
- Training, public relations and community activities to communicate our Autonomous Action Plan and raise awareness of our environmental protection measures

### Environmental protection at our overseas businesses

#### 1. Environment-friendly operations in our overseas business activities

We will ensure an appropriate approach to environmental protection at overseas operating bases 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 protection.

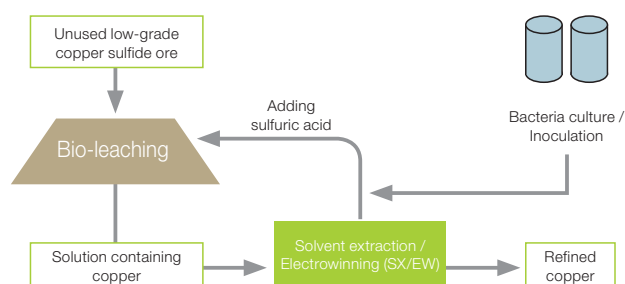
# Development of Environment-Friendly Technologies and Manufacturing Processes

Under the principal management concept of “innovation in the productivity of resources and materials,” the Nippon Mining & Metals Group is pursuing the technological developments outlined below.

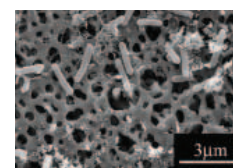
## Recovering copper through the use of advanced bio-mining technology

Utilizing the potential of bacteria found in the natural world, the Group is collaborating with the Chilean national copper company, CODELCO, to develop a technology to efficiently leach and refine copper from primary copper sulfide ore, a process that was long thought to be difficult. In terms of developing this bio-mining technology, we are also cooperating with external research institutes to introduce bacteria in order to develop technologies that increase the speed and rates of leaching copper from ore. When this technology is perfected, it will be possible to recover copper directly from unused low-grade copper sulfide ore. (See diagram on the right.)

### Copper recovery process employing bio-mining technology



Heap leaching



Electron micrograph image of bacteria

## Developing environment-friendly smelting technologies

At present, pyro-metallurgical smelting is the most commonly used method in the copper smelting industry. The process is energy intensive due to the high temperatures used to melt the copper concentrate and due to the need to recover the SO<sub>x</sub> as sulfuric acid from the sulfur in the concentrate.

The Nippon Mining & Metals Group has been pursuing the development of a next-generation hydro-metallurgical technology that does not release SO<sub>x</sub> and conserves energy. Efforts have resulted in the successful development of a new hydro-metallurgical technology, the N-Chlo Process, which

can effectively recover copper, gold and other metals from low-grade copper concentrate. Currently, a pilot plant of this process technology is under construction. (Please see p.31 in full report for details.)



Pilot plant testing facility for hydro-metallurgical copper refining

## Developing environmental conservation technologies

In recent years, the general public has become increasingly concerned about environmental protection, and there is a trend toward reinforcing environmental laws and regulations, such as severer standards for wastewater and regulations regarding heavy metal traces. The Group, in addition to complying with environmental regulations, is active in developing environmental protection technologies to reduce its impact on the environment, such as advanced treatment technologies for wastewater and purification technologies for contaminated water.



Column purification experiment to treat water contaminated with heavy metals

### Lead-free surface-mounted chemicals

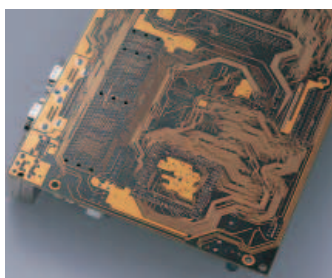
As part of a series of EU regulations relating to hazardous substances, the Restriction of Hazardous Substances (RoHS) directive took effect in July 2006 with the objective of reducing the impact on the environment caused by the use of six substances—lead, mercury, cadmium, hexavalent chromium, Polybrominated Biphenyl (PBB) and Polybrominated Diphenyl Ether (PBDE)—which have been, in principle, prohibited in electric and electronic equipment. Among these regulated substances, lead, in particular, has long been regarded as an

indispensable substance for soldering joints in the electronic materials field, so the race to develop a lead-free substitute is at a fever pitch. Taking this situation into account, the Nippon Mining & Metals Group is working on developing lead-free soldering powder and plating antioxidants; electro-less plating solutions as an alternative to the leveler used to solder used for the treatment of printed circuit boards (PCBs); and additives for encapsulation resins that can be used in higher reflow temperatures caused by lead-free processes.

