


KHI Group

# CSR Report 2012 (Full Report)




# Kawasaki Heavy Industries, Ltd. (KHI) and the Group it leads —collectively, the KHI Group—seek to provide useful reports that enable all stakeholders to gain a better understanding of the Group’s CSR activities.


We have prepared a CSR report in three versions, as described below, based on responses from a readers’ survey and third-party opinions, so that readers may choose the format and depth-of-content to suit their specific objectives.

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**1 Booklet Version**

Presented in digest style, this tightly arranged version provides information on key activities. The 2012 report is eight pages shorter than the 2011 report and the paper is thinner, making for an easier read.
  
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**2 Full Report (web)**

This version adds to the information in the paper-based digest with more detailed content. It can be downloaded as a PDF file.  
<http://www.khi.co.jp/english/csr/index.html> (CSR section of the KHI Group website)  
<http://www.khi.co.jp/english/csr/report/2012/index.html> (PDF file)
  
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**3 Detailed Environmental Report (web)**

A PDF file, this version focuses entirely on environment-related content. It also includes a collection of environmental data.  
<http://www.khi.co.jp/english/csr/report/detail/2012/index.html> (PDF file)

## KHI Group’s Profile

KHI Group is a leading global manufacturer of transportation and industrial equipment, comprising about 100 subsidiaries and affiliates in Japan and around the world.

The group boasts a comprehensive technological base that encompasses mastery of the land, sea, and air. This allows it to offer an impressive lineup of products, including aircraft, rolling stock, marine vessels, power plants, manufacturing equipment and systems. Among the many assets of which it is proud, the Group also manufactures such world-famous consumer products as Kawasaki motorcycles and Jet Ski® watercraft. With its technological wealth and brand prowess, the Group strives to protect the global environment and contribute to the development of a sustainable society. This is the philosophy that guides the KHI Group’s operations.



## Editorial Notes

In 1999, KHI issued its first environmental report, which later became a report on environmental and social responsibilities. Both publications provided a look at the KHI Group's activities from environmental and social perspectives. In 2010, the report was renamed the CSR Report. The report for 2012 covers this content:

- The overall structure of the report parallels the five themes of KHI Group CSR.

- ① Value creation through business
- ② Management
- ③ Employees
- ④ Environmental activities
- ⑤ Social contribution

- Our special features this year include

**Special Feature 1** After the Earthquake: Just Over a Year  
We offer an update on a variety of activities undertaken during this time.

**Special Feature 2** We provide an overview of our first dialogue with experts.

### Target

This report covers CSR activities undertaken throughout the Group.

### Period

Fiscal 2012 (April 1, 2011 to March 31, 2012), as well as a part of fiscal 2013

### Publication frequency

Annually, as a fiscal report

### Editing and publication

CSR Report Editorial Committee (Editorial office: CSR Department, CSR Division)

### Publication responsibility

General manager, CSR Division

### Guidelines

In preparing this report, the editorial office referred to the Environmental Reporting Guidelines (2012 Edition) issued by the Ministry of the Environment and GRI Sustainability Reporting Guidelines (G 3.1) issued by the Global Reporting Initiative (GRI).

### Disclaimer

This report contains forward-looking statements and descriptions of plans, estimates and forecasts based on business plans and management policies as of the date of publication as well as past and present facts about the KHI Group. Such plans, estimates and forecasts reflect possible courses of action and assumptions formed with information available at the time of publication. Consequently, they are inherently susceptible to uncertainties and changes in circumstances, and future performance and events undertaken in the course of business may differ from anticipated results.

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## **To fulfill the social responsibilities incumbent upon an enterprise that plays such an essential part in the creation of social infrastructure in communities around the world**

### **KHI Group CSR**

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The KHI Group traces its beginnings back to 1878 and KHI's early activities in the shipbuilding business. Since then, the Group has expanded its business pursuits in line with the times, gaining a solid foothold in transportation equipment and systems, specifically rolling stock, aircraft and motorcycles known worldwide under the Kawasaki brand, and then a growing presence in energy and environmental engineering, emphasizing gas turbines, gas engines and energy and environmental plant engineering, and also industrial equipment, where expertise has been applied to such products as industrial plants, hydraulic machinery and robots.

In 2007, we embraced a newly formulated mission statement—"Kawasaki, working as one for the good of the planet (Enriching lifestyles and helping safeguard the environment: Global Kawasaki)"—that clearly defined our duty to society as a corporate citizen. To keep this mission statement alive and realize inherent objectives at ever higher levels, we work toward action goals from a perspective infused with the solid understanding of CSR. This is the driving force that sustains CSR activities within the Group.

A keen awareness of our responsibility to stakeholders permeates all aspects of our corporate activities, and we always act accordingly. At the same time, we strive to contribute to the development of a better society, today and

tomorrow.

In fiscal 2012, we opened a dialogue with experts in an effort to ascertain with greater clarity the position that is specifically required of the KHI Group. (Please refer to pages 13–14 for details.) The comments and suggestions offered by the panel of experts will be reflected in future CSR activities as if the opinions were those of stakeholders.

### **Over One Year Since the Great East Japan Earthquake**

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The perils of unprecedented natural disasters etched itself deeply into my mind in 2011. My heart goes out to those still affected by the earthquake and tsunami and the ensuing consequences, and while reconstruction will take time, I fervently hope that life returns to normal in the areas of devastation as quickly as possible.

The KHI Group already had a business continuity plan (BCP) in place—prompted by the lessons learned in the Great Hanshin Earthquake of 1995—that stressed protecting the lives of employees and their families, getting business back to normal on our own, and recognizing our responsibility to and the importance of contributing to local communities. The Great East Japan Earthquake prompted management to review the existing BCP and give priority to business activities that must be maintained even when a large-scale disaster strikes to



ensure our ability to fulfill the social responsibilities incumbent upon an enterprise that plays such an essential part in the creation of social infrastructure. (Please refer to pages 9–12 for details.)

The demands of society also changed after the Great East Japan Earthquake. For example, heightened interest in emergency power sources pushed up requests for reliable energy supply systems and products capable of greater energy use efficiency, including operation during power-saving times. In addition, the importance of building towns better able to withstand disasters became blatantly more obvious.

The KHI Group will resourcefully respond to these demands, providing new value to society through such installations as independent distributed power systems that take advantage of local features and through the establishment of disaster shelters equipped with these power generation facilities. Such responses will contribute to the development of communities where people feel safe and secure.

### **Taking on Global Issues**

In recent years, the global economy has maintained accelerated growth, fueled by emerging markets, while environmental problems, particularly global warming, have become increasingly more of a concern. In addition, governments are once again rethinking the energy policies of

tomorrow with the environment and natural resources in mind. We are also seeing steadily rising demand for key infrastructure systems, such as transportation and industrial installations, in emerging markets.

I believe that the ability to consistently meet the expectations of people worldwide requires direct contact with communities and customers to really know their needs and create and provide new value to address those needs. Given this scenario, KHI established the Marketing Division in April 2012 to integrate corporate capabilities in all product categories under the Group umbrella for a total solution response to evolving issues, to acquire a global perspective, and to facilitate mutual understanding between the Company and customers, while reinforcing activities that attest to our commitment to social contribution through business.

Through these efforts, we will respond to evolving social and economic circumstances, continuously promote innovation and reform, and contribute to all stakeholders, including communities and customers. This emphasis will lead to further growth for us as well.

A handwritten signature in black ink that reads "S. Hasegawa". The signature is fluid and cursive, with a large loop at the end.

Satoshi Hasegawa  
President, Kawasaki Heavy Industries, Ltd.

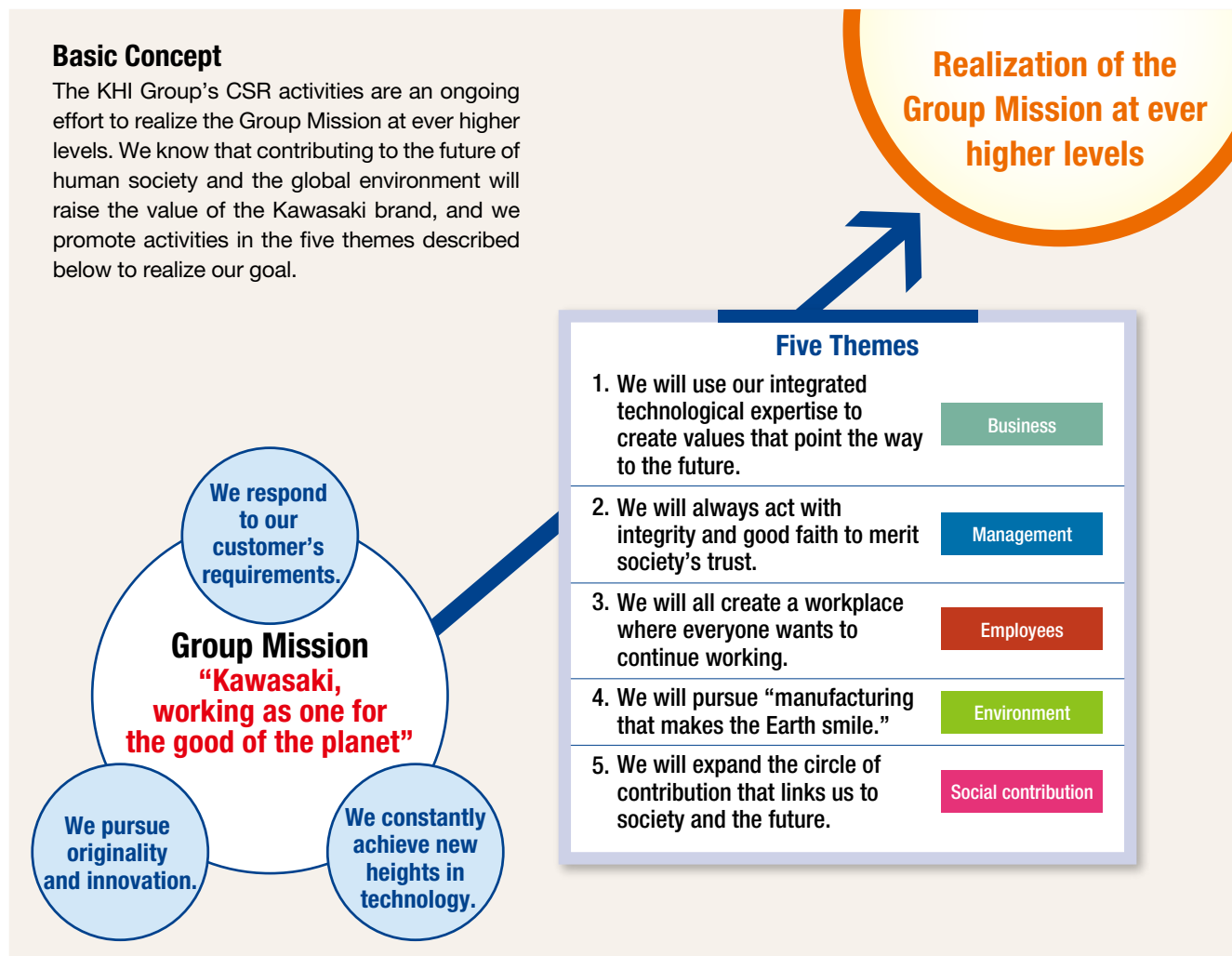
# KHI Group CSR

The KHI Group’s mission is “Kawasaki, working as one for the good of the planet : (Enriching lifestyles and helping safeguard the environment: Global Kawasaki).”

Each and every employee puts this statement into practice as he or she goes about individually assigned daily business activities.

To this we added a broader view of CSR and action goals, as we seek to realize the Group Mission at ever higher levels.

## Group Mission and CSR



## Creating the Group’s CSR Framework

The Group’s CSR activities fall into five themes.

Categories are established for each theme and action goals are set for each one of these.

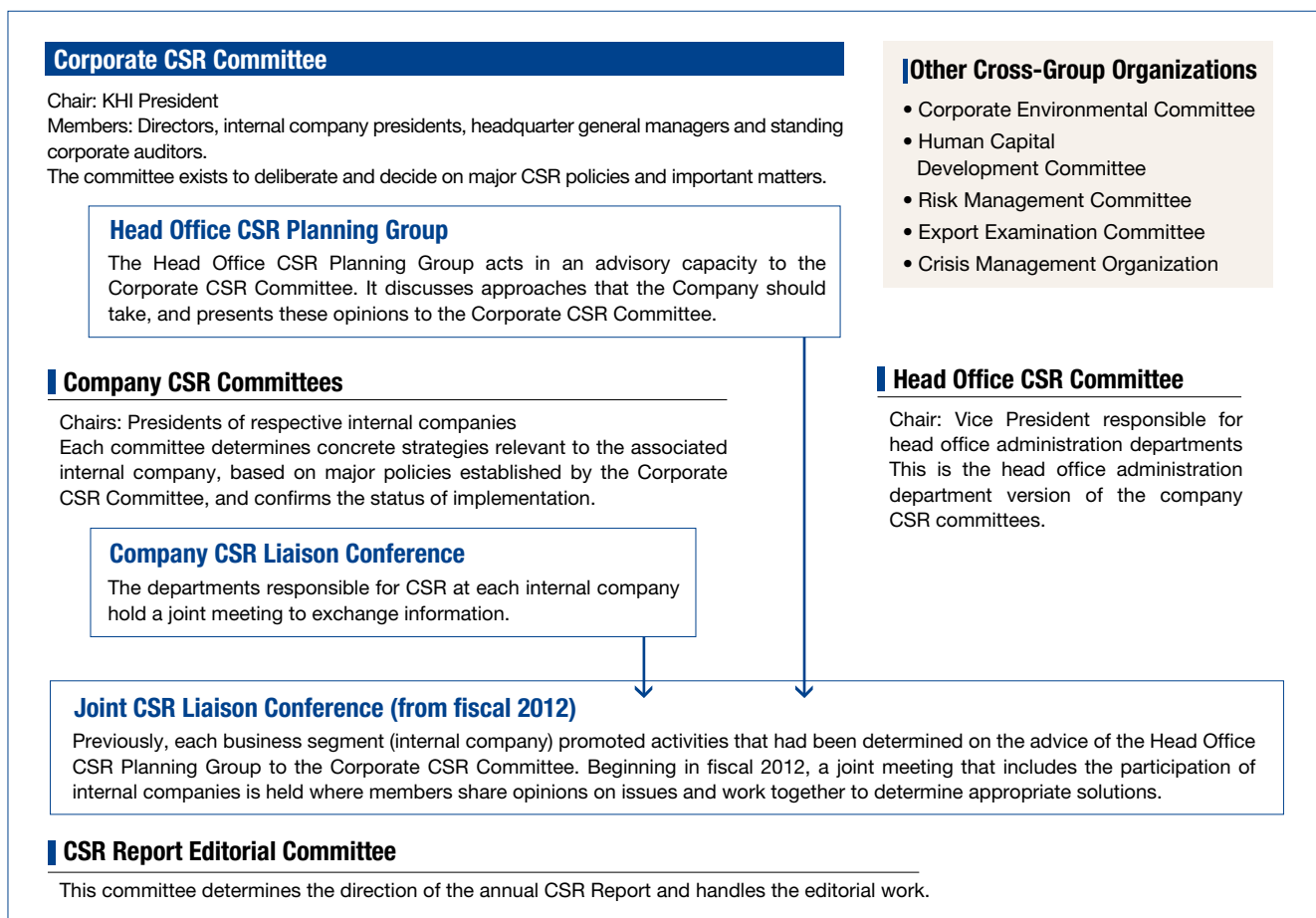
Various social expectations are placed upon companies. We collected and consolidated feedback from different sources, including requests from customers, points in CSR surveys conducted by third-party organizations, and ISO 26000 core subjects, and then selected specific CSR issues that we, as a corporate group, should address. These issues have been positioned as items of focused activity during the Medium-Term Business Plan 2010 (fiscal 2011-2013) that will enable the KHI Group to achieve its ideal.

The divisions assigned to these items self-assess the current status of their efforts and draft action plans highlighting

measures to compensate for shortcomings and to reinforce existing strengths. This PDCA (Plan-Do-Check-Act) cycle is repeated.(Please see page 7-8 for the individual CSR issues and Actions)

However, the social expectations placed on companies gradually change as the years go by, and the scope of issues that must be addressed starts to expand. Fiscal 2013 will be a year of preparation for the new medium-term business plan that will begin in fiscal 2014. During fiscal 2013, we will review our CSR issues and be ready to implement activities over the term of the new plan that perfectly reflect the changing times.

## CSR Activity Structure



## Group CSR Themes: Categories and Action Goals

| Themes                | Categories                             | Action Goals   |
|-----------------------|--|--|
| Overall               | CSR overall                            | Realize the Group Mission (KHI's duty to society) at a higher level.   |
| 1 Business            | Product Development                    | Draw on comprehensive Group capabilities and apply sophisticated technologies to the development of high-performance, high-quality products.                 |
|                       | Product Liability                      | Provide products and services that are reliable and safe from customer's perspective.  |
|                       | Customer Satisfaction                  | Provide products and services that meet customer needs and leave a great impression.   |
| 2 Management          | Corporate Governance                   | Pursue sound, transparent management, enable each business segment to operate independently, and demonstrate the combined strength of the Group.             |
|                       | Compliance                             | Build an organization that is open and self-regulating to underpin a corporate culture with credibility.   |
|                       | Risk Management                        | Pinpoint major risks that threaten the achievement of business targets and establish a system capable of providing the most appropriate responses.           |
|                       | Information Security                   | Institute reliable information security measures and maintain the safety and security of information.  |
|                       | Information Disclosure, IR Activities  | Provide timely, accurate corporate information and further enrich the contents of disclosure.  |
| 3 Employees           | Business Partners                      | Coexist with business partners and maintain fair partnerships while promoting collaboration in CSR activities.   |
|                       | Occupational Safety and health         | Create a safe, pleasant working environment where employees can perform their jobs in good health and in a positive state of mind.                           |
|                       | Human Resources Development            | Consistently cultivate the skills of employees, refine acquired talents, and raise the value of personnel assets to the highest level.                       |
|                       | Human Rights                           | Respect the diversity of employees and strive to create a workplace that embraces wide-ranging values and abilities and utilizes them.                       |
| 4 Environment         | Labor                                  | Endeavor to create a workplace that provides motivation and satisfaction and one in which employees are treated fairly and appropriately.                    |
|                       | Global Environment                     | Strive to realize a low-carbon society, a recycling-oriented society, and a society that coexists with nature.   |
| 5 Social Contribution | Local Communities and Japanese Society | Coexist and cooperate with local communities and help nurture new generations that will develop future dream technologies.                                   |
|                       | International Community                | Respect the myriad cultures of countries around the world and contribute to their vibrancy by cultivating technology and human resources in these countries. |

# CSR Issues and Actions

## Progress Report on Corporate Actions

Action plans are ultimately designed to achieve the action goals described on pages 5–6, with the PDCA cycle repeating until the desired objectives are reached. On this page, we describe action plans of head office divisions that promote corporate activities as well as changes in self-assessments based on results achieved through the stated action plans.

With sure and steady progress, we undertake activities in line with the characteristics of each action. Our activities address a range of subjects, including establishing policies and rules, which conclude in a single fiscal year with one action; diversity, which assumes higher priority as time goes on and results in an accumulation of measures; environmental activities, which incrementally expand in scope from the parent company to companies throughout the Group; and compliance awareness activities, for which an achievable target is hard to measure because no specific “complete-by date” goals are set.