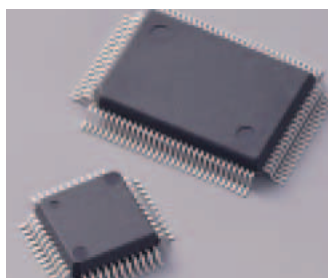
### Cyanide-free electro-less gold plating

Corrosion-resistant metal coatings are widely used in order to improve the reliability of electronic components. The three most common methods for forming the metal films are plating, the Physical Vapor Deposition (PVD) and the Chemical Vapor Deposition (CVD). Among these, plating is the most common because of its cost advantage. To further categorize plating methods, there are electroplating and electro-less plating, both solutions for which contain toxic cyanide compounds. Cyanide is toxic to the human body and also has a serious

impact on the environment, but since it is unsurpassed for improving the stability of plating solutions and film properties, it continues to be widely used. In light of this situation, the Group applied itself to developing a cyanide-free electro-less plating method, and has succeeded in the practical realization of a method that offers superior stability and film properties. At present, we are investigating its practical applications in semiconductors and printed circuit boards.



Printed circuit board



Integrated circuit (IC) packages



Surface-mounted components

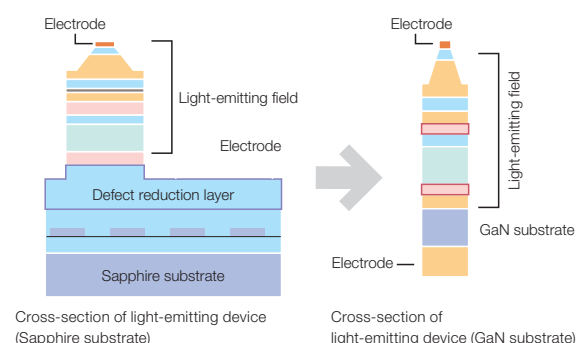
### Development of Gallium Nitride (GaN) thick-layer substrates

Gallium Nitride (GaN) is expected to become a key material for light-emitting, high-power laser diodes and high-frequency devices in the future. At the Toda Works, R&D efforts are under way to develop GaN thick-layer substrates for high-performance devices. The outcome of our development will contribute to the simplification of device processing, as well as to an environment-friendly manufacturing process, which either sapphire- or silicon carbide (SiC)-based devices cannot attain.



Gallium Nitride (GaN)

Use of GaN substrate simplifies the manufacturing process of light-emitting/receiving devices and cuts energy consumption

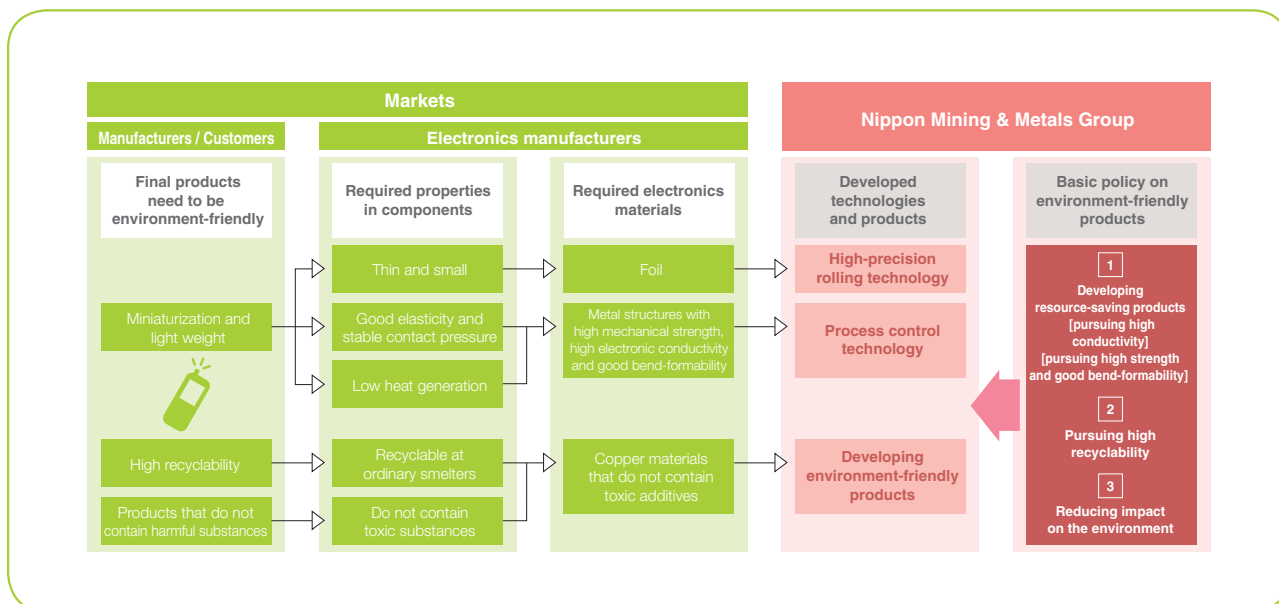




## The search for environment-friendly electronics materials for IT equipment

Mobile phones and other IT equipment are becoming more environment-friendly and more compact, which saves resources. More recyclable components and materials, which do not contain toxic substances, are much sought after. From

the point of view of a materials manufacturer for electronics, the Nippon Mining & Metals Group is developing environment-friendly product technologies in order to contribute to the creation of environmentally sound products.

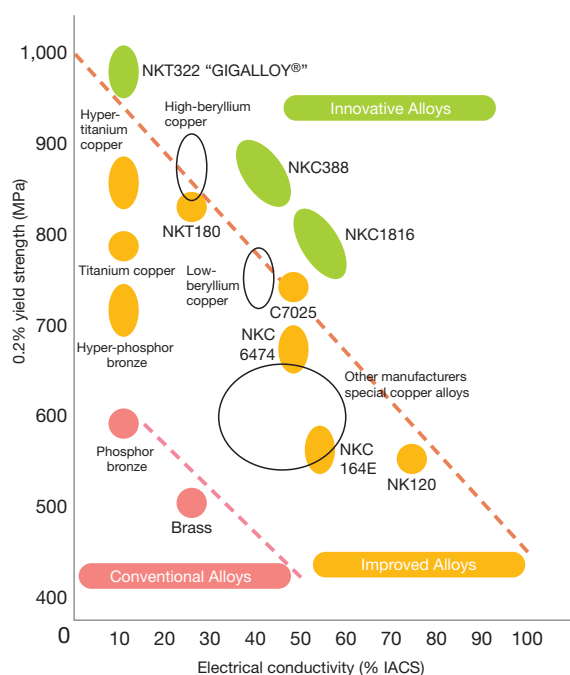


## Collaboration in the development of alloys and processes, realizing high strength and high conductivity

Pursuing resource conservation, high recyclability and reduction of impact on the environment, the Group responds quickly to rapidly changing demand in the market for electronic products through initiatives to improve existing materials (process

development and improvement) and to technological trends in markets and applications with measures to develop new materials (comprehensive development of new alloys and alloy processing methods).

Combination chart of strength versus conductivity in high-performance copper alloys



The high-performance series is the result of precise process control technology.

By precisely controlling the manufacturing process, the Group has created a high-performance metal material showing marked improvements in material properties compared to conventional alloys using the same components. The extensive lineup corresponds to the trend towards compact, lightweight, highly precise electronic components. From a recycling perspective, the products are superior because they are made of the same alloys as conventional products but without using any toxic materials.

- High strength and bend-formability → Hyper-phosphor bronze  
Compared to conventional phosphor bronze, there is more freedom to design products that feature high-density packaging
- High durability → Hyper-stainless steel, Hyper-phosphor bronze, Hyper-titanium copper  
Stainless steel dome switches for products with a long life span
- High strength, High bend-formability, Heat resistance → Hyper-titanium copper  
Compact connectors for mobile phones

### Developing ultrahigh functional copper alloys

Through collaboration in the development of alloys and processes, the Group has realized properties that could not be achieved in conventional copper alloys.

- High strength, High conductivity → NKC388, NKC1816  
A new Corson alloy that combines high conductivity to suppress heat generation in connectors with high strength
- Ultrahigh strength → NKT322 "GIGALLOY"  
We have developed an alloy that combines excellent bend-formability with strength at the one gigapascal level.