★ Will address   ★★ Have addressed somewhat   ★★★ Have addressed fairly well   ★★★★★ Have addressed sufficiently but would like to improve

| Category    | Action  | Fiscal 2012 Action Plan<br>(as found in CSR Report 2011)   | Current Assessment for Period March 2011 to March 2012<br>[Supplementary information on actual status]                                   |
|-------------|---|--|--|
| Overall     | Encourage understanding of CSR in-house and make everyone fully aware of CSR issues and practices.                  | Prepare informative tools. Provide information to all divisions in all regions and for employees/management at all career levels.  | ★★★⇒★★★★<br>[Included organizing information meetings in each office]  |
|             | Pursue dialogue with society at large (separate from daily stakeholder communication activities).                   | Hold dialogue opportunities on a trial basis and reflect comments in appropriate activities.   | ★⇒★★<br>[Implemented dialogue with experts]  |
| Management  | Implement compliance and ethics seminars and assess the effectiveness of such training.                             | Implement activities common throughout the Company and run special sessions during training geared to career levels.   | ★★★★⇒★★★★<br>[Implemented various activities and conducted compliance awareness survey]  |
|             | Identify significant risks at subsidiaries.   | Implement risk management at principal subsidiaries in Japan.  | ★★★⇒★★★★<br>[Risks can now be identified through same framework used at KHI]   |
|             | Formulate and review business continuity plans.   | Each business segment will formulate business continuity plan and embark on suggested preparations.  | ★★★⇒★★★★<br>[Plans matched to business characteristics of each segment are ready]  |
|             | Aggressively promote communication with shareholders and investors.   | Hold information meetings (target: institutional investors) for quarterly performance and upload Q&A from the results announcement.  | ★★★⇒★★★★<br>[Action plan implemented smoothly]   |
|             | Request business partners to observe CSR management practices and work with them to implement required activities.  | Look into our CSR management policies with regard to our business partners.  | ★★★★⇒★★★★<br>[Formulated CSR procurement guidelines, disclosed content in April 2012]  |
| Employees   | Implement initiatives, especially for safety, health and mental health.   | Implement measures, such as safety training programs, initiatives to support good mental health and address lifestyle diseases, and steps to improve workplace environments.           | ★★★★⇒★★★★<br>[Confirmed that content corresponds with actual conditions in each office]  |
|             | Offer opportunities for employee development based on career tracks right up to mandatory retirement.               | Look into the development of career planning seminars appropriate to each level of the corporate ladder and implement suitable programs, and create a database of intellectual assets. | ★★★★⇒★★★★<br>[Finished looking into development of career planning seminars appropriate to each job assignment level]                    |
|             | Present opportunities for women to advance to managerial positions.   | Promote such initiatives as the introduction of senior female employees to young female staff as role models and help supervisors foster skill development in female staff.            | ★★★⇒★★<br>[Held a diversity seminar]   |
|             | Maintain dialogue and build trust with labor unions and employee representatives.                                   | Hold meetings with labor unions and employee representatives, and conduct employee awareness surveys.  | ★★★★⇒★★★★<br>[Held meetings with various labor unions]   |
| Environment | Expand scope for tracking environmental information on the entire KHI Group, including overseas operations.         | Broaden target range to include all domestic consolidated subsidiaries and principal subsidiaries overseas.  | ★★★⇒★★★★<br>[Established environmental management systems at all domestic consolidated subsidiaries and principal subsidiaries overseas] |
|             | Pursue efforts to reduce environmental load in each business segment, including subsidiaries in Japan and overseas. | Expand scope to include all domestic consolidated subsidiaries and principal subsidiaries overseas, and disclose reduction targets.  | ★★★⇒★★★★<br>[Expanded scope for tracking amount of energy consumed to include consolidated subsidiaries]                                 |
|             | Efforts toward waste reduction and recycling and evaluate the results.  | Enhance efforts to reduce waste and boost recycling, evaluate the results and introduce an electronic manifest.  | ★★★⇒★★★★<br>[Enhanced waste management practices through establishment of environmental data management system]                          |
|             | Encourage social contribution initiatives planned and sponsored on our own.   | Host a child-oriented manufacturing and engineering classroom.   | ★★★★⇒★★★★<br>[Developed tools for manufacturing and engineering classroom, held events]  |

\* A review of actions will be undertaken after fiscal 2014.



## Progress Report on Actions Taken by Each Internal Company

In fiscal 2012, each internal company—that is, business segment—addressed issues designated as priorities but also dealt with other issues pertinent to the respective company. A second self-assessment of all issues was conducted at the end of the fiscal year, comparing their status with that from the beginning of the fiscal year to verify progress toward the action goals.

Assessments made by head office divisions that promote CSR actions may not match those made by the internal company assigned to implement actions in all cases, but going forward efforts will be made to smooth out any discrepancies in perception.

Specific actions selected for attention in fiscal 2013 are based on results achieved in fiscal 2012. The table below showcases the assessment results for some certain of the CSR actions and the internal companies responsible for executing them.

★ Will address   ★★ Have addressed somewhat   ★★★ Have addressed fairly well   ★★★★ Have addressed sufficiently but would like to improve

| Category            | Action  | March 2011 ⇨ March 2012 Assessment (average) | Fiscal 2012 Business Segment to Execute Action                                  | Fiscal 2013 Business Segment to Execute Action  |
|---------------------|---|--|---|---|
| Overall             | Encourage understanding of CSR in-house and make everyone fully aware of CSR issues and practices.  | ★★★⇨★★★★                                     | All internal companies  | Rolling Stock Company<br>Motorcycle & Engine Company<br>Precision Machinery Company<br>Robot Division |
|                     | Create mechanism to take in comments and critiques from stakeholders, including customers, suppliers, business partners and communities and reflect such opinions in business activities. | ★★★★⇨★★★★★                                   | Motorcycle & Engine Company   | —   |
| Business            | Create new markets, strive to develop new customer value.   | ★★★★⇨★★★★★                                   | —   | Motorcycle & Engine Company   |
|                     | Lay out quality policy in written form, execute quality assurance activities in line with policy.   | ★★★★⇨★★★★★                                   | Ship & Offshore Structure Company<br>Rolling Stock Company                      | Ship & Offshore Structure Company<br>Rolling Stock Company  |
|                     | Conduct customer satisfaction survey and apply the results to enhance customer satisfaction   | ★★★★⇨★★★★★                                   | Precision Machinery Company   | Precision Machinery Company   |
| Management          | Create a mechanism for regular, exhaustively thorough internal audits and management reporting, and apply this mechanism to operations.   | ★★★★⇨★★★★★                                   | —   | Gas Turbine Division<br>Machinery Division  |
|                     | Ensure thorough appreciation for mission statement.   | ★★★★⇨★★★★★                                   | —   | Aerospace Company   |
|                     | Implement and assess the effectiveness of compliance and ethics seminars.   | ★★★★⇨★★★★★                                   | Gas Turbine Division<br>Machinery Division<br>Robot Division                    | Plant & Infrastructure Company<br>Gas Turbine Division<br>Machinery Division<br>Robot Division        |
|                     | Ensure that overseas operations are in full compliance with local laws.   | ★★★⇨★★★★                                     | Aerospace Company   | —   |
|                     | Maintain an overall crisis management system and a framework for its operation.   | ★★★★⇨★★★★★                                   | Plant & Infrastructure Company  | Plant & Infrastructure Company  |
|                     | Design business continuity plans that prioritize activities for continuation or restoration in the event of a disaster, and implement regular assessment and review.                      | ★★★⇨★★★★                                     | Ship & Offshore Structure Company<br>Gas Turbine Division<br>Machinery Division | Ship & Offshore Structure Company<br>Gas Turbine Division<br>Machinery Division                       |
|                     | Request business partners to observe CSR management practices and work with them to implement required activities.  | ★★★⇨★★★★                                     | Motorcycle & Engine Company<br>Precision Machinery Company                      | Precision Machinery Company   |
| Environment         | Track environmental information at all companies under the Group umbrella, including those overseas.  | ★★★⇨★★★★                                     | Robot Division  | Robot Division  |
|                     | Address efforts to reduce environmental load in each business segment, including subsidiaries in Japan and overseas.  | ★★★★⇨★★★★★                                   | —   | Motorcycle & Engine Company   |
| Social Contribution | Encourage self-planned and -sponsored social contribution initiatives.  | ★★★⇨★★★★                                     | Aerospace Company<br>Plant & Infrastructure Company                             | Aerospace Company<br>Plant & Infrastructure Company   |
|                     | Define disaster response measures applicable to such events as earthquakes and typhoons, and establish a support policy to assist citizens affected by disaster.                          | ★★★⇨★★★★                                     | Rolling Stock Company   | Rolling Stock Company   |

\* A review of actions will be undertaken after fiscal 2014.

# Just Over a Year Since the Great East Japan Earthquake —KHI Group Activities—

The Great East Japan Earthquake prompted us, once again, to rethink our mission and reassess our own objectives as a corporate group. It is just over a year since the unprecedented disaster struck. We offer an update on a variety of activities undertaken by the KHI Group during this time.

## Review of Business Continuity Plan for Large-scale Earthquakes

A business continuity plan (BCP) is itself a management strategy. It requires more than just typical preparations, such as setting up disaster-prevention equipment and running evacuation drills, to expedite emergency responses in the wake of a disaster. It must also detail approaches to ensure that business continues without interruption and that the corporate mission is fulfilled. The lessons learned

in the Great Hanshin Earthquake, which hit the Kobe area in January 1995, formed the basis of the Group's disaster-prevention measures, and the outbreak of a new influenza virus in 2009 prompted the establishment of a BCP. However, with the Great East Japan Earthquake of March 2011, the BCP was revised to enhance the Group's ability to deal with the consequences of a large-scale earthquake.

### 1 Basic Corporate Policy Determine course of action to be taken by the KHI Group in the event of a large-scale earthquake

Basic corporate policy has been set for the KHI Group that clarifies courses of action to be taken in an emergency. Naturally, human life is the highest priority, and once again we documented our commitment to fulfilling the social responsibilities incumbent upon an enterprise that plays such an essential role in the creation of social infrastructure. When a large-scale earthquake strikes, our focus must be on operational support for equipment, including aircraft and naval vessels, used in rescue activities, and efforts to restore and repair infrastructure systems or components thereof, such as rolling stock, power generation facilities and waste-processing facilities, as quickly as possible and to assist our clients and business partners in returning operations back to normal.

#### Basic Corporate Policy

- Ensure safety and health of employees and their families.
- Ensure services and products that are essential to the fulfillment of corporate responsibility go on without interruption.
- Get Group operations back to normal.
- Acknowledge responsibility to local communities and contribute to each region.

### 2 Head Office and Internal Company Priorities With the basic corporate policy in mind, designate functions to be maintained at the head office and internal companies in the event of disaster.

We have identified priorities for the head office and internal companies in line with our basic corporate policy and have designated certain functions that must be maintained even in the event of disaster with due consideration given to the different business content of each internal company and the features inherent in products and services.

### 3 Response in Time of Disaster and Preparation during Normal Time Consider responses appropriate in the wake of disaster and prepare for the eventuality of such events during normal times.

Many disaster scenarios indicate the possibility of a massive earthquake centered directly under Tokyo as well as a cascade-like triple megaquake event along the Tokai-Tonankai-Nankai segment of the Pacific Ocean coastline. Bearing these potential events in mind, we considered the responses necessary should such catastrophes occur and activities that could be undertaken during normal times to prepare for such eventualities. We formulated a plan that designated specific divisions with a specific task, and outlined preparations necessary to achieve the desired objectives. Preparations are moving ahead in line with this plan.

### 4 Drills and Revisions Drills are undertaken regularly and content is revised based on results.

We are constantly running BCP drills and revising BCP content based on how the drills were performed.



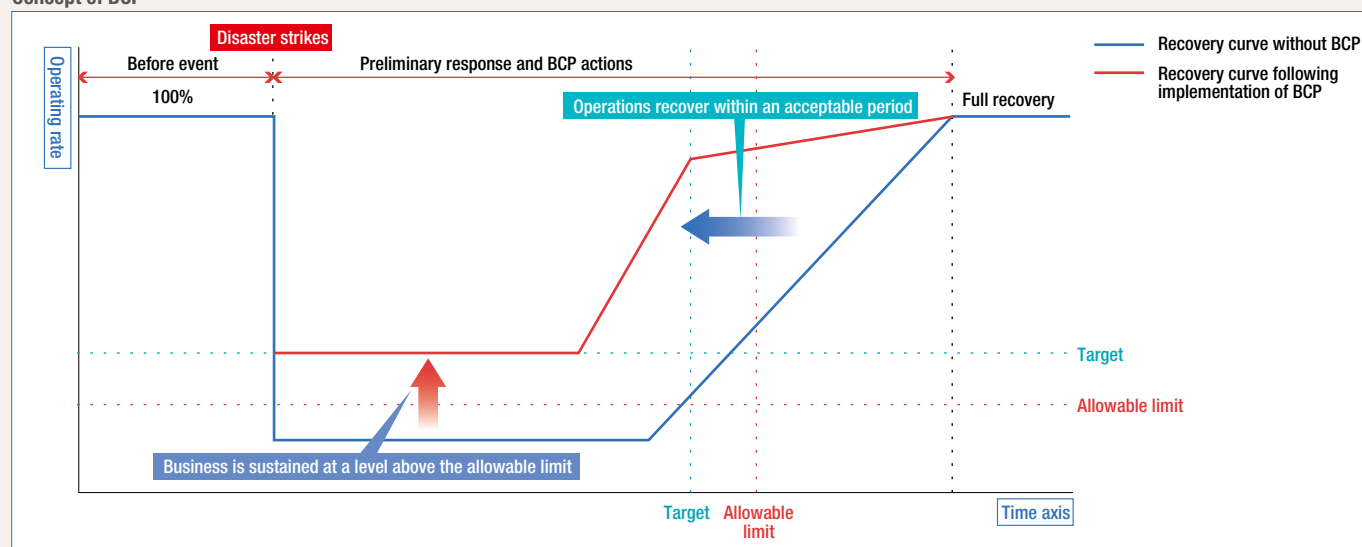
A simulation disaster drill for essential personnel in the local command center at the Tokyo head office in August 2011

## What is a BCP?

The diagram below illustrates the concept of a business continuity plan (BCP). Showing operating efficiency on the vertical axis and elapsed time on the horizontal axis, it demonstrates the flow of recovery after a crisis. As indicated, operating efficiency drops suddenly just when disaster strikes, and then gradually recovers over time. With a BCP and preparations put in place during normal times, the following results can be expected.

- The impact on business, mainly the drop in operating rate that coincides with the disaster event, is held within the allowable range. That is, we realize a diminished impact on operations directly after the disaster event.
- The recovery period is shorter. That is, recovery is achieved more quickly.

Concept of BCP



## KHI Group Crisis Management System

When a disaster, such as a large-scale earthquake, occurs, the Company implements special business activities different from usual and requiring urgent action, such as confirming

the safety of employees and initiating recovery operations. To address emergencies quickly as circumstances demand, we have set up the following command centers.

|                                 | Key Role   | Location   |
|---------------------------------|--|--|
| Corporate Command Center        | Set up in the event of a crisis that requires a companywide response; determines measures to be implemented throughout the Group and basic policy on action plans. | Office that has not sustained any damage<br>In principle, either the Kobe Head Office or the Tokyo Head Office |
| Integrated Plant Command Center | Determines issues related to all plants; coordinates with internal companies.  | Plant facilities of several internal companies   |
| Company Command Center          | Provides internal company support in areas devastated by the disaster; determined responses to affected suppliers and customers.                                   | Appropriate location at each internal company  |
| Local Command Center            | Determines responses for business segments and business offices.   | Office that sustained damage   |

## Frontline Perspective from the Disaster Area Message from the Senior Manager of the Sendai Office

A year after the disaster, we continue to help the region recover and rebuild.

Right after the disasters, myself and others—not only those at the Sendai Office but everyone associated with the office—responded as best we could in our respective capacities to fulfill our social responsibility. From the evening of the day disaster struck, the office began receiving requests for restoration of damaged infrastructure facilities, and the next morning, a few people who were able to get to the office joined me in getting discussions started with representatives from disaster-stricken municipalities and ensuring a timely restoration response. Also, as part of our community response, we met with many local governments to get information about what equipment and materials was needed for relief efforts and restoration operations, and we were able to provide wheel loaders and a crushing machine for moving and processing rubble and debris, motorcycles for efficiently

traversing a broken landscape and transporting goods, and a helicopter that became the community's eye in the sky—all at no cost.

Even now, a year after the earthquake and tsunami, many issues still require attention before reconstruction can get fully under way. I believe that efforts to successfully address these challenges include the active involvement of the private sector.

KHI has strengths in diverse reconstruction-supporting fields, including energy, the environment and transportation equipment, that can help in the rebuilding process. By utilizing this base of expertise and providing the necessary infrastructure support, particularly distributed power sources and renewable energy systems as well as products to reinforce crisis management efforts, we will accelerate reconstruction and development in the Tohoku region and contribute to the creation of communities that are more resilient to disaster.



**Hayato Nakamura,**  
Senior Manager, Sendai Office

## Efforts to Address Stable Energy Supply

An issue that the Great East Japan Earthquake pushed into the spotlight is stable energy supply, and the KHI Group addresses this issue in various ways.

### Effective Operation of Standby Gas Turbine Power Generation Systems in Times of Disaster

In a survey of system operating status during the power outages and rolling blackouts associated with the events of March 11, 2011, and the aftershocks that followed, 1,034 standby gas turbine generation systems out of 1,035 continued to supply power without any problem, for an operating rate of 99%. The one system that was not in operation had not undergone regular maintenance. Targeting an operating rate of 100%, we will establish a power feed structure that is truly reliable even in emergency situations.



Highly reliable standby gas turbine power generation system

### Increased Production of Gas Engine Power Generation Systems

Given the inability of commercial power facilities to meet demand after the earthquake and tsunami, the need for stable power supply grew stronger day by day. Distributed power sources, especially in-house power generation systems, are widely seen as a possible answer to the problem, and KHI, seeking to contribute to stable power supply without harm to the environment, expanded monthly production capacity of its Green Gas Engine to four units. This system boasts the world's highest power generating efficiency and environmental features.



The Green Gas Engine boasts the world's highest power generating efficiency—49.5%.

### Power Supply to Power Company

In response to a request to address reduced power capacity paralleling the shutdown of nuclear power plant operations, KHI increased its generating capacity for the Kawasaki-brand gas turbine in-house power generation system at Akashi Works, boosted the amount generated, and supplied the output to a power company to ensure stable power supply to its service area.

Between February 1, 2012 and March 31, 2012, total power volume hovered at 16 million kWh. This is equivalent to the amount used by approximately 27,000 ordinary households. Going forward, we will continue to support the power company to the extent that we are able and meet the electricity needs of society.



Gas turbine generation system at Akashi Works



## Recovery and Reconstruction Support in the Area of Devastation (since April 2011)

Given our own experience with destruction in the Great Hanshin Earthquake of 1995, we provided cash donations as well as relief and recovery products right after the 2011 devastating

earthquake and tsunami. Since then, we have continued to extend reconstruction support through our products under various approaches.

### Installation of Rubble Crushing and Processing Equipment (Otsuchi-cho, Iwate Prefecture)

We decided to provide motorcycles, wheel loaders and large crushing machines to process rubble. A crushing machine—product name: Gulliver; processing capacity, 160 tons/day) was loaned to Iwate Prefecture for one year at no cost to the local government. The machine was installed in Otsuchi-cho in March 2012 and began operation. A mountain of rubble still remains to be processed but this machine will surely demonstrate the necessary capability to crush through all that debris.



Rubble crushing machine

### Rubble Incineration and Processing Unit in Operation (Sendai, Miyagi Prefecture)

KHI installed a temporary rotary kiln facility under lease to the city of Sendai. This facility is similar to the one that was kept busy incinerating rubble from the Great Hanshin Earthquake. The Sendai unit went into operation in December 2011 and is making good progress in processing rubble. In fact, the city is getting through the rubble cleanup process faster than anticipated and has announced that it will accept rubble from other municipalities in Miyagi Prefecture for processing at this location.



Rubble incineration and processing unit



Interior of kiln as it burns rubble

### Soil Remediation Verification Test (Date, Fukushima Prefecture)

In a joint effort with Hakkisangyou Inc., a maker of flocculants (coagulating agents), and the Hyogo Prefectural Institute of Technology, KHI conducted remediation tests on cesium-contaminated soil at a playing field in the city of Date. In this test, cesium was flushed out of the soil using a flocculant-based rinse and then collected. The test successfully brought soil contamination below the established upper limit and left no residual cesium in the rinse.

The flocculants can be used with peace of mind because it is made from natural ingredients, and the kit can be used repeatedly in multiple areas because it is portable. Efforts will be made to turn the kit into a marketable product capable of addressing the problem of soil pollution.



Soil remediation verification test

# KHI Group's First Dialogue with Experts

On December 28, 2011, specialists in environmental management and CSR, and a CSR manager from an outside company gathered at Kobe Crystal Tower—the location of KHI's Kobe head office—for an inaugural dialogue with experts. The panel was asked to comment on expectations from the perspective of business activities and suggest approaches to enhance CSR pursuits. This was followed by a discussion that included the KHI representatives in attendance.

## Event Summary

### Date

December 28, 2011

### Place

KHI Kobe Head Office (Kobe Crystal Tower)

### Outside Participants

|                    |   |
|--------------------|---|
| Takehiko Mizukami  | Facilitator, Cre-en Inc.  |
| Takehiko Isobe     | Professor and Ph.D. in Business Administration, Graduate School of Business Administration, Keio University |
| Mizue Unno         | Managing Director, So-Tech Consulting Inc.  |
| Katsunori Kawasaki | ESG (Environment, Society, Governance) Promotion Department, TOTO Ltd.                                      |

### KHI Participants

|                     |  |
|---------------------|--|
| Yoshizumi Hashimoto | Executive Officer, General Manager, CSR Division                           |
|                     | Members of the CSR Planning Group<br>Secretaries of company CSR committees |

## Tour of Kawasaki Good Times World

Before the event, we guided the experts through Kawasaki Good Times World, a corporate museum within the Kobe Maritime Museum complex in Kobe's Meriken Park, to promote a deeper understanding of the activities undertaken by the KHI Group.



## Improved Brand Value Should Target Next Generation

Before considering what expectations anyone might have of KHI from the perspective of business activities, I believe the Company should first cement its brand image and refine that image. Why? Because if you ask students about KHI, they may know about *shinkansen* bullet trains and motorcycles, but they are not particularly familiar with the Company's other businesses. The brand—essentially, the face of products and technologies—is hard to see. Consequently, I feel KHI is not viewed accurately by the public.

An effective method for raising brand value is to give some background about what led to the development of your products and technologies. Customers and consumers are not impacted much by products and technologies or corporate image advertising, but a simple story would probably leave more of an impression.

Regarding approaches to enhance CSR pursuits, the most important thing is to decide who you are sending that message to. As a company making products like *shinkansen* bullet trains and aircraft, which attract the interest of children, I think you should put your CSR efforts into activities that target children, since they are tomorrow's decision makers.



**Takehiko Isobe**  
Graduate School Professor,  
Keio University

### Facilitator's Comment

#### Narrow Down the Issues and Set Targets from a Strategic Perspective

KHI has identified 85 CSR-related issues to address; however, it will have to narrow down the list to issues that really require improvement, issues that have to be carried through to completion.

Also, your internal companies pursue CSR activities independently, but current targets are quite general. Set corporate targets, such as CSR training, and then have internal companies establish their own objectives fine-tuned to the characteristics of their respective businesses. And, if

I may add, setting targets that enhance value creation through business activities and strategic CSR activities will certainly determine the direction that KHI takes on its CSR journey.



**Takehiko Mizukami**  
Cre-en Inc.



## Expect Expansion of CSR Activities on a Global Scale

Even though KHI's business activities are mainly B-to-B (business-to-business) transactions, soon a C—for consumer and community—will come into play. This is especially so for companies involved in the design and construction of facilities and infrastructures because their customers have numerous contacts in the community, and a CSR perspective attuned to local governments and administrations is integral to successful business development.

Also, if a company seeking to expand globally does not convey its long-term view on giving to the community, such as local hiring and respect for diversity in the workplace—that is, making the most of human resources without getting hung up on differences, such as gender or race—then the company will have a difficult time being accepted there. ISO 26000, an international guide on social responsibilities, highlights some themes, like human rights issues and labor issues, that global companies have yet to properly resolve. I would like to see KHI explore how it can best contribute to communities as a global company with a global perspective and get involved in every community where it has a presence.



**Mizue Unno**  
So-Tech Consulting Inc.

## Execute CSR Activities that Demonstrate the Qualities that Make KHI Distinct

As someone responsible for CSR at a company, I recognize common issues pertaining to CSR activities going forward. KHI is quite involved in CSR with a risk management emphasis, and the Company appears to be promoting CSR activities based on a careful assessment of systems and structures and proven results. The next step would probably be to emphasize efforts to strategically link business activities and CSR activities. ISO 26000 casts a net over many global social issues. KHI has to pinpoint the themes where it can demonstrate qualities that distinguish it from other companies and then focus efforts on these fields to showcase corporate originality. This will surely lead to higher value in business activities. KHI has a role in all sorts of infrastructure projects and as such is closely connected to people's lives, so I think there are many fields in which KHI could demonstrate its special qualities. Moving forward, social change will require that KHI become more proactive—as opposed to passive, or reactive—in its CSR activities. I believe it is vital for all companies, including KHI, to seek out these kinds of CSR activities.



**Katsunori Kawasaki**  
ESG Promotion Department,  
TOTO Ltd.

### On the receiving end of comments

## Toward CSR Activities as a Global Company with a Proactive Perspective on CSR

We promote activities based on our desire to realize our Group Mission “Kawasaki, working as one for the good of the planet” at ever higher levels. Today's dialogue has reconfirmed our view that we are expected to contribute to social development through sophisticated products and services and that we are expected to provide new value for all stakeholders. Toward this end, we must constantly review our activities to ensure that we address social needs and meet social expectations. We must also strive to be receptive to stakeholders' feedback and respond accordingly, and broaden the scope of our pursuits.

Based on the comments offered by our panel of experts, I am keen to embrace CSR activities from a proactive position, along with passive CSR activities, throughout the Group, not only in Japan but also abroad, under the banner of a global company.

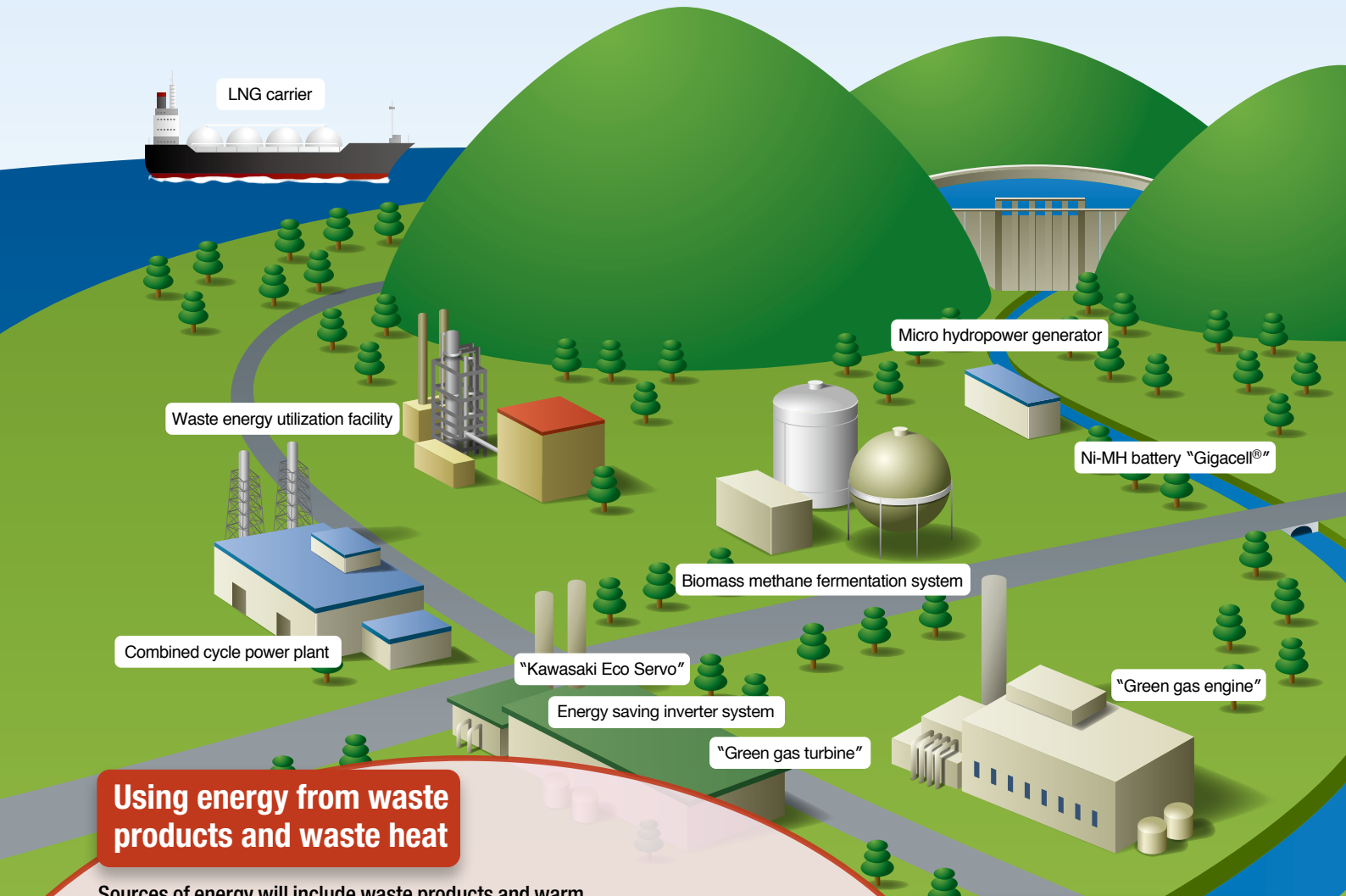


**Yoshizumi Hashimoto**  
Executive Officer,  
General Manager, CSR Division



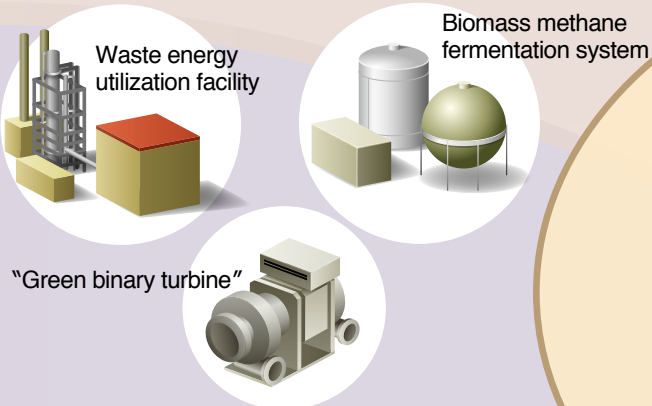
## KHI Group's Ideal Society: In the Fields of Energy and the Environment

Energy should be efficient, environment- and resource-conscious, and most certainly reliable. As a company whose role includes the building of infrastructures worldwide, the KHI Group provides new values with energy and the environment, both present and future, integral to the development of safe and comfortable lifestyles.



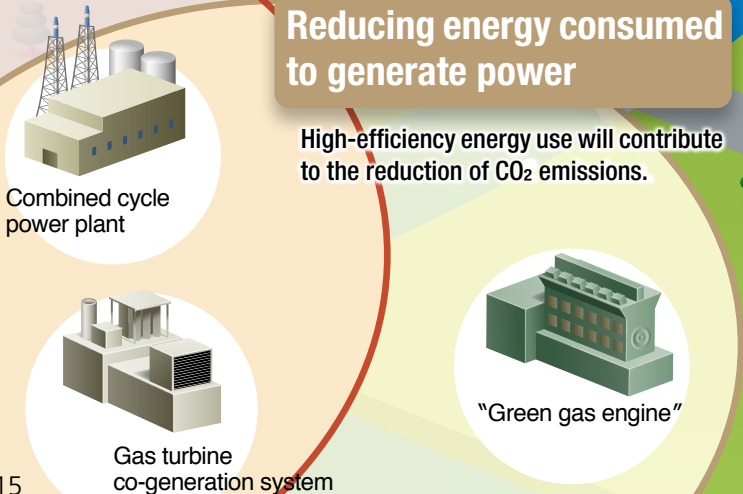
### Using energy from waste products and waste heat

Sources of energy will include waste products and warm water, steam and exhaust gas released from plants.



### Reducing energy consumed to generate power

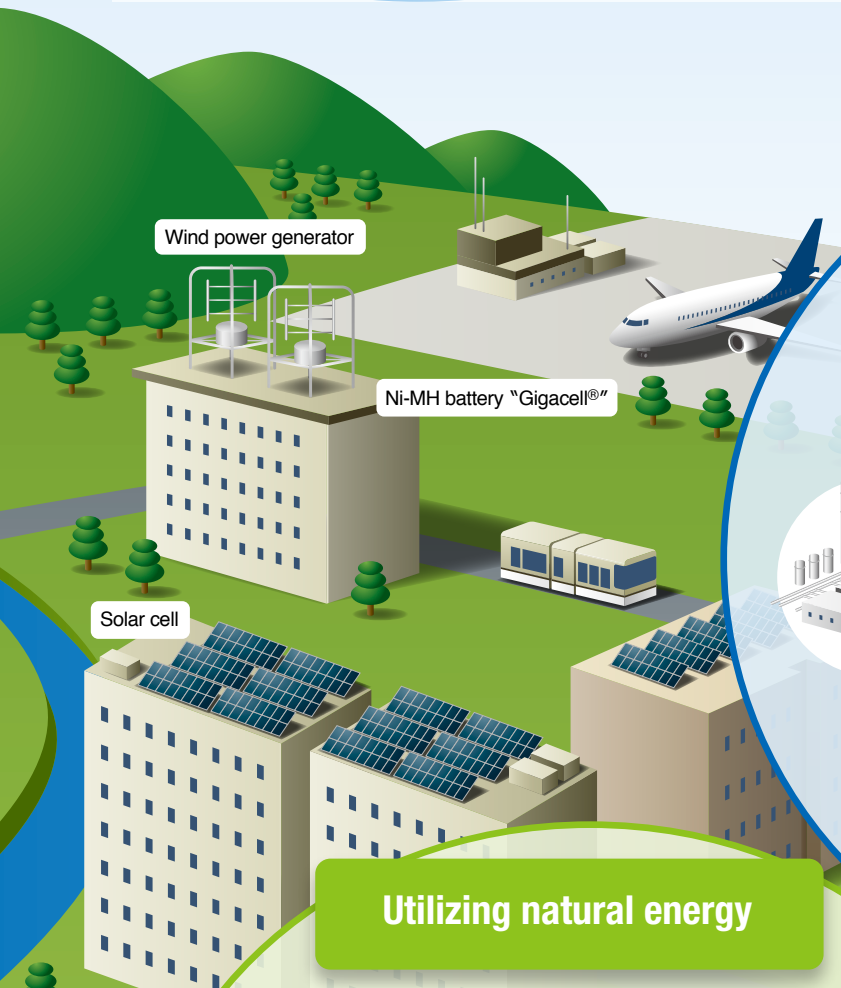
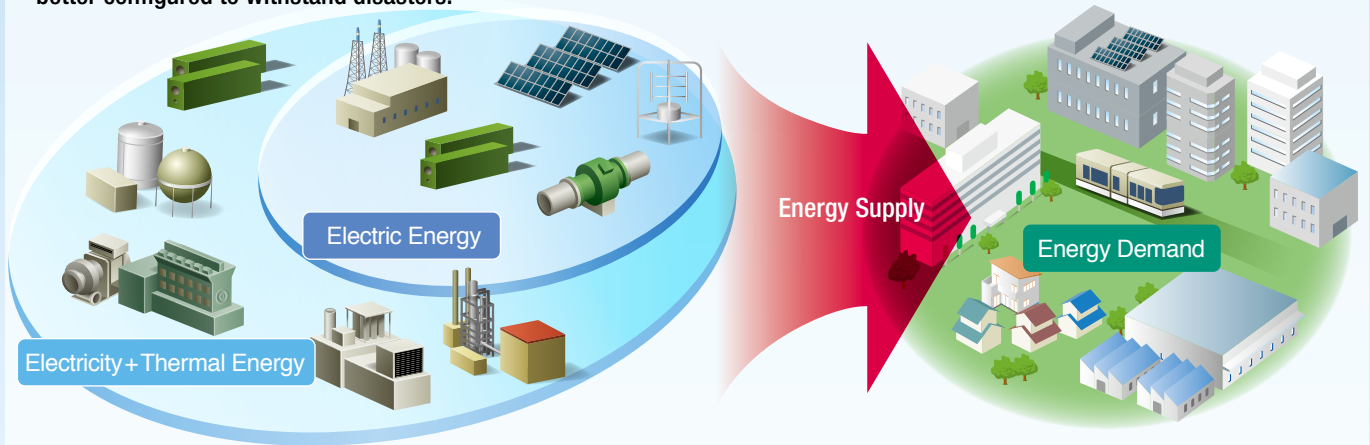
High-efficiency energy use will contribute to the reduction of CO<sub>2</sub> emissions.





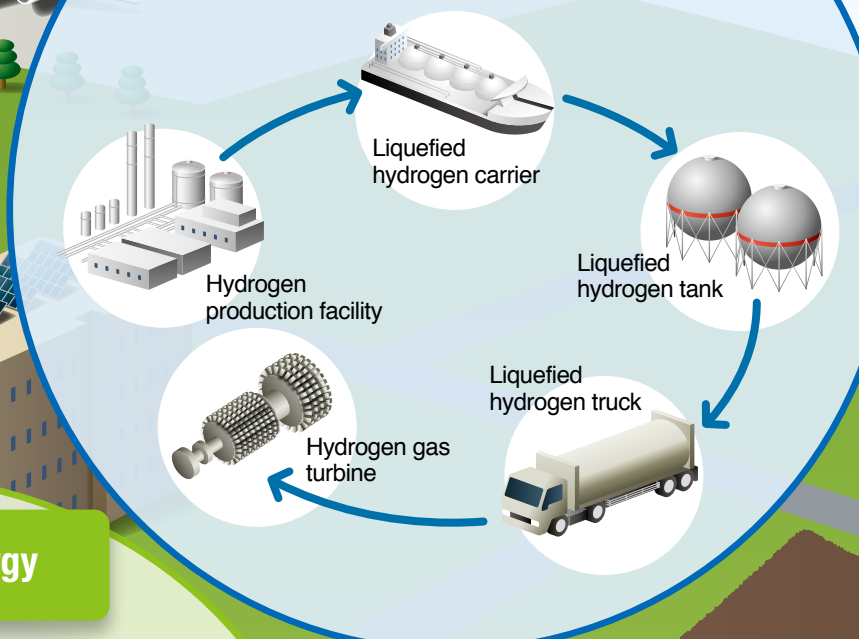
## Distributed energy systems

Distributed energy systems are highly efficient and contribute to the creation of safe and secure communities because they are better configured to withstand disasters.



## Realizing the perfect energy for tomorrow

We have proposed the CO<sub>2</sub>-free hydrogen chain as a new energy system for tomorrow's energy needs.



## Utilizing natural energy

Natural energy, such as sun and wind, among others, will not generate CO<sub>2</sub>.

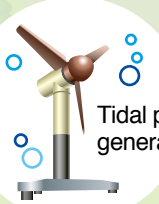
Wind power generator



Micro hydropower generator



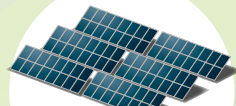
Tidal power generator



Ni-MH battery "Gigacell®"



Solar cell



The KHI Group consistently applies a practical perspective to activities aimed at improving product quality, ensuring product safety and boosting customer satisfaction. In this report, we showcase activities undertaken by the Ship & Offshore Structure Company, the Plant & Infrastructure Company and the Precision Machinery Company to highlight efforts to improve product quality, ensure product safety, and boost customer satisfaction, respectively.

## Efforts to Improve Product Quality

### Ship and Offshore Structure Company

The Ship and Offshore Structure Company, the business segment that quite literally launched KHI, has delivered more than a thousand ships. Here we highlight efforts to improve product quality by capitalizing on the many opportunities we have to interact with customers in the building of ships and the face-to-face relationships that are formed as the process unfolds.

#### ① Development, contract

We accurately identify customer needs and determine ship specifications through numerous meetings.



Ship building specifications

#### ② Design

Even at the design stage, we frequently hold technical meetings with customers and confirm requirements by obtaining approval of drawings while putting forward reliable designs conforming to technical standards.



Design work setting

#### ③ Procurement

We order equipment and components from more than a hundred suppliers. We accompany customers to suppliers' shop test of critical equipment and confirm that the products meet the required specifications.



Shop test of critical equipment

With our customers

#### ⑥ After-sales services

We take account of post-delivery customer feedback and quickly extend technical support to customers requiring repairs or supply of components. The information obtained through such activities is valuable and passed on to all the departments involved because the feedback is useful in efforts to improve quality.



Ship visited for after-sales services with the crew

#### ⑤ Sea trial, delivery

In the final stage of shipbuilding, the ship is actually put to sea and we, along with our customers, confirm performance. Later, we bid farewell as the ship leaves the shipyard quay to ply the world's oceans, marking delivery to the customer.



Sending the ship off from the quay amid waving flags

#### ④ Manufacturing, inspection

At the shipyard, the ship takes form over multiple stages, such as steel plate fabrication, welding, painting and installation of equipment. Customers dispatch supervisors to track progress and together we ensure quality through various inspections.



Welding inspection using an aerial work platform

## Efforts to Ensure Product Safety

Plant & Infrastructure Company



**Hiroshi Takaya**  
**No.1 Design Section, Chemical Plant**  
**Department**  
**Chemical Plant & Cryogenic Storage**  
**System Engineering Division**  
**Plant & Infrastructure Company**

One way to assess safety based on plant design is to use HAZOP (Hazard and Operability Studies). We applied HAZOP to a fertilizer plant project to ascertain safety. The HAZOP exercise brought together the parties involved in the project—the customer, the provider of fertilizer manufacturing technology and KHI—to 1) identify areas of possible safety issues, 2) analyze the hazardous events that would occur in the areas and look into their causes, and 3) formulate safeguards and necessary improvements to prevent such hazardous situations from arising, but if they were to occur, to avert an actual accident, on the assumption that operations deviated considerably from normal, in such areas as flow rate, pressure and temperature. This hypothetical scenario enabled us to reduce risk to a permissible level. Specifically, we suggested a safety device that brings the

plant to an emergency stop when pressure rises in the fertilizer synthesis equipment, a safety device that stops the compressor in an emergency, when the compressor inlet pressure drops, and a warning display to prevent an excess drop in pump pressure when the tank water level decreases due to manual valve mishandling by the operator. We thus identified possible hazards at an early stage and verified the status of safety from a design perspective and confirmed the need for improvements. Through HAZOP, we were able to raise awareness of safety design and implemented approaches to reduce risk by addressing concerns in the actual plant design.



Fertilizer plant for Fatima Fertilizer Company Ltd. (Pakistan)

## Efforts to Boost Customer Satisfaction

Precision Machinery Company, Nishi-Kobe Works



**Shoji Fujiwara**  
**Quality Assurance Department,**  
**Quality Assurance Division**  
**Precision Machinery Company**

The Precision Machinery Company produces hydraulic equipment and hydraulic units responsible for motion control in a range of machinery and provides products to countries all over the world. Among these products, hydraulic equipment for construction machinery, especially hydraulic shovels, have captured high shares and have earned a stellar reputation from customers. We have also earned the solid trust of customers by providing products fine-tuned to customers' varied needs right from the design stage.

In addition, we have offices in Japan, of course, as well as England, the United States, China and South Korea to expedite after-sales service requests, and through these quick responses we are able to meet customers' needs and maintain excellent customer satisfaction. We strive to enhance the activities that support this capability. Comments from customer questionnaires are categorized into themes: product quality, after-sales services, performance and delivery, and the information is shared among all divisions and with management. We take the results seriously and everyone strives daily to address issues that customers have noted so as to raise the level of customer satisfaction.