## Earning the Trust of Our Customers and Business Partners

In order to become an indispensable partner to our customers and business affiliates, the Nippon Mining & Metals Group is dedicated to supplying high-quality, safe products. The Group places the greatest importance on forging trusting relationships with its customers and business partners by listening to their opinions to improve the quality of products and services.

### Quality assurance system

The Nippon Mining & Metals Group is supplying high-quality products and services that meet the challenging requirements asked of us by a broad range of customers. The Group approaches the issue of "quality" not merely from the narrow perspective of the quality of products and services, but from the wider viewpoints of the quality of workplaces and management, and with this in mind is implementing a range of reforms, including those relating to quality management systems and NPM activities. Specifically, the Group has set various

targets, such as to reduce its product defect rates and the number of quality claims, and the Group as a whole is actively implementing reforms to achieve them. Tailored to the characteristics of each of its businesses, the Group has constructed a quality assurance system that incorporates marketing, manufacturing, technology and product development.

> Please see p.19 for details on "NPM Activities."

### Obtaining ISO9001 certification

For the purpose of the establishment of a system to stably and efficiently manufacture high-quality products that satisfy customers' demands, most domestic operating bases of the Group have ISO9001 certification, an international standard of a quality management system. Nikko Smelting & Refining Co., Ltd., and Japan Copper Casting Co., Ltd., are preparing for obtaining certification in 2009.



ISO9001 certification

### Green purchasing

The Group is promoting green purchasing to support the establishment of a recycling-oriented society, prevention of global warming and encouragement of 3R activities. In green purchasing, we have set up the Green Procurement Guideline covering all equipment and materials that we may purchase, to purchase more competitive equipment and materials in consideration of functions, prices and delivery times, as well

as environmental impacts. Also, we provide our suppliers with Nippon Mining Procurement Purchasing Policies and Green Procurement Guideline, in order to encourage them to establish environmental management systems, thoroughly control banned substances and investigate chemical substances contained in their products, and strengthen their environmental conservation activities.

### Commendations received by customers

The Nippon Mining & Metals Group received the following commendations in fiscal 2007. We will further strive to seek increased customer satisfaction.

| Customer                      | Commendation (Award)                                                                            | Recipient                                                 | Reason for the commendation                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Intel Corporation             | Intel Corporation's 2007 Supplier Continuous Quality Improvement (SCQI) Award                   | Nippon Mining & Metals Co., Ltd.                          | This award is Intel's highest honor for its suppliers, recognizing them for outstanding commitment to quality and performance in providing products and services deemed essential to Intel's success. Nippon Mining & Metals was recognized for its support to Intel by supplying Intel with sputtering targets for physical vapor deposition applications. This is the third consecutive year we have won this award. |
| Molex Japan Co., Ltd.         | Yushu-Sho (Excellence Award)                                                                    | Nikko Shoji Co., Ltd.                                     | The Company was highly admired for its efforts in accurately meeting costs, quality, and delivery deadlines that the customer requested, and in heightening customer satisfaction.                                                                                                                                                                                                                                     |
| Hitachi Display Devices, Ltd. | Commendation for supply of materials used for Electrode of Cold Cathode Fluorescent Lamp (CCFL) | Nikko Fuji Electronics Doungguan Co., Ltd.                | Its accuracy of delivery control and technological services were highly appreciated.                                                                                                                                                                                                                                                                                                                                   |
| Texas Instruments, Inc.       | Supplier Excellence Award                                                                       | Nikko Metals USA, Inc. (former Nikko Materials USA, Inc.) | This award was in appreciation and recognition of Nikko Metals USA's continuous efforts to improve its products supplied to Texas Instruments, subsequent to the commendation in 2004.                                                                                                                                                                                                                                 |

# Involvement with Society

## Communication with local communities

The Nippon Mining & Metals Group operates a wide range of businesses both domestically and internationally, and each operating base maintains regular communication with local governments, residents associations and chambers of com-

merce to establish trust with them. Each operating base within the Group makes active communication with local communities by hosting plant tours and summer festivals, etc. Cases of communication with local communities are introduced in p.34.