Training the people responsible for after-sales services



Overhauling hydraulic equipment





## Corporate Governance System

### Corporate Governance

At KHI, the basic stance on corporate governance is to increase the corporate value of the Group as a whole through highly transparent, efficient, and sound management practices and solid relationships forged with all stakeholders, including shareholders, customers, employees and the community.

### Overview of the Corporate Governance System

The Company opted for the statutory auditor system with board of auditors and has appointed independent auditors. With regard to corporate governance, the Company has a Board of Directors presided by the chairman, a Management Committee consisted of representative directors and others, and an Executive Officers Committee which includes all executive officers.

To reinforce the oversight and monitoring function of the Board of Directors, the Company appoints directors who do not have roles in the execution of operation. With regard to corporate auditors, the Company appoints internal corporate auditors with considerable knowledge of finance and accounting as well as two outside corporate auditors with no business relationships or other vested interests in the Company. One of these outside corporate auditors is an independent officer as required by the Tokyo Stock Exchange for all listed companies.

The Board of Directors appoints executive officers to execute operations. The Board of Directors decides the basic objectives and policies for the execution of operations under the prevailing management plan and promptly issues directives for implementation to all executive officers. The Executive Officers Committee ensures that the objectives and policies are implemented.

The Company applies incentive-based compensation corresponding to business performance and limits the term of office for directors to one year. These conditions serve to clarify the management responsibilities of directors.

As a rule, the Management Committee meets three times a

month to discuss management policy, management strategy, important management issues, and other matters from the perspective of the Group as a whole.

### Auditing Structure and Status

#### Internal Auditing

The Auditing Department, an internal auditing unit under the direct authority of the president, targets management activities in all the Group's business segments for audits to verify and evaluate effectiveness and efficiency in the execution of operations, the reliability of financial reports, and conformity to standards of compliance, namely corporate ethics and laws, and offers suggestions if audits indicate a need for improvement.

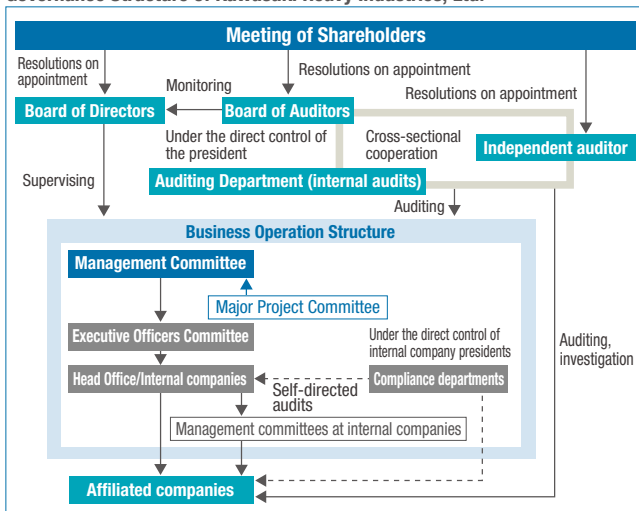
#### Statutory Auditing

Corporate auditors attend various meetings, including those of the Board of Directors and the Management Committee, and also review important documents and check the status of business operations and financial assets through periodic meetings with representative directors and business audits of corporate divisions and subsidiaries. In addition, two outside corporate auditors ensure the objectivity and neutrality of the management oversight function, and the full-time corporate auditors and outside corporate auditors share information and strive to enhance this function still further.

#### Independent Auditing

With regard to independent auditing, KHI undergoes audits of its financial statements conducted by the independent auditor KPMG AZSA LLC. The corporate auditors and the Board of Auditors receive an outline of the audit plan and a report on important audit items from the independent auditor, and the Board of Auditors explains the Company's auditing plan to the independent auditor. The corporate auditors and the Board of Auditors periodically receive reports on the results of independent auditing and strive to keep lines of communication open with the independent auditor by exchanging information and opinions.

Governance Structure of Kawasaki Heavy Industries, Ltd.





## Compliance

### KHI Code of Corporate Ethics

We established KHI Code of Corporate Ethics, and the basic principles of corporate ethics is stipulated in the Code as follows.

#### 1. Practice of ethics as a business person

We do not hide the truth and do the right things when performing the duties.

#### 2. Respect for individuality and human rights / Prohibition of discrimination

For creating and maintaining comfortable workplace, we respect for individuality and human rights of all people. We do not engage in discrimination, sexual harassment and bullying.

#### 3. Promotion of environmental protection

For conserving limited resource and nature and reducing impact on global environment, we take voluntary and proactive efforts to save resource and energy, minimize waste, promote resource recycling and prevent environmental pollution.

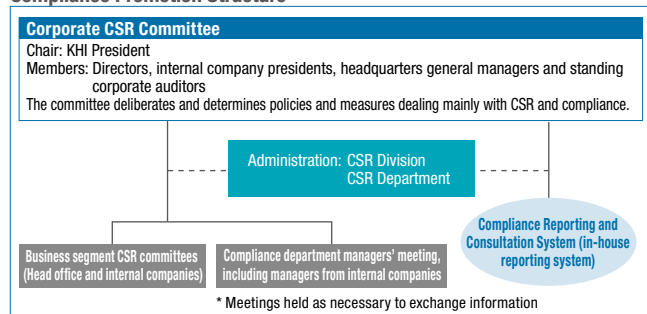
#### 4. Compliance with laws, regulations and social rules

We recognize the importance of compliance and proactively ensure compliance.

#### 5. Proper accounting and reliability of financial reports

We record and disclose corporate activity in accordance with proper accounting standards stipulated in laws and regulations. We ensure reliability of financial reports.

### Compliance Promotion Structure



### Distribution of Compliance Guidebook

We prepared a manual, the Compliance Guidebook, which provides information on each type of compliance-related violation and distributed copies to all employees and temporary staff at KHI Group companies in Japan.



Compliance Guidebook

### Compliance Declaration

KHI requires that executives and employees in administrative positions (section chief and above) submit a handwritten statement declaring their intention to observe laws and regulations.

### Developing a Deeper Awareness of Compliance

In fiscal 2012, KHI implemented a learn-by-example program to reinforce compliance in the workplace. This was a compliance activity shared throughout the Company.

With the consent of newspaper companies, we prepared original instruction materials using newspaper articles describing various examples of actual corporate compliance violations, and superiors in all offices used these materials as the basis of presentations to instill the importance of compliance.

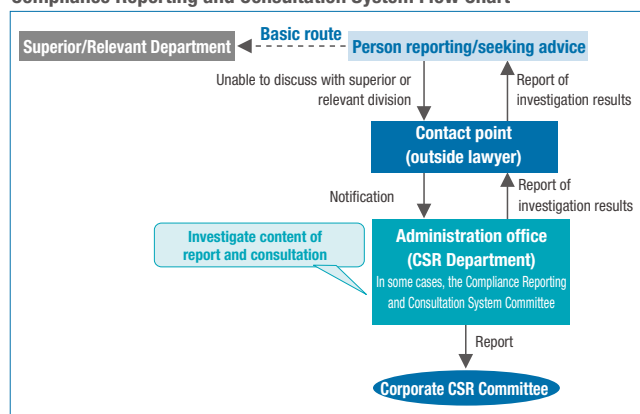
In addition, to verify the effectiveness of such approaches in raising awareness of compliance issues, in February 2012 we directed a compliance awareness survey of all employees and temporary staff at Group companies in Japan.

### Compliance Reporting and Consultation System (in-house reporting system)

In certain situations, employees who suspect a violation of compliance practices in their department may find it difficult to report the situation or seek advice from superiors or a department that would normally address alleged misconduct. We established the Compliance Reporting and Consultation System to solve this problem.

In fiscal 2011, the system was used 18 times.

### Compliance Reporting and Consultation System Flow Chart



### Promoting Corporate Ethics and Compliance Overseas

The KHI Group pursues business opportunities around the world and has many companies abroad. To date, a number of companies operating in emerging nations and small companies did not have policies in place to address corporate ethics and compliance.

As a result, in September 2011, we drafted Kawasaki Global Business Ethics Guidelines, which covers items generally applicable in any country, and asked that companies without their own existing policies on corporate ethics and compliance adopt our Global Business Ethics Guidelines as their own.

Consequently, nearly all overseas companies\* of the KHI Group now have policies on corporate ethics and compliance.

\* Companies where the KHI Group's equity stake exceeds 50%.

#### TOPICS

#### Example of Compliance Education in the United States

At KCMA Corporation, a manufacturer of construction machinery—wheel loaders—in the United States, a code of conduct describing corporate ethics and compliance was created and all 120 employees became signatories to the document, thereby affirming their agreement to observe the code of conduct.

Also, a company meeting is held every three months in which all employees participate and where the Senior Manager of the Personnel & General Affairs continues to bring up the importance of corporate ethics and compliance and reminds everyone to be alert to compliance issues.

In this way, KCMA persistently strives to raise awareness of corporate ethics and compliance among its employees.

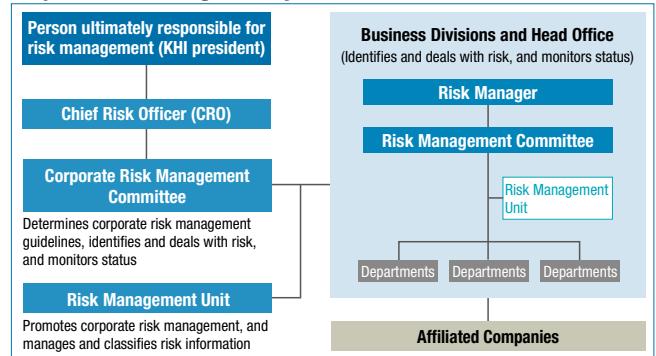


KCMA company meeting

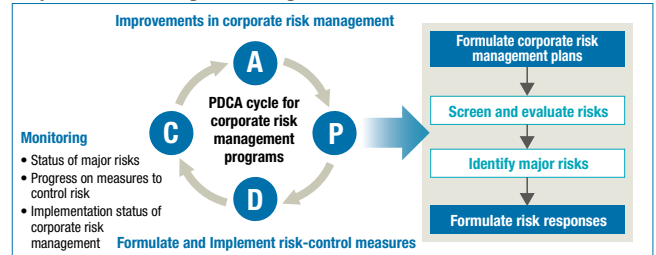
## Risk Management

Under the Corporate Risk Management System, we have been implementing corporate risk management programs—an integrated process of screening and evaluating risk, identifying major risks and determining risk treatment, and formulating, executing, and monitoring risk-hedging policy—to pinpoint any major risks having a significant impact on business according to annual and universal risk criteria, and we are controlling such risks with reasonable and appropriate methods from the perspective of enterprise management. Since fiscal 2012, the Corporate Risk Management System has been gradually introduced at domestic affiliated companies. We plan to establish the Corporate Risk Management System across the Group including overseas affiliated companies in fiscal 2014.

#### Corporate Risk Management System



#### Corporate Risk Management Programs



## Crisis Management

To prepare for the possibility that risk might become reality, the KHI Group adheres to internally defined Crisis Management Regulations. These regulations set forth behavioral guidelines and response systems that serve to protect lives and preserve assets, minimize damage and loss, and expedite the resumption of business activities in the event of unplanned interruption. To prepare for crisis situations, we rely on the Crisis Management Organization, a horizontally integrated Group structure for crisis management, and have a structure in place to expedite the establishment of command centers at the head office and local works or offices, as necessary, to ensure a quick response in the event of a crisis.

\* For information about the review of business continuity plan for large-scale earthquakes, see pages 9-10.

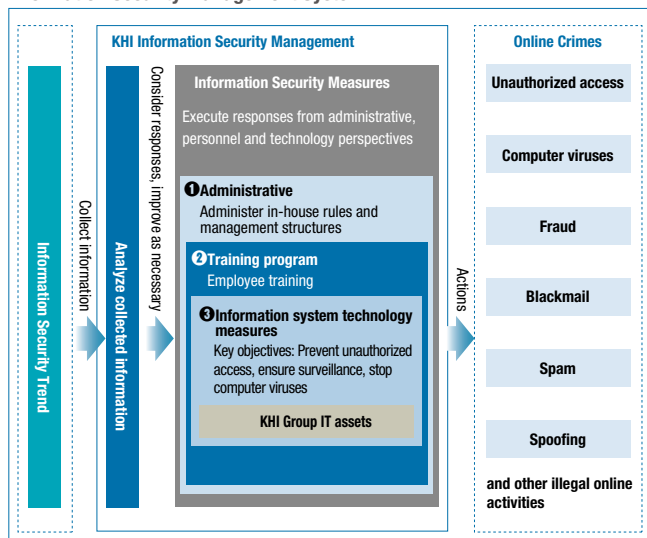
### Reporting Route in Times of Emergency

Should an accident or natural disaster occur, information gets to where it is needed through a predetermined reporting route for use in times of emergency. This route is made widely known to employees and executives through the Crisis Management Organization, which under normal circumstances underpins the Group's crisis management structure. In conjunction with the emergency-activated reporting route, we have introduced contact networks in all business divisions and at all operating sites to ensure quick updates on the status of personnel and facilities throughout the Group.

## Information Security Management

The KHI Group provides products to a wide range of customers, from general consumers to the public sector and further to defense forces, and meticulously promotes various information security measures matched to the requirements of respective customer sectors.

### Information Security Management System



## Safeguarding Intellectual Property

KHI applies a basic policy to safeguard intellectual property derived from corporate R&D results, which is to secure trademark registration/protection in Japan and overseas at appropriate times and thereby reduce risks associated with intellectual property and also to utilize such very valuable corporate assets to their fullest potential, for reasons including the freedom to expand business activities and ensure technological superiority.

To promote and manage these strategic intellectual property-oriented activities, we maintain a structure whereby the Intellectual Property Department in the Corporate Technology Division drafts corporate measures for implementation and works with other intellectual property management departments in each business segment to provide support in line with respective business activities.

### Invention Reward System

In accordance with the Patent Law regulation pertaining to inventions by employees, KHI has established a provision in its internal rules regarding inventions by employees to reward these employees at specific milestones, such as the filing of a patent application (application reward), patent registration (registration reward) and practical application (performance-based reward). The Company faithfully adheres to this provision. In addition, the same reward system is applied even when the invention is not made public for strategic reasons. Of note, the performance-based reward is awarded after duly taking into consideration how the Company has benefited from the invention, using an evaluation standard that is based on comparisons with other companies in the same industry and trends in society.

## Protecting Personal Information

KHI abides by its Privacy Policy (Personal Information Protection Policy), a basic policy for protecting personal information. This policy is publicly disclosed.

The Company also has a chief personal information protection officer and created Rules for Protecting Personal Information, which functions as a guide for personal information management.

As part of personal information management, a personal data-handling ledger is prepared to facilitate at-a-glance confirmation regarding the status of personal information handled by each business segment. The information is updated on a regular basis.

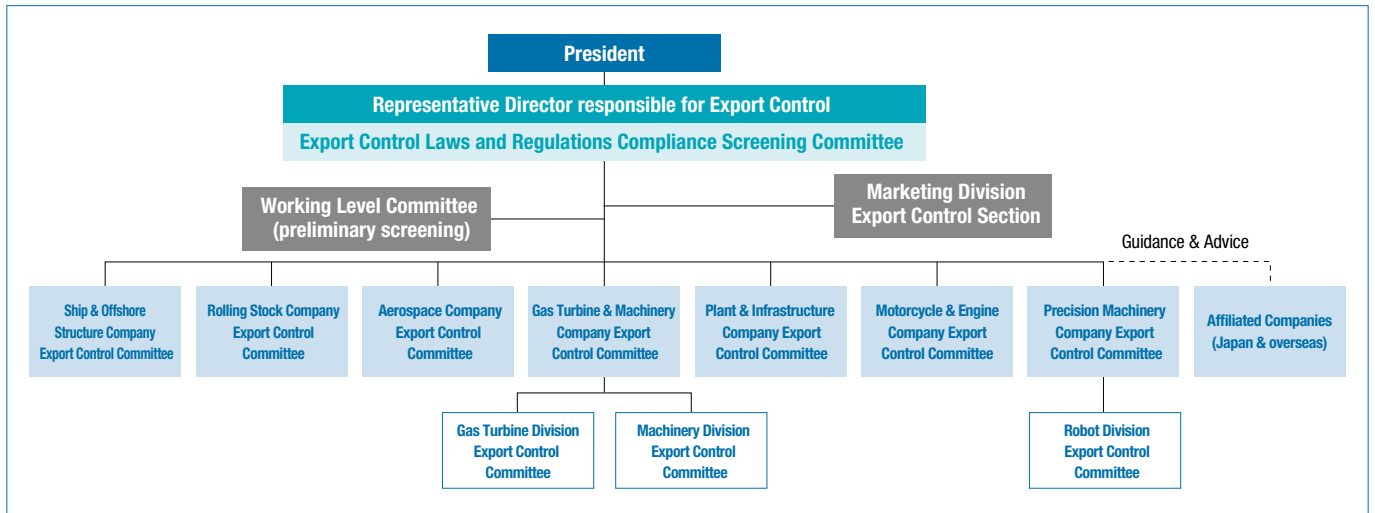
With regard to personal information in its possession, the Company has put a structure in place that ensures a prompt response to individual requests on the use of personal information, such as disclosing it or no longer using it.

## Export Control

To ensure that export-related laws are carefully observed throughout the Group, we drafted internal rules on export control for goods and technologies related to international

safety and security, and we maintain an export control structure with a representative director taking primary responsibility for export control.

Export Control Structure





## Relationship with Shareholders and Investors

### General Meeting of Shareholders

At KHI, we believe the General Meeting of Shareholders—the highest corporate decision-making body of any company—is an important opportunity for communication between the Board members and our shareholders.

To enable shareholders to properly consider important matters on which they will cast their vote at the General Meeting of Shareholders, we send out the convocation notice even earlier than required by law. In addition, we prepare an English version of our official Japanese-language convocation notice for the convenience of our shareholders overseas and make it posted on our website.

Shareholders who are unable to attend the annual meeting in person now have the option of exercising their voting rights through the Internet or by mobile phone.

At the meeting venue, we endeavor to present information, highlighting new developments and business results over the past year, in an easy-to-understand format utilizing video. Presentation videos from past meetings are available for viewing on our web site.



General Meeting of Shareholders

### Distribution of Dividends

Our basic policy on the return of profits to shareholders calls for a stable dividend appropriate to our performance, tempered by sufficient maintenance of retained earnings to strengthen and expand profitability and the business foundation in preparation for future growth. Taking an overall perspective, with particular consideration to future business performance and retained earnings, management resolved to pay a year-end dividend of ¥5 per share for fiscal 2012, the year ended March 31, 2012.

#### Consolidated Net Income (Loss) and Annual Dividends per Share

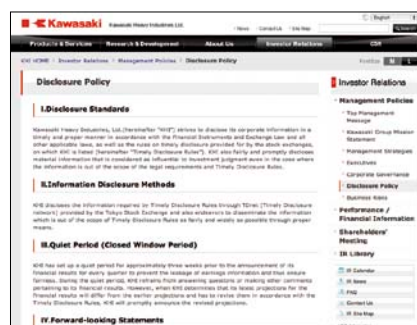
| Ended March 31    | 2008   | 2009  | 2010    | 2011   | 2012   |
|-------------------|--------|-------|---------|--------|--------|
| Net income (loss) | ¥21.08 | ¥7.02 | ¥(6.51) | ¥15.55 | ¥13.95 |
| Dividends         | ¥5.00  | ¥3.00 | ¥3.00   | ¥3.00  | ¥5.00  |

### IR Activities

We strive to disclose timely and fair business information, in accordance with the disclosure policy posted on our web site, and we keep an open channel to shareholders and investors through various investor relations (IR) activities at home and abroad to promote communication.

For institutional investors and analysts, we hold quarterly financial performance briefings and one-on-one meetings. (The briefings for the first and third quarters have started from fiscal 2012). Corporate representatives visit institutional investors outside Japan (North America, Europe and Asia) to explain recent business performance and other critical information. We disclose principal questions and answers at the briefings in the IR section of the KHI website since the second quarter of fiscal 2012.

Also, at the end of June and in early December, we send shareholders our Business Report, an easy-to-understand update on management conditions and business content.



Disclosure policy posted on our web site



For details, please visit our IR section online at

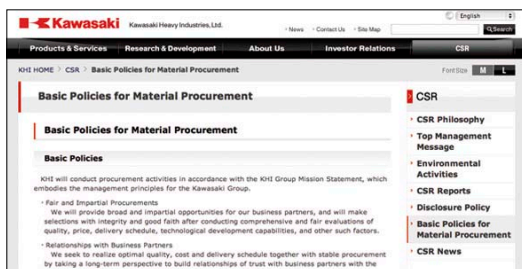
<http://www.khi.co.jp/english/ir/index.html>

## Relationship with Business Partners

### Fair Transactions and Bonds of Trust

In accordance with Basic Policies for Material Procurement and Code of Conduct for Dealing with Business Partners, everyone—including employees in design and manufacturing departments—who deals with business partners undertake procurement activities predicated on long-standing relationships of trust with our business partners.