### • Hosting plant tours and others

| Operation bases in the Group                                                       | Implemented activities                                                                     | Participants                                                                     | Timing of implementation           | Number of participants |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------|------------------------|
| Isohara Works                                                                      | Plant tour                                                                                 | Children of employees                                                            | August, 2007                       | Approx.50              |
|                                                                                    |                                                                                            | Rotarians in Kitaibaraki City                                                    | October, 2007                      | Approx.20              |
| Kurami Works                                                                       | Plant tour                                                                                 | Neighboring elementary schools                                                   | November, 2007                     | 9                      |
| Tomakomai Chemical Co., Ltd.                                                       | Plant tour                                                                                 | Local residents, schools                                                         | July and August, 2007              | Approx.30              |
| Kurobe Nikko Galva Co., Ltd.                                                       | Plant tour                                                                                 | Local residents                                                                  | August, 2007                       | 25                     |
| Nikko Tsuruga Recycle Co., Ltd.                                                    | Plant tour                                                                                 | The Mining and Materials Processing Institute of Japan (MMIJ)                    | September, 2007                    | 20                     |
|                                                                                    |                                                                                            | Manufacturing Science and Technology Center (MSTC)                               | November, 2007                     | 13                     |
|                                                                                    |                                                                                            | Local residents                                                                  | November, 2007                     | Approx.40              |
|                                                                                    |                                                                                            | Industry group— <i>Kogyo-bukai</i> —The Tsuruga Chamber of Commerce and Industry | November, 2007                     | 16                     |
| Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd. and Hibi Kyodo Smelting Co., Ltd. | A discussion session with leaders of local self-governing bodies in five neighboring wards | Leaders of local self-governing bodies in five neighboring wards                 | From the end of 2007 to early 2008 | Approx.10              |
|                                                                                    |                                                                                            | Leaders of neighborhood associations                                             | May, 2007                          | 11                     |
|                                                                                    | A discussion session with leaders of local self-governing bodies in neighboring wards      | Leaders of local self-governing bodies in two neighboring wards                  | December, 2007                     | Approx.30              |
| Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.                 | Plant tour                                                                                 | Neighboring elementary schools                                                   | February, 2008                     | 32                     |

### • Convivial events such as summer festivals to introduce local residents

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hitachi Area Coordination Center                                                   | <ul style="list-style-type: none"> <li>• Hosts a summer festival—<i>Sanjin-Sai Enyu-kai</i>—on its company field, once a year in July, with approx. 2,000 participants.</li> <li>• About 10 employees joined an annual celebration conducted by a local shrine, as well as worked for a local summer festival.</li> </ul>                                                                                                                                                                                                                      |
| Kurami Works                                                                       | <ul style="list-style-type: none"> <li>• Hosts a summer festival—<i>Hazuki-sai</i>—on its company field, once a year in August with approx. 5,000 to 6,000 participants.</li> <li>• Participates in a fall festival—<i>Shinko-sai</i>—in every September with approx. 300 to 500 participants.</li> <li>• Opens an area of the Works as a stopover-point for the o-mikoshi (portable shrine) during the festival in which the o-mikoshi is carried to a local shrine. Company employees also participate in carrying the o-mikoshi.</li> </ul> |
| Toda Works                                                                         | <ul style="list-style-type: none"> <li>• Participates in a summer festival hosted by Japan Energy Toda Administration Office, once a year in August, with approx. 800 participants.</li> </ul>                                                                                                                                                                                                                                                                                                                                                 |
| Nikko Mikkaichi Recycle Co., Ltd.                                                  | <ul style="list-style-type: none"> <li>• Participates in a summer festival conducted at the front of JR Kurobe Station, in every August, with approx. 100 participants.</li> </ul>                                                                                                                                                                                                                                                                                                                                                             |
| Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd. and Hibi Kyodo Smelting Co., Ltd. | <ul style="list-style-type: none"> <li>• Opens an area of the smelters for a walking rally—<i>Hoko-rally</i>—conducted in the Hibi district, Tamano City once a year in November, with approx. 100 participants.</li> </ul>                                                                                                                                                                                                                                                                                                                    |
| Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.                 | <ul style="list-style-type: none"> <li>• Hosts a summer festival in an open area within the company's housing complex, once a year in August, with approx. 1,500 participants.</li> <li>• About 30 company employees participate in a dancing festival—<i>Seki-no-Taitsuri-Odori-Taikai</i>, once a year in September.</li> </ul>                                                                                                                                                                                                              |
| Kasuga Mines Co., Ltd.                                                             | <ul style="list-style-type: none"> <li>• Conducts an annual celebration—<i>Sanjin-sai</i>—with about 10 local relevant guests.</li> <li>• Participates in a festival—<i>Akamizu-matsuri</i>—of Kurino settlement, Bounotsu-machi, Minamisatsuma City, Kagoshima Prefecture, once a year, with 50 local residents.</li> </ul>                                                                                                                                                                                                                   |
| Gould Electronics GmbH                                                             | <ul style="list-style-type: none"> <li>• Volunteers in the company participated in a marathon race in Freiburg, Germany in April 2007.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                              |