We seek to ensure widespread acknowledgement of the guidelines and toward this end post them on our web site, with each division prominently displaying them as a constant reminder of the importance of fairness and mutual trust.



Basic Policies for Material Procurement (excerpt)

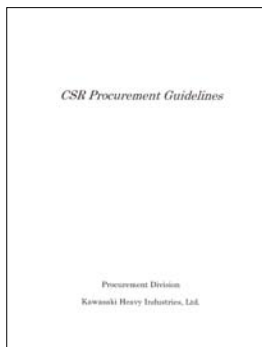


Code of Conduct for Dealing with Business Partners (excerpt)

### CSR-Driven Procurement

From the perspective of CSR-driven demands and customer trust, KHI formulated CSR Procurement Guidelines in April 2012 and placed the document on its website.

Backed by the Basic Policies for Materials Procurement and these new guidelines, the Company will encourage suppliers to support its position on these issues and promote procurement activities in line with CSR principles, such as compliance, of course, and human rights, labor and employee health and safety as well as environmental consciousness.



CSR Procurement Guidelines

### Reinforcing the “Partner” Sentiment in Partnership

We have organized cooperation-building associations for each business segment that have as their members business partners with whom the respective segment has developed particularly close ties.

These associations promote cooperation based on mutual trust between KHI and its business partners and serve to foster a sense of coexistence and coprosperity.

Specific activities, described below, reinforce the “partner” sentiment in our relationships with business partners.

- Hold regular meetings, to share policies on procurement, production and other operations
- Implement improvement initiatives, emphasizing joint efforts between KHI and business partners to enhance quality and production
- Hold lectures and workshops on such themes as human resource development and management practices
- Offer factory tours and discussion opportunities for member companies

### Thorough Compliance

Every year, KHI holds a group workshop mainly for procurement divisions within the Group to ensure compliance with procurement-related laws and regulations, especially the Subcontractors’ Act—or more formally, the Act against Delay in Payment of Subcontract Proceeds, etc., to Subcontractors—and the Construction Industry Law.

Of note, with regard to the Subcontractors’ Act, we maintain proactive measures, as outlined below.

- Run sessions for design and manufacturing divisions at plants and affiliates (in fiscal 2012, a total of 16 sessions attracting 769 participants)
- Distribute a collection of examples on violation of the Subcontractors’ Act, which highlights actual situations that businesses need to be aware of.
- Planning to prepare a checklist for self-auditing compliance status pursuant to the Subcontractors’ Act, post it on the internal website in fiscal 2013, and widely raise awareness of the checklist to divisions other than those involved in procurement, design and manufacturing.

## Developing Human Resources

### Thoughts on Personnel

Group Management Principle No. 3—“People: The KHI Group’s corporate culture is built on integrity, vitality, organizational strength and mutual respect for people throughout the entire Group. We nurture a global team for a global era.”—provides the foundation for a corporate culture and environment in which our employees can maintain a positive outlook as they go about their work. We have introduced a variety of systems to achieve this goal and strive to enrich associated content.

### Education and Training

KHI’s ideal human resources fall into six categories, based on the Company’s mission statement. They are 1) actively involved around the world; 2) solving issues for customers and the community; 3) leading reforms and innovation; 4) taking technology to new heights; 5) demonstrating comprehensive capabilities; and 6) always maintaining a profitability perspective. Seeking to cultivate human resources with these qualities, we promote comprehensive training and skill development for all employees regardless of rank.

#### ① Reinforce the management and business execution capabilities of employees (Administrative and technical training)

During their first three years of employment, employees in administrative and technical positions receive a combination of structured on-the-job training, facilitated by a mentoring system, and access to various training content to help these young professionals shoulder new responsibilities as quickly as possible.

In addition to training for managers, including section managers, general managers and board members, we regularly conduct multifaceted observation surveys that provide feedback—opinions and evaluations—from supervisors, subordinates and colleagues to managers on their strong points and areas in need of improvement. Such initiatives serve to strengthen middle management and develop the skills of candidates for management positions.

In the execution of routine duties, we utilize communication opportunities, especially the operational goal sharing program GMK—which takes its name from the Japanese gyomu mokuhyo kyoyuka—and semiannual one-on-one meetings between supervisors and subordinates, to foster skill development through the achievement of operating goals.



Training session for general managers

#### ② Improve on-site capabilities (Training for production specialists)

We encourage young employees in production positions to enhance their skills and older employees to share their acquired expertise. Toward this end, we have a system in place for young workers to obtain technical qualifications early in their careers and a fairly recently introduced masters’ system whereby experienced workers with sophisticated, specialized capabilities are designated “masters” upon which they impart their hands-on knowledge to younger colleagues. KHI’s production professionals actively participate in industry competitions involving technical skills, including the Technical Skill Grand Prix. At the 2011 event, the KHI representative took third place in the machinery assembly work category and the fighting spirit award in the conventional lathe work category.



Technical Skill Grand Prix

## Respect for Diversity

### Promoting Diversity

To date, KHI has consistently embraced initiatives that encourage all employees, including women, post-retirement rehired individuals and the disabled, to be active in their assigned roles. To better address increasing diversification in the workplace, we established the Diversity Promotion Section in April 2010.

In “Kawasaki Business Vision 2020,” a stated goal is to “create a corporate culture that emphasizes diversity and a good work-life balance, gives employees confidence in the Company and their colleagues, fosters pride in the work they do, and enables everyone to enhance their skills and demonstrate their full potential.” Toward this end, we are introducing policies with an emphasis on a variety of approaches to working that facilitate the realization of a good work-life balance for all employees, on promoting active roles for women, on promoting active roles for the disabled, on childcare and eldercare support, and on the creation of workplaces receptive to older employees.

In June 2011, a message from the president was distributed to all employees. In his message, entitled “Drawing on the Diversity of Our Human Resources Allows Individuals and the Organization to Achieve Maximum Results,” the president called on everyone “to reaffirm the importance of communication and create a workplace that is accepting of and welcome to all, to create an environment in which people can utilize the structures they need when they need them, and to review and reinitialize business processes with due thought to working efficiency in a limited amount of time.”

### Promoting Active Roles for Women

Currently in our efforts to promote active roles for women in our organization, our first priority is to hire them, taking an enthusiastic approach to such recruitment. The number of women hired and the number of women in managerial positions increases annually, and in the area of hiring in particular, about 30% of the university graduates taking administrative positions with us are women. We are also implementing actions such as introducing senior female employees to young female staff as role models, and helping supervisors foster skill development in female staff.

### Promoting Active Roles for the Disabled

We also strive to hire more people with disabilities, and people with physical challenges are thriving in various office environments. We earnestly endeavor to break down barriers, in the true sense of barrier-free, and in 2010, we took a stab at in-house training featuring sign-interpreted lectures so that employees with hearing impairments could benefit from the content covered just as much as their hearing colleagues.

We will resourcefully work to boost the rate still higher and, through advanced case studies and lateral development, establish an environment in which the disabled can fully demonstrate their capabilities.

Percentage of Disabled Employees

| Fiscal 2008 | Fiscal 2009 | Fiscal 2010 | Fiscal 2011 | Fiscal 2012 |
|-------------|-------------|-------------|-------------|-------------|
| 1.86%       | 1.89%       | 1.83%       | 1.81%       | 1.74%       |

### Support for a Good Work-Life Balance

All employees should be able to combine work and childcare responsibilities, continuing to work with energy and enthusiasm. With this in mind, KHI provides a wide variety of programs to support employees’ efforts to raise the next generation and balance work and family life.

Of note, our childcare leave system go beyond the requirements of the law, and we have instituted programs to support the workplace return of employees who have taken such leave. These progressive efforts have been favorably received, substantiated already back in 2006 with the Hyogo Labor Office Director’s Award.

The planning stage of our Action Plan for Support for Rearing the Next Generation, formulated in 2005, ended in March 2010, and the Director of the Hyogo Prefectural Labor Office certified us as a company that supports childcare. In April 2010, we formulated a new Action Plan, and we will continue taking an active role in supporting the rearing of the next generation.

In April 2011, we introduced a new system, whereby former employees, who retired for such reasons as marriage, childbirth or childcare, may request reinstatement when their circumstances allow them to rejoin the workforce. We also introduced a system that enables employees to take time off in hourly blocks when needed to deal with child-related issues such as regular parenting duties or when a child is sick.

These efforts are not only applicable to childcare. Similar programs are available to employees with elderly or ill family members who require home care, and we provide many kinds of support for maintaining a balance between working and caring for family members.

Number of Employees Taking Childcare Leave

| Fiscal 2007 | Fiscal 2008 | Fiscal 2009 | Fiscal 2010 | Fiscal 2011 |
|-------------|-------------|-------------|-------------|-------------|
| 14          | 22          | 19          | 27          | 23          |



## Respect for Human Rights

### Respect for Human Rights and Policy on Discrimination

The underlying philosophy on which the Kawasaki Heavy Industries Code of Corporate Ethics are built is “respect for individuality and human rights / prohibition of discrimination.” Committed to this, we promise that “For creating and maintaining comfortable workplace, we respect for individuality and human rights of all people. We do not engage in discrimination, sexual harassment and bullying.”

### Prohibiting Sexual Harassment and Power Harassment

Seeking to create a comfortable working environment in which employees can perform their jobs free from harassment, KHI offers training to guide everyone onto the path of appropriate behavior and to enlighten everyone on the morale-crushing consequences of harassment.

On the issue of sexual harassment, we have established counseling offices at all work sites. We also maintain an e-mail address just for harassment-related comments to facilitate communication. In addition, we have prepared a manual for counselors which outlines procedures that ensure the privacy of people seeking advice and a proper response to their concerns.

To raise awareness of human rights issues, we utilize training for new employees and sessions for existing employees in various corporate positions as opportunities to highlight the importance of respect for human rights.

#### TOPICS

#### Consideration Given to Employees at KMI (Indonesia)

PT. Kawasaki Motor Indonesia (KMI) is a local manufacturing and marketing base for Kawasaki-brand motorcycles in Indonesia.

About 90% of the population of Indonesia is Muslim, and many of KMI's employees are followers of Islam. Therefore, various considerations are extended to these employees.

The company has set aside an area on site for a *mushola* (prayer room). Female employees are allowed to wear a headscarf during working hours and, in the cafeteria, no dishes made with pork are served since dietary laws prohibit consumption of pork.

During the holy month of Ramadan, Muslims fast between sunrise and sunset, and through this month office hours for employees in administrative and marketing divisions start 30 minutes earlier than usual. This change reflects the desire of many Muslims to have their evening meal with family at home during Ramadan. Also, after Lebaran (a celebration to mark the end of fasting), which follows Ramadan, KMI holds a halal bi halal event for Muslims.

But Islam is not the state religion of Indonesia. In fact, there are Christian and Hindu minorities, and since the constitution guarantees religious freedom, Christmas and Hindu celebrations are also observed as national holidays. KMI therefore extends considerations to employees of Christian and other faiths and holds events, such as Christmas celebrations.

This demonstrates KMI efforts to accommodate the local

religions, culture and customs of the land and execute business activities that respect human rights.



On site prayer room (*mushola*)



Women employees wearing a headscarf



Halal Bi Halal

## Realize Vibrant Workplace Atmosphere

### Encourage employees to take annual paid vacation

KHI encourages employees to use their annual paid vacation time to refresh mind and body and to strike a better balance between work and private life. As one approach to this, the Company introduced a program—*Yuyu Renkyu*—that asks employees to decide on consecutive days off at the beginning of the fiscal year that they will have to take when those days come round on the calendar. Also, since April 2010 the Company has endeavored to create an environment that makes it easier to take vacation time, including a one-day increase in annual paid vacation, from 21 days, to 22.

Average days of annual paid vacation taken by employees

| Fiscal 2008 | Fiscal 2009 | Fiscal 2010 | Fiscal 2011 | Fiscal 2012 |
|-------------|-------------|-------------|-------------|-------------|
| 15.1        | 15.7        | 14.9        | 15.3        | 15.6        |

### Communication between Management and Employees

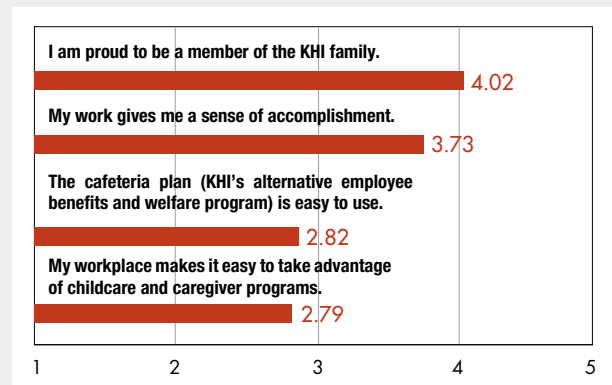
To create a vibrant workplace environment, the thoughts of top management as well as corporate policies, management information and other key issues must reach all employees as quickly as possible. To ensure that information is accurately transmitted from management to employees, KHI's intranet and internal bulletins expedite delivery of information and ensure that messages from top management are quickly received by all. We have a variety of opportunities for discussion with labor, where executives can explain policies and management information directly to employee representatives.

## TOPICS

### The Result of Employee Satisfaction Survey

KHI conducts employee satisfaction surveys every other year and use the results in the preparation of new policies and programs. The survey undertaken in February and March 2011 garnered an increase in positive responses on nearly all questions, such as “Proud to be a member of the KHI family” and “My work gives me a sense of accomplishment”. But positive responses to questions on employee welfare and the environment to take advantage of childcare and caregiver programs were relatively few. We will carefully evaluate this situation and promote various measures to ameliorate perceived concerns.

\*From the 59 questions in the survey, we selected four that generated notable results. The number represents the average value given by respondents who were asked to rate the statement on a scale from 1 to 5. The higher the value, the more positive the assessment, indicating a high level of satisfaction.



## Creating a Safe, Comfortable Workplace

### Basic Premise on Employee Safety and Health

Protecting the safety and health of employees is of paramount importance. KHI seeks to create a workplace culture that prioritizes safety and health and a safe, comfortable working environment where employees can perform their jobs in good health and in a positive state of mind.

### Safety and Health Management Systems

In its Safety and Health Management Rules, KHI assumes this corporate obligation: “We will establish safety and health management systems and institute measures necessary to prevent occupational accidents and conditions that impair health, sustain and perhaps improve the health of employees, and foster a pleasant working environment.”

Specifically, the general safety and health manager at each site is assigned safety and health management supervisory duties, in accordance with basic policy outlined by the Chief Safety and Health Management Officer, to facilitate safety and health management.

### Efforts to Prevent Occupational Accidents

#### ① Steadfast Implementation and Promotion of Occupational Health and Safety Management Systems

By continually using and improving its occupational health and safety management systems, KHI reinforces system standards and ensure meticulous health and safety management, which in turn stops occupational accidents before they can occur and lays the foundation of a comfortable workplace environment. A current priority is to enhance risk assessment capabilities and systematically eliminate any latent risks to ensure inherently safe conditions for employees.

#### ② Maintaining the KSKY Campaign

KHI has been implementing the KSKY campaign since 2002. KSKY is coined from the first letters of Japanese words: the K from *kihon*, meaning “basic rules”; the S from *shisakusho*, “pointing and calling”; and the KY from *kiken yochi*, “predicting danger”. The purpose of this campaign is to instill greater awareness of safety measures and to create a workplace secured by “mutual cautioning”, which is, essentially, employees watching out for the safety of others as well as themselves.

#### ③ Learning to Detect Dangerous Situations

To raise safety awareness and prevent occupational accidents that are caused by unsafe practices, we run mock accidents that allow employees to identify possible dangers in the workplace. As an added precautionary measure, we are installing more devices and facilities to make the practical experience more effective.



Mock accidents training

### Health Advice and Efforts in Mental Healthcare

#### ① Health Classes

As one of its corporate THP (Total Health Promotion) efforts, KHI offers health classes to help employees lead healthier lives. These classes cover general topics, such as dental hygiene and quitting smoking, as well as specialized topics, such as better diets for young adults and approaches for lowering high blood sugar, which are geared to both new employees and existing employees who show signs of having lifestyle diseases based on the results of legally required health checks.

#### ② Stress Checks

We ask that employees have their daily stress levels checked during regular health checks, and industrial physicians interview employees with high stress levels and provide them with personalized advice. We have also implemented measures to manage stress effectively in the workplace using work stress diagnoses. In addition, we conduct group classes for managers and supervisors and offer information about “line-care”—to improve the working environment and assist staff who wish to discuss mental health issues—and self-care, or personal health maintenance, as well as other topics through e-learning.

#### ③ Fatigue Accumulation Self-diagnostic Checks

We require people who work long hours to undergo fatigue accumulation self-diagnostic checks. Industrial physicians interview employees with high levels of accumulated fatigue and provide them with personalized advice.



Health class

## Promoting Environment Management

### Establishment of Environmental Vision 2020

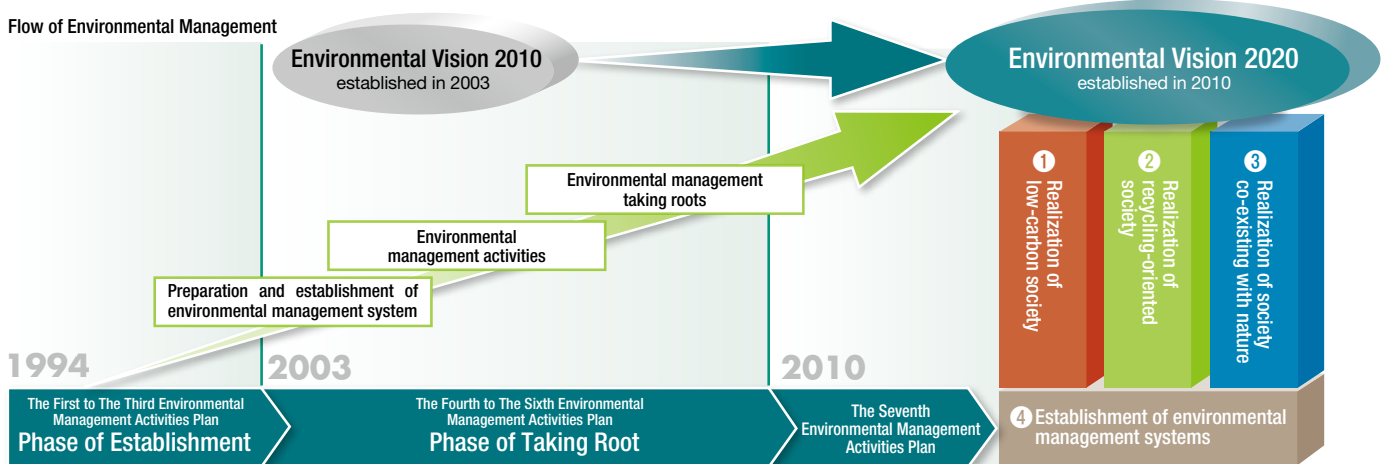


**Hashimoto Yoshizumi,**  
Chief Environmental Officer,  
Executive Officer,  
General Manager, CSR Division

In fiscal 2011, KHI Group drafted Environmental Vision 2020, which seeks to define what the Group should be in 2020 from an environmental perspective under KHI’s Group Mission: “Kawasaki, working as one for the good of the planet (Enriching lifestyles and helping safeguard the environment: Global Kawasaki).” Realization of this vision will be supported by environmental management activities plans, which run for three years. KHI Group embarked on the Seventh Environmental Management Activities Plan in fiscal 2011, at the same time that Environmental Vision 2020 was launched, with targets to achieve during this three-year period and key strategies to implement in each year of the plan.

Based on the environmental philosophy described in our Environmental Charter, Environmental Vision 2020 will underpin the establishment of three types of societies — a low-carbon society, a recycling-oriented society, and a society that coexists with nature. A fourth component — the establishment of environmental management systems—forms the cornerstone of such societies. Through our Environmental Vision 2020, KHI Group aims to contribute to integrating business management and environmental management activities and contribute to a sustainable society.

To realize our social mission, KHI Group will continue to prioritize the environment as an important management theme and support solutions to global environmental problems through our products and services.



### Environmental Charter (Established in 1999, rev. 2010)

#### Environmental Philosophy

The KHI Group has undertaken business with the advancement of society and the nation through “manufacturing” as our foundation, and has sought to develop a global enterprise in “key industries related to land, sea, and air.” In doing so, we have worked toward resolution of global environmental problems by seeking the “realization of a low-carbon society,” the “realization of a recycling-oriented society,” and the “realization of a society coexisting with nature.” We will contribute to “the sustainable development of society” through business activities that are in harmony with the environment and through the KHI Group’s own products and services that show consideration for the global environment.

#### Conduct Guidelines

1. Recognizing that global environmental protection is a common and serious issue for humankind, KHI Group will positively volunteer to engage itself in harmonizing with the environment globally. We shall regard this as one of the most important strategies when we deploy our business activities.
2. During its production stages, KHI Group will endeavor to conserve resources, to save energy, to recycle resources and to reduce industrial waste and will promote the reduction of environmental impact.
3. In the new product planning (i.e. research and development) and designing stages, KHI Group will render careful attention throughout the procurement, production, distribution, utilization and material disposal stages in order to minimize the environment impact.
4. KHI Group will minimize the impact of its business activities on ecosystems and proactively protect those ecosystems.
5. In seeking solutions to global environmental issues, KHI Group will do its best to develop and provide new technologies and new products that contribute to environmental protection, energy saving and resource conservation.
6. Not only complying with environmentally related institutional laws, regulations and agreements and voluntary action plans of each industry concerned, but KHI Group will voluntarily institute its own environmental control standards as an appropriate and necessary action in order to strive to improve environmental control levels.
7. Through environmental training and public awareness activities, KHI Group will strive to enlighten all its employees on global environmental issues and will support individual views, lifestyles and will encourage their participation in the social activities and services.
8. KHI Group will implement an environmental management system to promote environmental preservation and conservation, and hold regular conferences to review management systems and maintain continual improvement.