A briefing to plant tour participants at Tomakomai Chemical



Plant tour at Nikko Tsuruga Recycle



*Sanjin-sai* (Hitachi Area Coordination Center)



Summer Festival (Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.)



*Seki-no-Taitsuri-Odori* (Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.)



*Hoko-rally* (Hibi Kyodo Smelter, Pan Pacific Copper Co., Ltd. and Hibi Kyodo Smelting Co., Ltd.)



*Hazuki-sai* (Kurami Works)

# Involvement with Employees

Taking great care of its employees, the Nippon Mining & Metals Group aims to create an optimum working environment where employees can perform at their full potential.

## Respect for human rights

The Nippon Mining & Metals Group aims to create an organization where employees' personality, human rights and individuality are respected. The Group's Code of Conduct clearly expresses "respect of human rights" in the stipulation of "the creation of an optimum working environment" to familiarize the concept to employees in the Group including domestic and overseas affiliated companies. Also, the Nippon Mining & Metals Compliance Guidebook, distributed to every

employee, specifies "respect of individual personality," and strictly prohibits unjust discriminatory treatments based on nationality, gender, age, religion, social status or physical features, and sexual harassment.

Highly esteeming harmonious relationship with societies where our operating bases locate, we will further create working environments that allow those who are employed at the locations to work without undue worries.

## Initiatives of Nippon Mining & Metals in Japan

### • Initiatives toward diversity

Nippon Mining & Metals Co., Ltd. ("NMM") values diversity of human resources and working ways. NMM is promoting the reemployment of retirees, the use of women workers' abilities, and the employment of the physically challenged. Also, NMM is creating systems of holidays for employees raising children or providing nursing care, and community service leave to promote diverse working ways.

#### Promoting a balance between work and other life commitments

NMM believes that measures to help employees achieve a balance between professional and other commitments are important. In compliance with various laws and statutory

regulations, we operate childcare and nursing-care leave systems and systems for shortening working hours.

#### Introduction of Self-Statement System

In April 2007, NMM adopted "Self-Statement System" to understand employee requests and the circumstances of employees for proper job placements and career development. The aim of this system is that the Company identifies each employee's career interests and aspirations, and reflects them in human resource development programs to the utmost extent.

### • Job ability evaluation

To maintain the Group's policy of operating with a small number of highly skilled staff, one of the keys is to create a system that allows individual employees to fully realize their potential and make the best use of their unique abilities. To make this possible, we need to accurately evaluate their abilities.

#### Introduction of "Competency Evaluation Program"

In April 2007, the Group introduced the "Competency Evaluation Program" based on "company models." This program aims to evaluate efforts that are continuously made to produce significant results during process for achieving goals or performing tasks. Results of the evaluation are taken into consideration in relation to employees' promotion.

### • Our initiatives for human resources development

NMM follows a basic policy of running its business operations with a small number of highly-skilled staff. To translate this policy into reality, it is essential to provide training that will develop the individual skills of each employee.

Since the integration of three metal-related companies into new NMM in fiscal 2006, we have been revamping our entire educational programs. In fiscal 2007, a new human resources development program for managerial personnel was launched. Furthermore, in fiscal 2008, we are going to systematically develop an educational program for senior staff, including job rotation focusing on human resources development, as well as develop educational programs to enhance expertise and improve the judgment of those who work on manufacturing floors. The NMM's educational program identi-

fies various professional education courses such as studies at overseas graduate schools in the field of management, law or technology, at the International Institute for Mining Technology (MINETEC), and overseas language schools. Training courses conducted by Nippon Mining Holdings, Inc., including "Nippon Mining Management Collage," also provide professional development opportunities for our staff.





## • Relationship with the labor union

Labor unions are organized in most domestic affiliated companies of the Group. Based on mutual trust between management and employees, a sound relationship is maintained. At regular meetings between representatives of management and a labor union of each company, management discloses details of the business conditions of the Company 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 unions thus act in partnership with management to ensure that important information is communicated to all employees, and also play a part in ascertaining employee's views on issues concerning them. We believe that employees' full understanding allows smooth change of the Companies' business lines or organizational structures.

## • For maintaining physical and mental well-being

We believe that maintaining of all employees' physical and mental well-being is important.

### Mental healthcare

We recognize the good mental health as a requisite to create a happy life for each employee and his or her family and a lively workplace. For the purpose of a broad sense of mental healthcare, a wide range of initiatives, including facilitating communication at workplaces, have been taken.

Measures in support of mental healthcare across the organi-

zation of NMM, such as dispatch of doctors and counselors specialized in mental health to operating bases, have been conducted since July 2008. The measures also allow employees to conclude counselling contracts without passing through the Company.



Brochure about mental healthcare

## Health and safety activities

Placing the highest priority on ensuring health and safety for all members working at the Nippon Mining & Metals Group, we have drawn up our Basic Policy on Health and Safety, under which we conduct various business activities.

### Nippon Mining & Metals Co., Ltd. Basic Policy on Health and Safety

We place the highest priority on ensuring health and safety for all members working at the 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 the health and safety management system.
2. We will work to identify, eliminate and reduce hazards and harmful factors in all areas of business operations and to ensure no accidents occur.

3. We will work to maintain and improve employee's 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.

Established in October, 2006

## • Safety performance\*1

Safety performance for fiscal 2007 substantially improved from the previous fiscal year.

|                                                  |                                                         | 2004 | 2005 | 2006 | 2007 |
|--------------------------------------------------|---------------------------------------------------------|------|------|------|------|
| Safety performance of domestic operating bases   | Instances of accidents with lost work days (persons)    | 8    | 9    | 16   | 8    |
|                                                  | Instances of accidents without lost work days (persons) | 16   | 15   | 21   | 13   |
|                                                  | Total (persons)                                         | 24   | 24   | 37   | 21*2 |
|                                                  | Explosions, fires (cases)                               | 0    | 3    | 3    | 1*3  |
| Health performance of domestic operating bases   | Occupational diseases (persons)                         | 0    | 0    | 0    | 1*4  |
| (Ref.) performance of overseas operating bases*5 | Instances of accidents with lost work days (persons)    | —    | —    | 23   | 7    |
|                                                  | Instances of accidents without lost work days (persons) | —    | —    | 9    | 6    |
|                                                  | Total (persons)                                         | —    | —    | 32   | 13   |

Notes:

\*1. Data of the safety performance is counted on a calendar-year basis.

\*2. From January through December 2007, the frequency rate of industrial accidents (the number of casualties caused by occupational accidents per total actual working million hours) is 0.32, and the accident severity rate (the number of workdays lost per total actual working thousand hours) is 0.08. (These figures cover cases of the employees of Nippon Mining & Metals Co., Ltd.) (Ref.) From January through December 2006, the frequency rate of industrial accidents and the accident severity rate in Japan were 1.90 and 0.12, respectively. (Industrial Accident Trend Survey by the Ministry of Health, Labor and Welfare)

\*3. Please see p.61 in Sustainability Report 2007 (Japanese) for the details.

\*4. The occupational diseases listed in 2007 was a pulmonary disease caused by dusts to be certified as a work-related accident by a relevant labor standards supervision office. We continuously implement measures against the disease, such as preventing airborne dusts from occurring, carrying out the medical examination, and providing information and education to relevant workers. This case is included in the "instances of accidents with lost work days."

\*5. The first counts on performances of overseas operating bases started in 2006. This report shows the retroactively revised data in 2006, due to the increased number of the overseas affiliated companies.

### Activities in domestic and overseas societies

The Nippon Mining Group is engaged in activities as mentioned below, in collaboration with NPOs.