## Environmental Vision 2020

### Entry Points of Sustainable Society

#### Realization of low-carbon society

Contribute to the prevention of global warming through **our products and manufacturing that use energy without waste**

##### Perspective on our activities

In many areas of the world, global warming appears to be driving wide-scale climate change. To address problems like these that affect our planet's sustainability, KHI Group is working to reduce the greenhouse gas emissions associated with our business activities and providing products and services that help reduce those same emissions, thereby contributing to building a low-carbon society.

##### Vision for 2020

- ① Reduce 2020 greenhouse gas emissions in line with national targets.
- ② Offer customers energy-efficient products and services and reduce emissions of greenhouse gases on planetary scale.
- ③ Promote energy conservation in production and logistics processes and reduce emissions of greenhouse gases.

#### Realization of recycling-oriented society

Engage in **manufacturing that uses resources without waste** in order to recycle and fully utilize limited resources

##### Perspective of our activities

Planetary resources to support human life are now being consumed faster than the earth can naturally replace them. KHI Group endeavors to conduct business and develop products in order to fully use, reuse and recycle limited resources and thereby help achieve a recycling-oriented society.

##### Vision for 2020

- ① Practice design that uses resources effectively and work to make products lighter, more durable and more recyclable.
- ② Practice the 3R's (reduce, reuse and recycle of waste) in production activities and achieve zero emissions at all plants.
- ③ Completely and appropriately process all PCB waste and PCB-containing devices.

#### Realization of society coexisting with nature

Contribute to reduction of environmental impact and conservation of the ecosystem through **manufacturing that is in harmony with the global environment**

##### Perspective of our activities

Biological diversity sustains the ecosystems that make up our global environment. Biodiversity provides us with food and natural resources, regulates our climate, cycles materials and cleans the environment. KHI Group will conduct business activities that lessen our burden on the environment and we will help prevent pollution and protect ecosystems through our products and technologies.

##### Vision for 2020

- ① Offer customers products and services that prevent air and water pollution, and advance environment improvements and ecosystem protection.
- ② Reduce the use of chemical substances in products and production activities.
- ③ Cooperate in regional forest conservation and other activities to protect the environment of ecosystems.

### Building a foundation for environmental management

#### Establishment of environmental management systems

Build a foundation for **environmental management that will realize the Environmental Vision 2020**

##### Perspective of our activities

KHI Group aims to achieve a sustainable society and to contribute to more prosperous lifestyles for the people of the world and a brighter future for the global environment through environmentally conscious business activities and products and services.

##### Vision for 2020

- ① Have an environmental management system (EMS) in place at every consolidated subsidiary in Japan and abroad and practice environmental management throughout the Group.
- ② Comply with environmental laws and regulations and regularly follow up on compliance status.
- ③ Communicate environmental data within and beyond the Group and maintain two-way dialogue while protecting the environment.

## Seventh Environmental Management Activities Plan Results of Fiscal 2012

The Seventh Environmental Management Activities Plan, which inaugurated the Environmental Vision 2020, runs from fiscal 2011 through fiscal 2013. This plan sets out four themes—the realization of low-carbon society, the realization of recycling-oriented society, and the realization of society coexisting with nature, as well as the establishment of environmental management systems to serve as a foundation for environmental management—that will enable KHI Group to realize our vision.

### Seventh Environmental Management Activities Plan (Fiscal 2011–Fiscal 2013)

**Realization of low-carbon society** Contribute to the prevention of global warming through our products and manufacturing that use energy without waste

**(1) Global warming prevention measures**

- 1) Reduce CO<sub>2</sub> emissions from our own production activities; make CO<sub>2</sub> more tangible to promote energy-saving activities Groupwide; create a verification system
  - Undertake Groupwide CO<sub>2</sub> reduction measures (energy-saving capital investment)
  - Promote energy savings from logistics as a specified consignor
- 2) Acquire emissions credits with KHI Group products and technologies
  - Create a system to acquire emissions credits with KHI Group products and technologies in Japan and abroad (e.g., CDM)
- 3) Purchase emissions credits from trading market
  - Take precautionary measures in the event we do not meet CO<sub>2</sub> reduction targets
- 4) Acquire emissions credits by endowment or donation

**Group target:** By fiscal 2013, reduce our average amount of CO<sub>2</sub> basic unit (= CO<sub>2</sub> emissions per net sales) for fiscal 2009 through fiscal 2013 by 10%, compared with fiscal 2008

**Realization of recycling-oriented society** Engage in manufacturing that uses resources without waste in order to recycle and fully utilize limited resources

**(1) Activities to reduce total waste emissions**

- 1) Promote resource savings and 3R (reduce, reuse, recycle)
- 2) Zero emissions activities, increasing recycling rate

**Group target:** By fiscal 2013, reduce waste basic unit (= waste emissions per net sales) by 12%, compared with fiscal 2003; maintain zero emissions

**(2) Decide on proper treatment plan for PCB wastes and follow through with appropriate measures**

**Realization of society coexisting with nature** Contribute to reduction of environmental impact and conservation of the ecosystem through manufacturing that is in harmony with the global environment

**(1) Activities to reduce chemical substances**

- Set reduction targets and promote activities (both design and production initiatives)

**Group target:** Set controlled chemical substances reduction target for fiscal 2011 through fiscal 2013, compared with average for fiscal 2004 through fiscal 2006

**(2) Environmental contributions through products and technologies**

- 1) Activities to reduce environmental impact over product life cycle
  - Prepare foundation for performing product life cycle assessment
- 2) Make products greener, promote environmental consciousness in products
- 3) Reduce impact on and conserve biodiversity
  - 1) Decide on biodiversity action guidelines and promote conservation

**Establishment of environmental management systems** Build a foundation for environmental management that will realize the Environmental Vision 2020

**(1) Build EMS for KHI Group**

**Group target:** Finish building EMS at consolidated subsidiaries in Japan and abroad that are key production bases by fiscal 2013.

**(2) Thoroughly comply with environmental laws and regulations**

- Prevent recurrence of environmental accidents, etc.

**(3) Practice environmental communication**

- Promote environmental dialog with all stakeholders

## Main initiatives of the Seventh Environmental Management Activities Plan

### Realization of low-carbon society

KHI Group is aiming to achieve our company-wide Fiscal 2013 objective for greenhouse gases, which is to reduce the average basic unit of emissions (meaning CO<sub>2</sub> emissions/sales) for Fiscal 2009-2013 by 10% compared with the level of Fiscal 2008. This objective represents a specific initiative to counter global warming.

### Realization of recycling oriented society

KHI Group's measures to reduce total waste emissions include promoting conservation and the 3R movement.

### Realization of society coexisting with nature

KHI Group has engaged in measures to reduce chemical substances, environmental contributions through our products and technology, and the like.

### Establishment of environmental management systems

KHI Group has committed itself to promoting the establishment of EMS in all consolidated subsidiaries in Japan and overseas. Also, we have committed ourselves to environmental risk management and employee education.

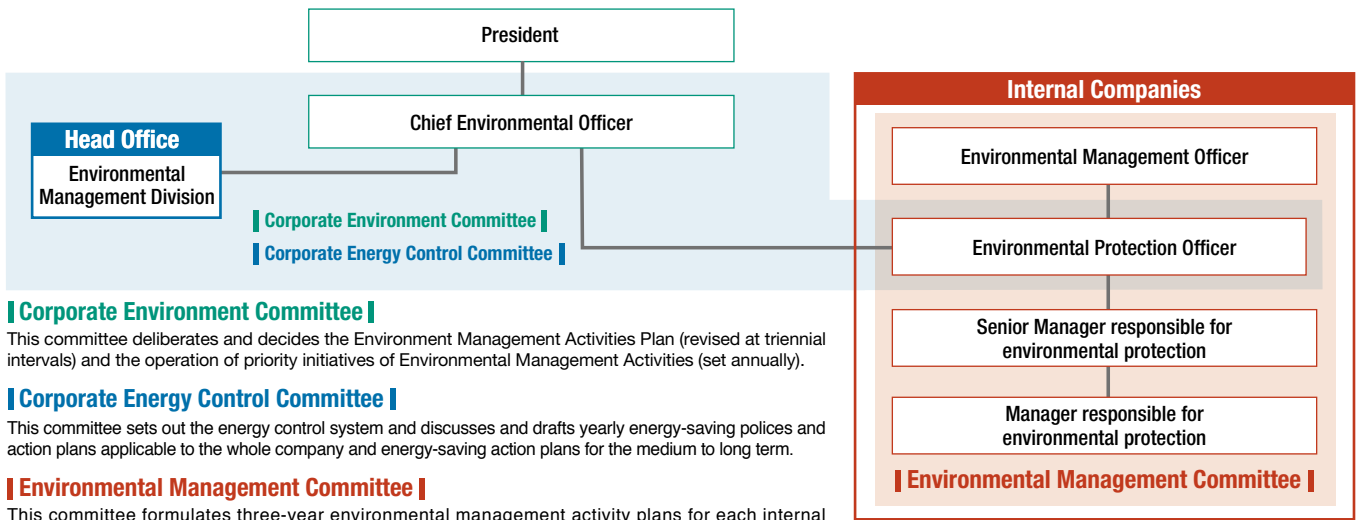
| Environmental Activity Results of Fiscal 2012   | Evaluation |
|---|------------|
| <p><b>1. Global warming prevention measures</b></p> <p>1) Reduce CO<sub>2</sub> emissions from our own production activities</p> <ul style="list-style-type: none"> <li>• Introduce system to make CO<sub>2</sub> emissions tangible (includes response to Revised Energy-Saving Law); operate system at pilot plant, collect and distribute energy-saving know-how in-house;</li> <li>• Undertake Groupwide CO<sub>2</sub> reduction measures (energy-saving capital investment)</li> <li>• Implement energy-saving capital investment (factory and office lighting, energy-saving inverters) and verify the results of such energy-saving measures</li> <li>• Strengthen energy-saving activities in each segment and follow through on plans</li> <li>• Establish corporate energy-saving promotion structure</li> </ul> <p>2) Acquire emissions credits with KHI Group products and technologies</p> <ul style="list-style-type: none"> <li>• Consider responses to new measures that fight global warming)</li> </ul> <p>3) Purchase emissions credits from trading market</p> <ul style="list-style-type: none"> <li>• Examine burden of purchasing portion of reduction targets not achieved</li> </ul> <p>4) Acquire emissions credits by endowment or donation</p> <ul style="list-style-type: none"> <li>• Forest conservation activities, use of green electric power, etc.</li> </ul> | ○          |
| <p><b>1. Activities to reduce total waste emissions</b></p> <p>1) Activities to reduce three substances with greatest waste emissions (metal scrap, waste oil, wood scrap)</p> <p>2) Promote resource saving, 3R</p> <p>3) Maintain and enhance zero emissions status</p> <p>4) Promote implementation of electronic manifests</p> <hr/> <p><b>2. Decide on proper treatment plan for PCB wastes and follow through with appropriate measures</b></p> <p>1) Follow through on JESCO commissioned processing)</p> <p>2) Follow through on processing trends and number of processed units of equipment containing low-density PCBs</p>   | ○          |
| <p><b>1. Activities to reduce chemical substances</b></p> <p>1) Perform critical point follow-through in departments stepping up reduction measures in the Seventh Plan</p> <ul style="list-style-type: none"> <li>• Acknowledge and organize usage status, clarify issues and set targets</li> <li>• Promote implementation and follow through with low-VOC paints as well as heavy-metal-free painting and surface-processing technologies</li> </ul> <hr/> <p><b>2. Environmental contributions through products and technologies</b></p> <p>1) Activities to reduce environmental impact over product life cycle</p> <ul style="list-style-type: none"> <li>• Assess CO<sub>2</sub> reduction effects on products related to energy and transportation</li> <li>• Consider evaluation techniques for life cycle assessment</li> <li>• Report environmental contributions from products and technologies</li> </ul> <p>2) Make products greener</p> <ul style="list-style-type: none"> <li>• Respond thoroughly to laws and regulations (RoHS Directive, REACH Regulations, etc.)</li> <li>• Set standards for green products and boost sales of such products</li> </ul> <hr/> <p><b>3. Activities to protect bio-diversity</b></p> <p>1) Promote conservation activities of bio-diversity in each business segment and on a company-wide basis.</p>  | △          |
| <p><b>1. Build EMS for KHI Group</b></p> <p>1) Devise and promote a plan for building EMS at consolidated subsidiaries in Japan and abroad</p> <ul style="list-style-type: none"> <li>• In fiscal 2012, introduce EMS at five domestic subsidiaries and five overseas subsidiaries</li> </ul> <p>2) Collect major environmental data for entire Group (energy, waste, chemical substances, etc.)</p> <ul style="list-style-type: none"> <li>• Collect information from Group companies on energy/CO<sub>2</sub> emissions and disclose data to public</li> </ul> <hr/> <p><b>2. Thoroughly comply with environmental laws and regulations</b></p> <p>1) Activities of Environmental Law and Regulation Compliance Status Review Committee</p> <p>2) Follow up on environmental law revisions, etc., and implement throughout the Group</p> <hr/> <p><b>3. Practice environmental communication</b></p> <p>1) Awareness-raising activities for KHI Group employees (environmental education)</p> <p>2) Disclose environmental data within and beyond Group (issue environmental news, CSR Report, etc.)</p> <p>3) Company forest restoration program</p>   | ◎          |

## Building an Environmental Management Platform

### Environmental Management Organization

The director for environmental issues at KHI is appointed Chief Environmental Officer and in this position chairs the Corporate Environment Committee, which deliberates and decides on operations of a variety of important matters related to the environment. To enable each internal company to independently promote the environmental management activities plan as designed, Environmental

Management Officer, Environmental Protection Officer, Senior Manager responsible for environmental protection, and Manager responsible for environmental protection are appointed to match the structure of each internal company with such activities. Furthermore, organization systems are in place to facilitate a coordinated effort among all employees to implement environment-oriented initiatives.



#### Corporate Environment Committee

This committee deliberates and decides the Environment Management Activities Plan (revised at triennial intervals) and the operation of priority initiatives of Environmental Management Activities (set annually).

#### Corporate Energy Control Committee

This committee sets out the energy control system and discusses and drafts yearly energy-saving policies and action plans applicable to the whole company and energy-saving action plans for the medium to long term.

#### Environmental Management Committee

This committee formulates three-year environmental management activity plans for each internal company and tracks the results achieved through company-specific activities.

### Environmental Management System (EMS) Administration

All KHI production bases have acquired ISO 14001 certification. Currently, KHI Group is working to expand the scope of Environmental Management System (EMS) implementation at subsidiaries in Japan and abroad and continue activities aimed at establishing environmental management structures, including compliance with environmental laws and regulations. All the 43 domestic subsidiaries that we targeted for EMS adoption had completed development of the necessary structure by the end of fiscal 2012. To date, KHI Group focused on principal factories, but under the Seventh Environmental

Management Activities Plan, KHI Group will strive to expand the scope of EMS establishment at overseas locations. Of the 26 overseas subsidiaries that have been targeted for an EMS, Kawasaki Motors Enterprise (Thailand) Co., Ltd and other four companies completed implementation in fiscal 2012. Of the 14 companies that still have not established the EMS, we will advance the establishment of EMS in fiscal 2013, clarifying the policy corresponding to the business field and the scales, in accordance with local laws and regulations.



## Current Situations for Acquiring ISO 14001 (JIS Q 14001) Certification for KHI Production Bases

### Kawasaki Heavy Industries

| Internal Companies                | Date Acquired        | Registration |       |
|-----------------------------------|----------------------|--------------|-------|
| Ship & Offshore Structure Company | Kobe Works           | Aug. 2002    | DNV   |
|                                   | Sakaide Works        | Aug. 2000    | DNV   |
| Rolling Stock Company             |                      | Feb. 2002    | LRQA  |
| Aerospace Company                 |                      | Feb. 2002    | BSK   |
| Gas Turbine & Machinery Company   | Gas Turbine Division | Mar. 2000    | LRQA  |
|                                   | Machinery Division   | Dec. 2000    | NK    |
| Plant & Infrastructure Company    |                      | Nov. 1999    | JICQA |
| Motorcycle & Engine Company       |                      | Feb. 2000    | DNV   |
| Precision Machinery Company       | Nishikobe Works      | Feb. 1998    | DNV   |
|                                   | Robot Division       | Mar. 2011    | DNV   |

LRQA: Lloyd's Register Quality Assurance, JICQA: JIC Quality Assurance, NK: Nippon Kaiji Kyokai (ClassNK), BSK: Bouei Choutatsu Kiban Seibi Kyoukai (Defense Procurement Framework Establishment Association of Japan), DNV: Det Norske Veritas

## Current Situations for EMS Installation for Subsidiaries

### Subsidiaries in Japan

| Oversight organization         | Company  | Establishment level           | Date of Establishment |           |
|--------------------------------|--|-------------------------------|-----------------------|-----------|
| Ship & Offshore Structure      | Kawasaki Shipbuilding Inspection Co., Ltd.           | 1                             | Apr. 2008             |           |
|                                | Kawasaki Techno Wave Co., Ltd.                       | 1                             | Aug. 2000             |           |
|                                | Kawaju Kobe Support Co., Ltd.                        | 2                             | Dec. 2005             |           |
|                                | KHI JPS Co., Ltd.                                    | 3                             | Mar. 2008             |           |
| Rolling Stock                  | Kawaju Marine Engineering Co., Ltd.                  | 1                             | Mar. 2008             |           |
|                                | Alna Yusoki-Yohin Co., Ltd.                          | 1                             | Nov. 2008             |           |
|                                | Kawasaki Rolling Stock Component Co., Ltd.           | 1                             | Aug. 2002             |           |
|                                | Kawasaki Rolling Stock Technology Co., Ltd.          | 1                             | Aug. 2002             |           |
|                                | Kansai Engineering Co., Ltd.                         | 3                             | Aug. 2002             |           |
|                                | Sapporo Kawasaki Rolling Stock Engineering Co., Ltd. | 2                             | Jun. 2011             |           |
|                                | Nichijo Manufacturing Co., Ltd.                      | 2                             | Oct. 2005             |           |
| Aerospace                      | Kawaju Gifu Engineering Co., Ltd.                    | 1                             | Feb. 2002             |           |
|                                | Kawaju Gifu Service Co., Ltd.                        | 1                             | Feb. 2002             |           |
|                                | KGM (Kawaju Gifu Manufacturing) Co., Ltd.            | 1                             | Feb. 2002             |           |
|                                | NIPPI Corporation                                    | 1                             | Dec. 2006             |           |
| Gas Turbine                    | Kawaju Akashi Engineering Co., Ltd.                  | 1                             | Mar. 2000             |           |
|                                | Kawasaki Thermal Engineering Co., Ltd.               | 1                             | Apr. 2002             |           |
| Machinery                      | Kawasaki Prime Mover Engineering Co., Ltd.           | 1                             | Dec. 2002             |           |
|                                | Kawasaki Naval Engine Service, Ltd.                  | 1                             | Dec. 2002             |           |
| Plant & Infrastructure         | KEE Environmental Construction, Co. Ltd.             | 1                             | Dec. 2003             |           |
|                                | KEE Environmental Service, Ltd.                      | 1                             | Jun. 2002             |           |
|                                | EarthTechnica Co., Ltd.                              | 1                             | Sep. 2000             |           |
|                                | EarthTechnica M&S Co., Ltd.                          | 1                             | Sep. 2000             |           |
|                                | Kawasaki Engineering Co., Ltd.                       | 3                             | Oct. 2009             |           |
|                                | Fukae Powtec Co., Ltd.                               | 3                             | Mar. 2010             |           |
| Motorcycle & Engine            | Kawaju Facilittech Co., Ltd.                         | 2                             | Jul. 2007             |           |
|                                | Autopolis  | 2                             | Dec. 2011             |           |
|                                | Kawasaki Motors Corporation Japan                    | 1                             | Feb. 2008             |           |
|                                | K-GES Co., Ltd.                                      | 1                             | Jan. 2006             |           |
|                                | K-TEC Corporation                                    | 3                             | Dec. 2009             |           |
|                                | Technica Corp.                                       | 3                             | Mar. 2012             |           |
|                                | Union Precision Die Co., Ltd.                        | 1                             | Jul. 2006             |           |
|                                | Head Office  | KCM Corporation               | 1                     | May 2000  |
|                                |  | KCMJ                          | 2                     | Mar. 2012 |
|                                |  | Kawasaki Hydromechanics Corp. | 1                     | Jun. 2007 |
| Kawasaki Machine Systems, Ltd. |  | 2                             | Dec. 2011             |           |
| Kawasaki Life Corporation      |  | 2                             | Jul. 2006             |           |
| Kawaju Service Co., Ltd.       |  | 1                             | Feb. 2000             |           |
| Kawasaki Trading Co., Ltd.     |  | 1                             | Dec. 2004             |           |
| Kawaju Techno Service Corp.    |  | 3                             | Mar. 2005             |           |
| Kawaju Tokyo Service Corp.     |  | 3                             | Mar. 2009             |           |
| K Career Partners Corp.        |  | 2                             | Mar. 2007             |           |
| Benic Solution Corp.           | 2  | Feb. 2006                     |                       |           |

level 1 ISO14001 certification

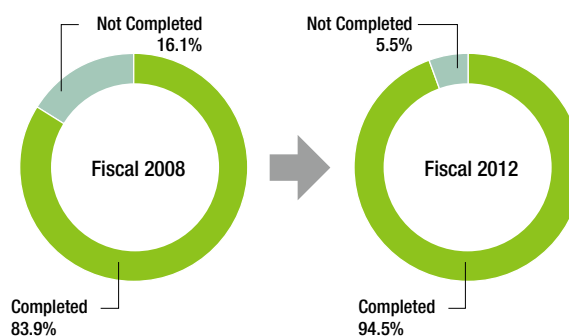
level 2 Simplified EMS certification

level 3 Self-declaration of EMS establishment

### Subsidiaries Overseas

| Oversight organization      | Company  | Location    | Establishment level | Date of Establishment |
|-----------------------------|--|-------------|---------------------|-----------------------|
| Machinery                   | Wuhan Kawasaki Marine Machinery Co., Ltd.          | China (PRC) | 1                   | Jul. 2009             |
| Plant & Infrastructure      | KHI Design & Technical Service Inc.                | Philippines | 1                   | Nov. 2011             |
| Motorcycle & Engine         | Kawasaki Motors Manufacturing Corp., U.S.A.        | U.S.A       | 1                   | Apr. 2003             |
|                             | Kawasaki Motors Enterprise (Thailand)Co., Ltd.     | Thailand    | 1                   | Dec. 2011             |
|                             | KHITKAN Co., Ltd.                                  | Thailand    | 1                   | Dec. 2011             |
|                             | P.T. Kawasaki Motor Indonesia                      | Indonesia   | 3                   | Jan. 2012             |
|                             | Kawasaki Motors(Phils.)Corporation                 | Philippines | 3                   | Jun. 2012             |
| Precision Machinery Company | Kawasaki Precision Machinery (UK)Ltd.              | U.K.        | 1                   | Nov. 2001             |
|                             | Flutek, Ltd.                                       | South Korea | 1                   | Nov. 2005             |
| Robot Division              | Kawasaki Precision Machinery (Suzhou) Ltd. (China) | China (PRC) | 1                   | Dec. 2007             |
|                             | Kawasaki Robotics(U.S.A.)Inc.                      | U.S.A       | 1                   | Feb. 2006             |
| Head Office                 | KCMA Corporation                                   | U.S.A       | 3                   | Mar. 2011             |

### Proportion of Employees of Subsidiaries in Establishing EMS Structures



## Compliance with Laws and Regulations

In fiscal 2012, there were no instances of judicial or administrative penalties.

However, KHI received two administrative warnings. One was for an accident that released acidic wastewater (from sulfuric acid) at the site of some construction work at the Gifu Works. The system that constantly monitors wastewater status quickly detected the problem and generated an alert so that steps could be taken immediately. As a result, pH value only slightly exceeded the allowable level.

The other was for irregularities found at the Akashi Works during an on-site inspection by a team of pollution regulators from Hyogo Prefecture. We installed corrective devices and implemented measures to address these irregularities.

### Violations and Accidents during the Past 5 Years

| Fiscal Year                       | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------------------|------|------|------|------|------|
| Judicial/Administrative Penalties | 0    | 0    | 0    | 0    | 0    |
| Administrative Measures           | 0    | 1    | 0    | 0    | 0    |
| Administrative Warnings           | 3    | 4    | 0    | 2    | 2    |
| Complaints from residents         | 2    | 4    | 0    | 5    | 0    |

- Judicial/Administrative Penalties: Penalties handed down by judicial or administrative authorities
- Administrative Measures: Instructions for improvements and other corrective measures in written form
- Administrative Warnings: Verbal directives concerning business practices

### Status of Laws and Regulations Compliance and Environmental Protection Activities Overseas

Overseas subsidiaries and offices of the Group are expected to abide by environmental laws and regulations just as domestic operations do, and we seek to expand the scope of EMS implementation and eliminate factors that lead to environmental accidents.

To enhance environmental management and lower environmental risk throughout the Group, regardless of location, In fiscal 2012 we have broadened the range of environmental impact data we collect from principal subsidiaries overseas, in addition to the energy consumption data collected from the fiscal 2011. Also, we are preparing to form the structure to reduce environmental risks by checking the actual situation of the oversea subsidiaries through onsite review by the Environmental Affairs Department.

## Risk Management

Prompted by a NOx accident at the Akashi Works in February 2009, we established the Environmental Law and Regulation Compliance Status Review Committee in April of that year. In the last two years, the committee has inspected 16 facilities: that is, 11 sites run by KHI and five sites run by four subsidiaries where operations can have a considerable environmental impact. Issues requiring corrective measures have been largely resolved at all facilities and initial goals have been achieved, so the committee's activities will be suspended.

Going forward, we will continue to ensure awareness of revisions to environment-related laws and regulations and encourage managers responsible for environment-related activities to acquire additional qualifications. This will be achieved not through a committee format but rather through the establishment of a joint CSR liaison conference at

which environmental management officers from our internal companies work together, guided by the secretariat—Environmental Affairs Department—to address CSR issues from a risk management perspective and thereby prevent environmental accidents before they happen.

In fiscal 2012, environmental management officers at KHI and principal subsidiaries attended a joint meeting. This was an opportunity to highlight changes to recently revised environmental laws and regulations, share the results of on-site inspections undertaken by the secretariat to confirm legal compliance at facilities.

## Environmental Awareness Activities for Employees

### Environmental e-Learning/Courses for People without Computers

To maintain and improve environmental awareness among employees throughout the Group, we offer environmental e-learning opportunities to new employees. This ongoing process is aimed not only at new employees at KHI but also those at subsidiaries. In fiscal 2012, approximately 1150 people participated in the environmental e-learning courses. The attendance rate was 89%.

For employees who do not have access to a personal computer, we offer lecture-style classes. In the four years since these classes were first offered in fiscal 2009, we have had around 6800 people attend the lectures.

### Environmental Awareness

KHI Group runs publicity campaigns designed to raise the environmental awareness of each and every employee. We undertake these campaigns all the time to promote environmentally conscious conduct not only in the workplace but also in the community and at home.



Message from the President concerning environmental management



Environmental News



"Eco Mind," featured in the Group magazine Kawasaki

### Cultivating Qualified Managers

To enrich management activities emphasizing energy and the environment, we are striving to cultivate individuals with legal qualifications required under laws and regulations related to energy and the environment.

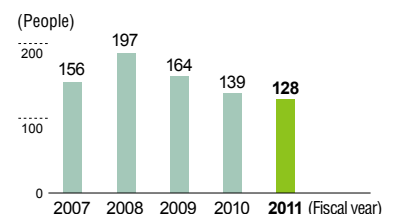
#### Number of Qualified Pollution Control Managers

|                  |     |
|------------------|-----|
| Air              | 70  |
| Water            | 74  |
| Noise, Vibration | 45  |
| Others           | 78  |
| Total            | 267 |

#### Number of Qualified Energy Managers

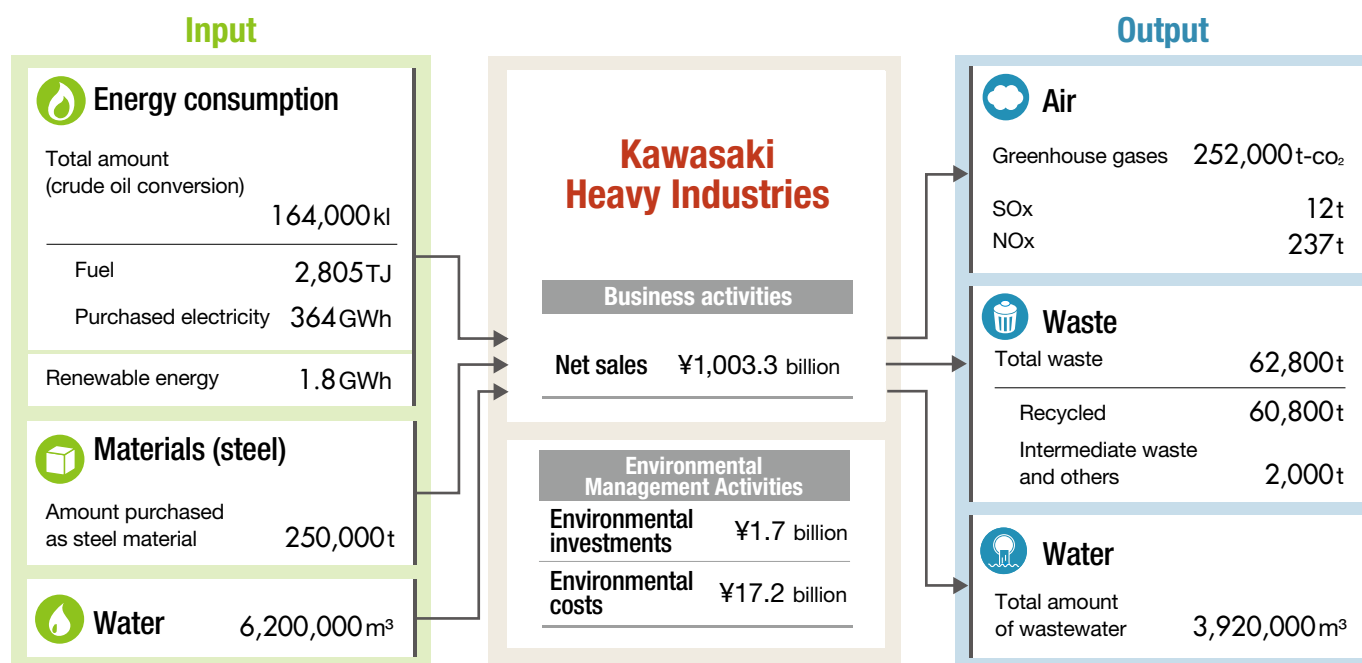
|                 |    |
|-----------------|----|
| Energy Managers | 39 |
|-----------------|----|

#### Number of Newly Registered ISO 14001 Internal Environmental Auditors



### Material Balance of Business Activities for Fiscal 2012 (Overall Picture of Environmental Impact)

KHI has put together a summary of the impact of our business activities on the environment during fiscal 2012. We undertake activities to reduce the amounts of raw materials, energy, and water used in the production of the many products we make and strive to curb emission of substances that adversely affect the environment.



### Environmental Accounting Calculations for Fiscal 2012

| Item                            |  | Millions of yen               |                     |                                   |                                 |
|---------------------------------|--|-------------------------------|---------------------|-----------------------------------|---------------------------------|
|                                 |  | Environmental Investments     | Environmental Costs | Economic Effects                  |                                 |
| Business area costs             | Global warming prevention Save energy, reduce greenhouse gas emissions, stop ozone layer destruction, etc. | 847                           | 2,974               | Energy-saving cost reduction 175  |                                 |
|                                 | Efficient use of raw materials, water, and other resources   | 6                             | 192                 | Resource-saving cost reduction 50 |                                 |
|                                 | Resource-recycling activities  | Resource-recycling activities | 70                  | 726                               | Income from recycling 1,167     |
|                                 |  | Waste disposal costs          | 0                   | 321                               | Waste disposal cost reduction 4 |
|                                 | Environmental risk control   | 650                           | 1,722               | 2                                 |                                 |
|                                 | Subtotal   | 1,572                         | 5,935               | 1,398                             |                                 |
| Year-on-year comparisons        |  | 112%                          | 125%                | 115%                              |                                 |
| Upstream/downstream costs       |  | 59                            | 2,661               | 0                                 |                                 |
| Management activity costs       |  | 3                             | 452                 | 0                                 |                                 |
| R&D costs                       |  | 87                            | 7,876               | 0                                 |                                 |
| Social activity costs           |  | 13                            | 194                 | 0                                 |                                 |
| Environmental remediation costs |  | 0                             | 78                  | 0                                 |                                 |
| <b>Total</b>                    |  | <b>1,735</b>                  | <b>17,196</b>       | <b>1,398</b>                      |                                 |
| Year-on-year comparisons        |  | 80%                           | 109%                | 104%                              |                                 |

| Item                             |  | Millions of yen |
|----------------------------------|--|-----------------|
|                                  |  | Total           |
| Total investments in fiscal 2011 |  | 47,404          |
| Total R&D costs in fiscal 2011   |  | 37,916          |

| Item   |  | Proportion |
|--|--|------------|
| Percentage of investments (Environmental investments 1,735/Total investments 47,404) |  | 4%         |
| Percentage of R&D costs (Environmental R&D costs 7,876/Total R&D costs 35,321)       |  | 21%        |

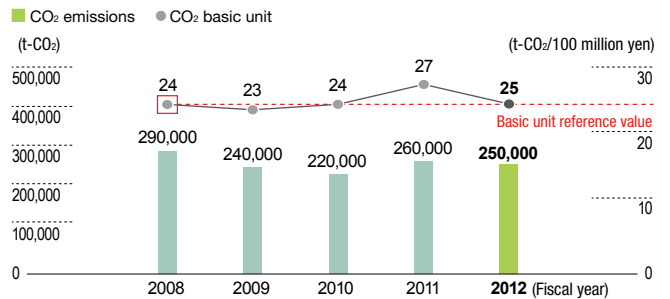
## Realization of Low-Carbon Society

### Reducing Greenhouse Gas Emissions

It is KHI's stated goal to contribute to the prevention of global warming through products and manufacturing that use energy without waste. Because 99% of the greenhouse gas emissions KHI generates through our business activities are CO<sub>2</sub> emissions from energy sources, KHI has implemented greenhouse gas reduction programs emphasizing a decrease in the usage of fossil fuel-derived energy. Our efforts include installation of photovoltaic power generation systems and conversion to high-efficiency lighting as well as progress in visualizing energy usage so that we can discover where energy is being wasted and then make the necessary changes to remedy the situation.

KHI's greenhouse gas reduction target is to achieve an average 10% decrease between fiscal 2009 and fiscal 2013 in our CO<sub>2</sub> basic unit, compared with the fiscal 2008 reference value. The results for fiscal 2012 showed a basic unit of 25t-CO<sub>2</sub>/¥100 million— against the benchmark 24t-CO<sub>2</sub>/¥100 million—indicating that it will be difficult to reach our target. However we will meet the target by using CO<sub>2</sub> credit to offset the shortage.

Changes in CO<sub>2</sub> Emissions and Basic Unit at KHI

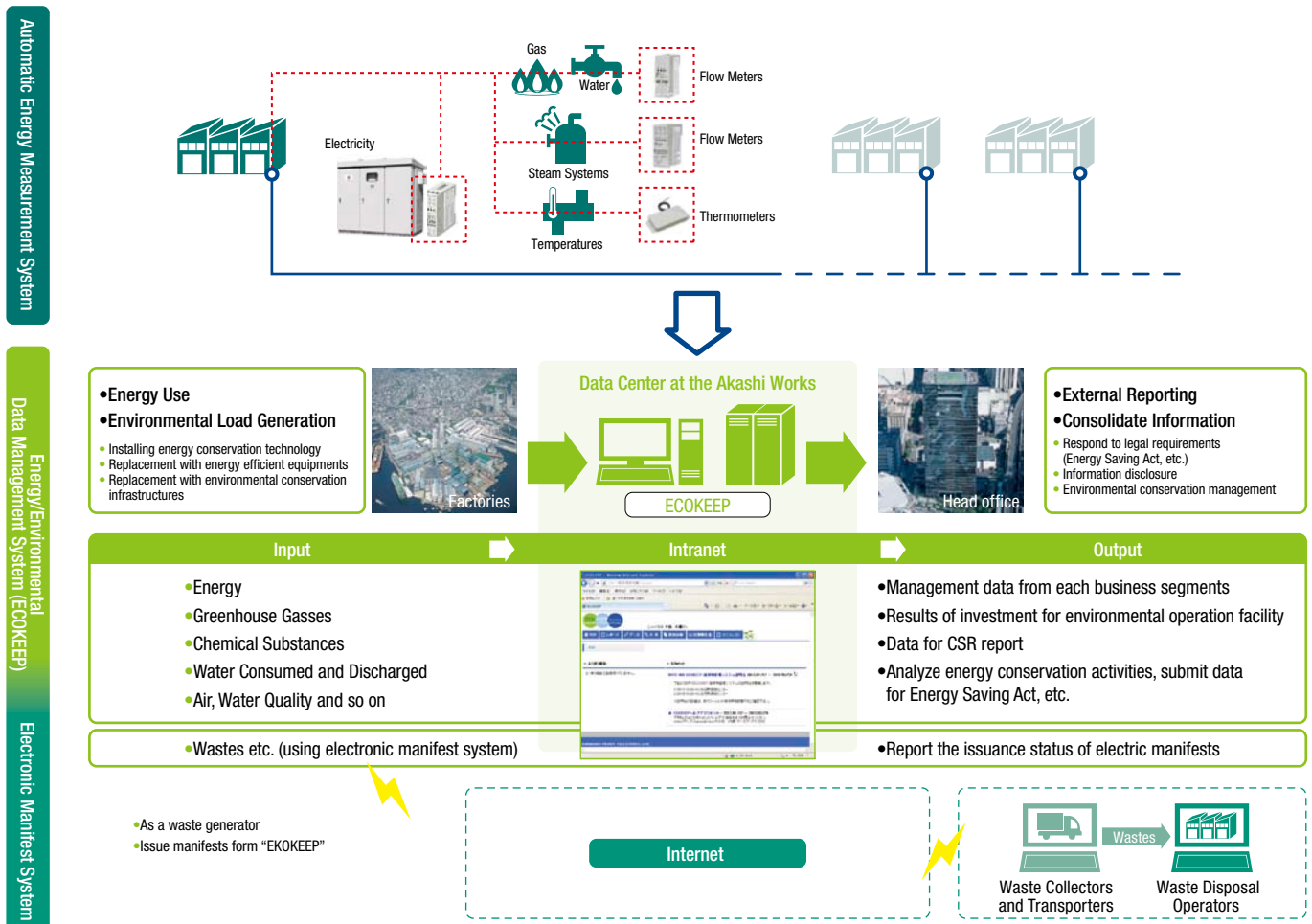


Note1 CO<sub>2</sub> basic unit is a measurement obtained by dividing CO<sub>2</sub> emissions by net sales.  
 Note2 CO<sub>2</sub> emissions in logistics processes are calculated from our position as a specified consignor (a Japanese legal designation applied to consignors that ship 30 million ton-kilometers of freight or more per year), under the revised Energy Saving Law.

### Reducing Energy Consumption

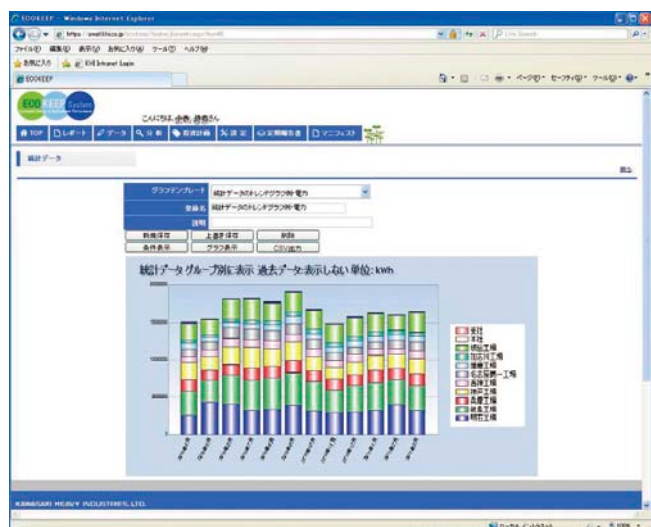
KHI has achieved some positive results in reducing CO<sub>2</sub> emissions through investment in energy-saving

#### System Structure Image





equipment. But to achieve sustained reduction in energy consumption, KHI has implemented a system using automatic energy readers. At the Kakogawa Works, we measure energy consumption to be about 350 points, covering most metered sources, including electricity, gas and compressed air. Consumption is displayed in real time to promote energy-saving activities. In addition, measurements are tallied up in a group-wide system and then analyzed, with the information made available for sharing within the Group.



an example of "ECOKEEP" monitor views

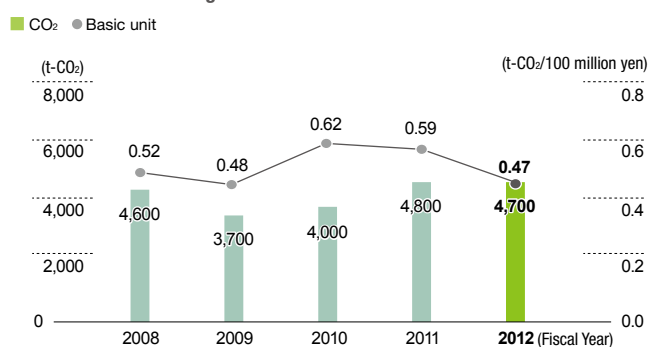
### CO<sub>2</sub> Reduction through Investment in Energy-Saving Equipment

From fiscal 2011 through fiscal 2012, KHI upgraded plant and office lighting systems and installed about 14,000 light fixtures with high energy-saving bulbs at plants and about 16,000 at offices. Specifically, we switched plant lighting from mercury bulbs to metal-halide bulbs, which offer the same level of brightness but consume only about half the power, and we switched office lighting from conventional fluorescent bulbs to high-frequency fluorescent bulbs, which are 20% more energy-efficient. Through these efforts, we expect to reduce CO<sub>2</sub> emissions by about 2,600 tons per year.