#### • A firefly appreciation meeting organized by Nikko Tsuruga Recycle Co., Ltd.

In June 2008, Nikko Tsuruga Recycle Co., Ltd., organized events and meetings for the viewing and appreciation of fireflies that appear around the Nikkori River irrigation canal on the company's southern side in collaboration with local environmental preservation groups, Aqua Sangha, and the Tsuruga Machizukuri Hagi-No-Kai. Nikko Tsuruga Recycle organizes this meeting every June, and this was the third meeting, which approximately 60 people including families

joined. At the meeting, participants enjoyed a fantastic sight with fireflies hovering in the night sky, as well as a slide show. The Group believes that taking good care of and improving the environment is an essential mission for companies, and recognizes such a campaign for the protection of fireflies as a part of its efforts for better local communities. We will continue and nurture such a relationship with local communities.



A slide show at the meeting



Participants coming to the firefly appreciation meeting

>>> The web-site of Aqua Sangha <http://aquasangha.jp/>

#### • Supporting the activities of NPO 2050

##### —Increasing the status and quality of life of women in developing nations

NPO 2050 tackles such global problems as rapid population growth, poverty, environmental destruction, and HIV and AIDS. The organization believes one of the keys to solving these problems is to increase the status and quality of life of women in developing countries. Accordingly, NPO 2050 undertakes

projects to help women in poor families to become self-reliant through educational funds and agricultural instruction in Pakistan, Nepal, India, Bangladesh, and Guizhou Province, China. The Nippon Mining & Metals Group supports this initiatives of NPO 2050.



With scholarship students (left; Bangladesh, right; Guizhou Province, China)



>>> The web-site of NPO2050 <http://www.npo2050-e.org/>

## ICMM in 2007: working to showcase member companies and to promote good practice



The mining and metals industry has undergone an unprecedented period of transformation; of rapid growth, diversification and an increase in the complexity of the companies involved. For many companies it has been a time of impressive financial performance. But with such remarkable success comes considerable responsibility. For example, the mining industry is often the first to make significant inward investment in poor countries, and this places the industry in a prime position to ensure a positive contribution at a critical stage in the host nation's economic development.

The work of ICMM began in 2001 when leading companies came together with the aims of distinguishing industry leaders, and making a contribution to raising standards and promoting good practice across the industry as a whole. It is clear from events in 2007 that we have been building on significant progress in this direction during the past year.

In September 2007 ICMM attended the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development in Geneva, where we presented an update on our Resource Endowment initiative to the forum's 38 national government members. Moving into Phase III

of the initiative, we held workshops in Chile, Peru and Tanzania to discuss our findings and recommendations with stakeholders.

We also began work on two pieces for publication in 2008: a toolkit for companies to use as a practical aid to improve their approach to integrated closure planning, and a good practice guidance on the management of HIV/AIDS, TB and malaria in mining communities.

2007 also saw the publication of MERAG, the metals environmental risk assessment guidance, and HERAG, the health risk assessment guidance.

Notwithstanding the considerable progress made in a productive year, there remain significant challenges, not least in bringing together different levels of government, multilateral institutions, donor agencies, and local communities, as well as companies in the sector. We look forward to making significant inroads in 2008.

The Nippon Mining & Metals Group associates itself with the 10 principles of ICMM, stipulated on the next page. The Group has established its Code of Conduct and others in alignment with these principles.

### ICMM Principles

01. Implement and maintain ethical business practices and sound systems of corporate governance.
02. Integrate sustainable development considerations within the corporate decision-making process.
03. Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.
04. Implement risk management strategies based on valid data and sound science.
05. Seek continual improvement of our health and safety performance.
06. Seek continual improvement of our environmental performance.
07. Contribute to conservation of biodiversity and integrated approaches to land use planning.
08. Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.
09. 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.

#### • Approbation and support to EITI

British prime minister Tony Blair, advocated the Extractive Industries Transparency Initiative (EITI) at the World Summit for Sustainable Development in Johannesburg. In 2005,

ICMM expressed its continuous support for EITI. The Nippon Mining & Metals Group has approbated EITI Principles and will support EITI.

Please send us your feedback about Sustainability Report 2008 to help us make the next report even better. We welcome any suggestions for improving the report.

Send your views on this report to:

CSR Office, Administration Department  
Nippon Mining & Metals Co., Ltd.  
2-10-1 Toranomom, Minato-ku, Tokyo 105-0001, Japan  
E-mail: [info@nikko-metal.co.jp](mailto:info@nikko-metal.co.jp)  
FAX: +81-(0)3-5573-7598

A full report is available in PDF format at the website.  
<http://www.nikko-metal.co.jp/e/sustainability/index.html>