### Environmentally Conscious Logistics

KHI promotes energy-saving activities and data tracking to curb CO<sub>2</sub> emissions from logistics processes. Evaluating the Company's freight traffic on the basis of freight ton-kilometers carried (freight weight x distance), truck transport accounts for about half, with the balance of the freight carried by train or ship, which exerts less impact on the environment. In fiscal 2012, CO<sub>2</sub> emissions reached 4,700t-CO<sub>2</sub> and the basic unit improved 20% over fiscal 2011, to 0.468 point. We will strive to cut CO<sub>2</sub> emissions even further by boosting the load factor for truck transport and considering a modal shift from truck to other modes, such as train.

CO<sub>2</sub> Emissions from Logistics Processes



- \*1 CO<sub>2</sub> basic unit is a measurement obtained by dividing CO<sub>2</sub> emissions by net sales.
- \*2 CO<sub>2</sub> emissions in logistics processes are calculated from our position as a specified consignor (a Japanese legal designation applied to consignors that ship 30 million ton-kilometers of freight or more per year), under the revised Energy Saving Law.
- \*3 CO<sub>2</sub> emissions from logistics processes are for KHI and do not include emissions by Kawasaki Shipbuilding Corporation and other subsidiaries before they merged into the Company on October 1, 2010.
- \*4 The parameters for net sales, used in the calculation of the basic unit, are the same as those applied to emissions in \*3 above.

## Realization of Recycling-Oriented Society

### Efforts toward the Waste Reduction

#### Waste Reduction Activities

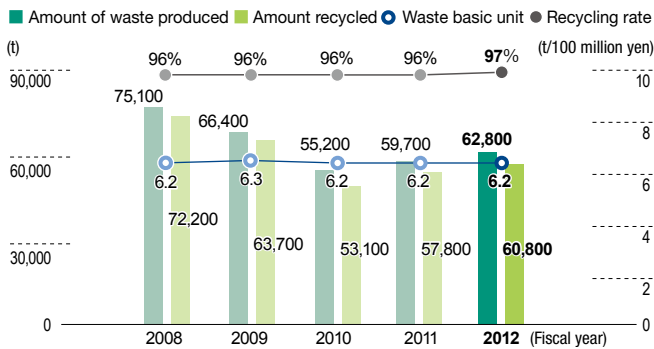
Taking real world trends into account, KHI defines zero emissions as a final waste processing ratio below 1%.

In fiscal 2012, all plants reached zero emission status. Going forward, we will not rest on our laurels but rather strive to improve upon this achievement.

In terms of output, KHI recorded an increase in the total amount of waste in fiscal 2012, mainly because production expanded to keep pace with higher sales, we marked a year-on-year increase of about 5%, to roughly 62,800 tons of waste. Our basic unit—waste emissions per net sales—held steady at 6.2 points.

KHI's recycling rate was 97% in fiscal 2012.

Amount of Waste Produced and Recycling Rate



#### On-Site Inspection of Industrial Waste Treatment

As a responsible waste-discharging business committed to the appropriate treatment of industrial waste, KHI performs an on-site inspection, basically once every two years, at each of the facilities operated by the businesses to which waste-treatment services have been outsourced. KHI personnel assigned to such inspection duties visit service sites to confirm that industrial waste generated by the Company is treated as per conditions set forth in respective contracts. Personnel also verify permit validity, prepare on-site confirmation reports and upload to the in-house intranet any information that should be shared across the Company.

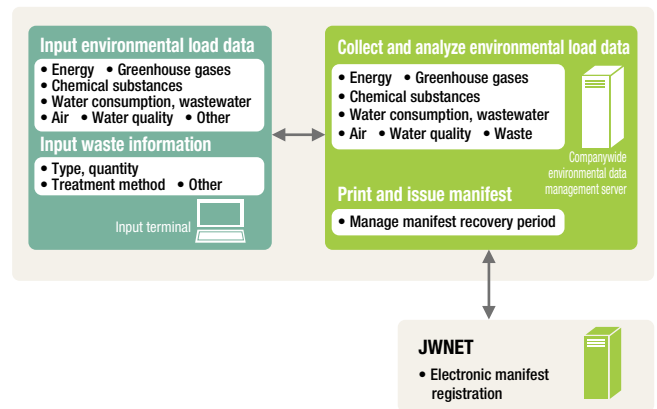
#### Proper Disposal of PCB Waste

In accordance with the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes, also known as the PCB Special Measures Law, KHI reports to the appropriate prefectural government by June 30 each year any polychloride biphenyl (PCB) waste found at our operating sites. Also, until treatment is completed by Japan Environmental Safety Corporation (JESCO), we are required under the Waste Management and Public Cleansing Law—the Waste Management Law—and the cabinet and ministerial ordinances to appoint a manager for each business location where specially controlled industrial waste was discharged and to store such waste with the utmost care in line with applicable storage standards. In December 2011, KHI undertook our first disposal of condensers—114, in this case—through JESCO.

#### Installing Electronic Manifest System and Building In-House Management System

In the process of rebuilding an in-house management data system, KHI aims to achieve a structure that interfaces with the electronic manifest system “JWNET”. The system will be fully operational in fiscal 2013. Through this, we will not only achieve integrated management of environmental data from all facilities at the head office, we will also ensure thorough compliance through the electronic manifest system and reduce the man-hours needed to process manifest slips.

#### Environmental Data Management System



## Realization of Society Coexisting with Nature

### Reducing Chemical Substances

It is KHI's stated goal to contribute to reduced environment impact and conservation of the ecosystem through manufacturing that is in harmony with global environment. KHI undertakes various activities to achieve this goal. Among efforts to reduce chemical substances, KHI has set targets in every business segment for major VOCs, dichloromethane, and hazardous heavy metals, and each segment has embraced the necessary approaches. The status of the efforts to reduce major VOCs, dichloromethane, hexavalent chromium and lead is outlined below. Suitable measures have been implemented in nearly all areas, but efforts will continue on the study and consideration of additional measures to curb the amount of chemicals subject to reduction.

#### Major VOCs

With regard to major VOCs, KHI promoted the switch to low-VOC paints, such as water-based paint, and improved coating efficiency through electrostatic coating, and also reduced our use of cleaning solvents by installing solvent recovery equipment. We encountered some challenges, such as production increases and customer-specified painting requirements, which prevented us from successfully achieving our VOC-reduction goal and caused emissions to go beyond the fiscal 2011 level. Moving forward, however, we will strive to curb emissions through such measures as the wider application of alternative products, including water-based paints and high-solid paints.

#### Dichloromethane

Dichloromethane is often found in the paint strippers that KHI uses in our operations. With an increase in production volume, emissions grew over fiscal 2011. Moving forward, KHI will strive to reduce emissions, especially through enhanced recovery methods.

#### Hexavalent Chromium

Hexavalent chromium is often used in the special surfacing processes that we use in KHI's operations. KHI is keen to introduce technologies that do not utilize hexavalent chromium, but we will need more time before alternative processes are fully adopted. Nevertheless, the amount of hexavalent chromium handled in fiscal 2012 decreased over fiscal 2011, and we will continue to systematically apply potential replacements, such as chrome-free paint.

#### Lead

Lead is often found in paint, so KHI's efforts have focused on switching to lead-free paint. KHI is working on reducing lead use, and the handled amount was decreased from fiscal 2011. We will work for the further reduction of lead use.

The Seventh Plan, which began in Fiscal 2011, contains the basic policy of driving down the use of chemical substances under control to the absolute minimum (as a rule, totally eliminating heavy metals) by Fiscal 2021. This policy will guide our further reduction activities.

Amounts of Chemicals Subject to Reduction Handled and Emitted (t/year)

| Substance              |                     | Fiscal 2012 | Increase or decrease from fiscal 2011 |
|------------------------|---------------------|-------------|---------------------------------------|
| Major VOCs             | Toluene             | 443         | +38.0%                                |
|                        | Xylene              | 678         | +7.1%                                 |
|                        | Ethylbenzene        | 278         | -14.7%                                |
|                        | Total               | 1,399       | +9.3%                                 |
| Dichloromethane        |                     | 59          | +31.1%                                |
| Hazardous heavy metals | Hexavalent chromium | 23          | -14.8%                                |
|                        | Lead                | 1.4         | -17.6%                                |
|                        | Cadmium             | 0.013       | -51.9%                                |

\*1 Amounts of major VOCs and dichloromethane are the amounts emitted, while that of hazardous heavy metals is the amount handled.

\*2 Cadmium is not included in the collection of data under the PRTR Law because the amount handled is less than 500kg.

### Biodiversity-Friendly Society

A short-term target in Japan's national biodiversity strategy, which was revised in 2010, is to analyze the state of biodiversity to get a clearer picture of conditions and based on this knowledge, promote activities to protect biodiversity. We will support efforts to achieve this objective by implementing the activities listed below at all business sites with biodiversity protection in mind. We also undertake activities, such as greening programs on corporate premises that reflect location or other characteristics specific to each operating site.

#### Efforts to Reduce Environmental Load from Business Activities

- 1 Promote measures to cut greenhouse gas emissions
- 2 Reduce amount of industrial waste for final disposal
- 3 Decrease environmental load from wastewater and chemical substances

#### Non-Business Activity

- 1 Promote cleanup events around business sites
- 2 Implement greening programs and other activities based on analysis of and insight into biodiversity conditions on corporate premises and the surrounding area
- 3 Embrace collaborative opportunities to protect biodiversity with local groups, such as creating corporate forests

## Consideration for the Environment in Our Products

### Main Efforts of the KHI Group

The KHI Group believes that one of the pillars of our Group Mission is to contribute to the environment through our products. We will make thorough efforts in implementing product assessments and complying to overseas laws and regulations and voluntary regulations in industry, and will continue to promote consideration for the environment in our products in the entire KHI Group.

### Product Assessment

For newly developed and designed products, as well as for particularly important products, KHI assesses products according to such criteria as resource-and energy-savings and recycling potential, with the goal of reducing the environmental impact of our products during their life cycles. Because specific evaluation techniques vary depending on the type of product, each business segment draws up product assessment rules appropriate to the characteristics of respective products. Main evaluation items of product assessment are shown below.

- 1 Product weight reduction
- 2 Product energy saving
- 3 Longer product life
- 4 Product safety and environmental conservation effectiveness
- 5 Measures for product disposal and recycling
- 6 Environmental impacts when problems or other extraordinary circumstances occur
- 7 Provision of information for use and maintenance
- 8 Compliance with regulations

### Responding to the ELV Directive<sup>\*1</sup>, the RoHS Directive<sup>\*2</sup>, and the REACH Regulation<sup>\*3</sup>

Since 2000, laws and regulations related to chemical substances have been strengthened in the European Union by the establishment of such controls as the ELV Directive, the RoHS Directive, and the REACH Regulation. The RoHS Directive covers electric and electronic products, and some of the products made by the Precision Machinery Company and the Robot Division comply with this Directive. The ELV Directive focuses on automobiles, and while motorcycles are not subject to the content of this directive, the Motorcycle & Engine Company has embraced the voluntary actions espoused by the Japan Automobile Manufacturers Association (JAMA). We also apply this directive to some Precision Machinery Company products.

The REACH Regulation went into effect in June 2007 and applies to all chemical substances manufactured in and imported to the European Union. Regulations exist for the evaluation, authorization, restriction, and communication of information regarding chemical substances, necessitating a system to identify information about the chemical substances in products throughout our entire supply chain. Laws and regulations related to chemical substances have

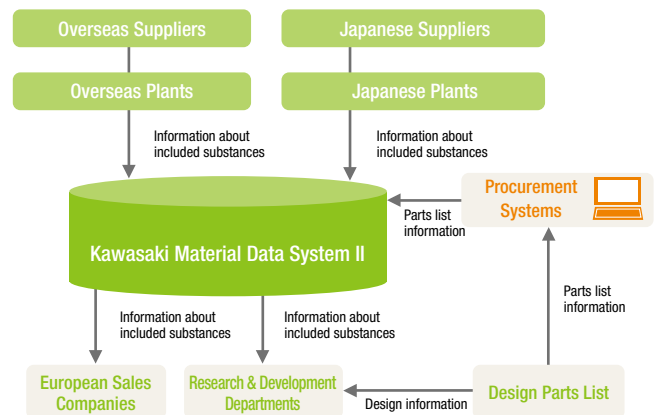
been strengthened not only in the EU but in many countries around the world. KHI invited outside experts to lecture at corporate study sessions in Japan. Focusing on the REACH Regulation, they clarified issues and responses regarding chemical substance information management, which is required of companies operating abroad.



A cooperate study by an external lecturer for chemical substance information management

KHI practice “CSR procurement” (see p.25) and respond to requests from customers to gather chemical substance information. Besides that, the Motorcycle & Engine Company has created the Kawasaki Material Data System II<sup>\*4</sup> to collect data about chemical substances and respond to REACH and other chemical substance regulations.

### Response to REACH in the Motorcycle & Engine Company



\*1 ELV Directive: End of Life Vehicles Directive

\*2 RoHS Directive: Directive on Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

\*3 REACH Regulation: Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals

\*4 Kawasaki Material Data System II: Currently we are preparing for the shift to International Material data System (IMDS)



## Approach by the Motorcycle & Engine Company

### Cleaner Exhaust Gas

In fiscal 2012, we continued to tackle technologies that make exhaust from motorcycles cleaner, from a world standard perspective, and launched sales of the Ninja ZX-14R, the newest in a flagship lineup that reigns supreme in every sport-bike domain. By improving intake and exhaust systems, we have ensured that this motorcycle meets European exhaust gas restrictions and delivers high environmental performance.

The fuel injection system features throttle bodies fitted with sub-throttle valves<sup>\*1</sup> and a remote idle speed control (ISC) valve<sup>\*2</sup> to provide fine fuel control perfectly matched to whatever driving conditions the rider encounters. As a result, this motorcycle offers outstanding engine performance without compromising efforts to meet tough exhaust gas standards.



\*1 Sub-throttle valve: This electronically controlled device connects to the manual throttle and ensures optimum intake levels.

\*2 Remote ISC (idle speed control) valve: This device controls fuel delivery not only under normal idling condition but also during deceleration.

### Promoting the 3Rs

Since October 2004, we have operated an independent motorcycle recycling system in cooperation with three other motorcycle manufacturers and 12 importers in Japan. In fiscal 2012, we achieved a recycling rate of 92.9%. From October 2011, the user burden of recycling costs has become completely free of charge. For new-model motorcycles, we emphasize environmentally conscious designs highlighting reduced materials and more recycling, right from the development phase. We conduct preliminary evaluations of efforts related to the 3Rs—reduce, reuse and recycle—before commencing design, prototyping, and mass-production phases. In particular, we seek to increase recyclability through greater use of materials that are easy to recycle and have achieved a potential recycling rate exceeding 90% on every model, with most models exceeding 95%. This potential recycling rate was calculated based on The Guidelines for Definition and Calculation Method on the Recyclability Rate for New Vehicles (1998 JAMA).

### Reducing and Eliminating Environmental Substances of Concern

For new-model motorcycles sold in Japan, we already meet the voluntary targets of reduced environmental substances of concern (lead, mercury, hexavalent chromium and cadmium) set by the Japan Automobile Manufacturers Association, and we have also achieved voluntary targets for older models still being sold.

For general purpose engines and JET SKI® watercraft, there are no Japanese regulations like the JAMA voluntary reduction targets, but we are making elimination and reduction efforts that follow those applied for motorcycles, and we had achieved voluntary reduction targets for lead, mercury and cadmium by fiscal 2008. Hexavalent chromium had been contained in a very small amount of parts, but we completed its elimination in fiscal 2009.

#### Japan Automobile Manufacturers Association “Reduction targets for environmental substances of concern” for new vehicles

| Substance           | Reduction target   |
|---------------------|--|
| Lead <sup>*3</sup>  | Use 60 g or less in and after January 2006 (for 210 kg weight vehicle)   |
| Mercury             | Use prohibited in and after October 2004<br>(Exception for the use of minute quantities in parts that are necessary for traffic safety <sup>*4</sup> ) |
| Hexavalent chromium | Use prohibited in and after January 2008   |
| Cadmium             | Use prohibited in and after January 2007   |

\*3 Used batteries are already recycled and excluded from the target values

\*4 Combination lamps, discharge headlamps, etc.

## Environmentally Conscious Products -Transportation-Related Products-

In aerospace field, KHI Group contributes to the advancement of the world’s aircraft by jointly developing and manufacturing with leading American and European enterprises. Our technologies are highly reputed in the world. Under the increasing demands for improvement of fuel efficiency, KHI Group has been developing the technologies for both aircraft bodies and engines. In shipbuilding field, KHI Group develops and builds a variety of products, such as LNG carriers and LPG carriers. In response to the demand for increased fuel efficiency, we are working to develop technologies for optimizing hull forms and increasing the efficiency of propulsion systems. In rolling stock field, KHI Group manufactures a wide range of products, for example Shinkansen bullet trains. As for environmental measures, KHI Group emphasizes improved energy efficiency in rolling stock as well as noise reduction and enhanced recyclability, drawing on the results of technological teamwork with customers as well as our own technologies.

### 1 First Delivery of “Boeing 787 Dreamliner”

Right from the start, KHI was involved in the joint development of the “Boeing 787 Dreamliner” as a member of the international team, assigned with the task of developing the forward fuselage—a key component—and the fixed section of the wing trailing edge. With an innovative airframe using lightweight, high-strength carbon fiber composite for the fuselage and wings, this aircraft is about 20% more fuel efficient than comparable aircraft and cuts operating costs by about 30%. Greater use of composite materials, which boast excellent strength and anticorrosive qualities, facilitates better control of the on-board environment, including air pressure and humidity, which ensure a more comfortable flight for

passengers. KHI also played a role in the development and production of the “Trent 1000 engine” for Rolls-Royce. This engine, which boasts low fuel consumption and low noise, powers the “787”. The first delivery of the 787 was to All Nippon Airways Co., Ltd.—the first customer (first order)—in September 2011, but the aircraft has captured the interest of airlines around the world and this is sure to make it a best seller.



The “Boeing 787 Dreamliner”

Low Fuel Consumption

Low noise

### 2 Development of New-Model LNG Carrier —Inaugural Installation of Advanced Reheat Steam Turbine Plant Cuts Fuel Costs 15%

The 177,000m<sup>3</sup>-capacity KHI-built LNG carrier “Energy Horizon” expands 20% more tank capacity than its predecessors, thanks to the installation of the largest Moss\* tanks ever fitted into an LNG carrier. Yet the carrier still maintains the ability to enter at the world’s major LNG loading and receiving terminals. In addition to development work on hull size and shape, KHI endeavored to optimize propulsion performance, and while the ship is wider than existing carriers, it moves through the water with the same performance level. Furthermore, the “Energy Horizon” is equipped with the world’s first reheated steam turbine propulsion plant for LNG carrier, wherein steam used to drive the high-pressure turbine is returned to the boiler

where it is reheated, with the resulting steam driving an intermediate-pressure turbine. This delivers a 15% improvement in fuel efficiency over conventional steam turbine propulsion plants and marks the first successful development of a new steam turbine plant for LNG carriers in about 35 years.



The “Energy Horizon”

\*The Moss independent, spherical tank design was developed by Norways’ Moss Rosenberg (now, Moss Maritime).

Low Fuel Consumption

### 3 Production of New-Model Train “Series 13000” —Takes Environmentally-Friendly, Barrier-Free Safety to New Heights

The “Series 13000” commuter train delivered to Keihan Electric Railway Co., Ltd., uses about 35% less electric power than the series it replaced, because of its semi-double skin aluminum body, which helps to reduce weight, and its variable-voltage, variable-frequency (VVVF) control which enables the power generated by the car during braking to be returned to the power supply system. The use of low-noise equipment also contributes to a quieter environment along the tracks. In addition, these cars have more barrier-free features, including spaces for wheelchairs, LCD passenger information screens above doorways, measures for safe passage between cars, guidance chimes, door open/close indicator lamps, low-height

luggage racks and bright orange lines marking the edges of the car doorways. Structural strength was increased with the aim of further enhancing safety, including crash resistance, and measures were taken to prevent injuries to passengers in the event of emergency braking or collision.



The “Series 13000” commuter car for Keihan Electric Railway, Co., Ltd.

Energy conservation

Low noise

## Environmentally Conscious Products -Industrial Plant and Equipment-

KHI Group is offering around the world a variety of products that support the foundations of industry, including, large-scale plants for cement, chemicals and nonferrous metals, and industrial equipment such as steam turbines, aerodynamic machinery and other prime movers, as well as industrial robots, hydraulic equipment, and other civil engineering machinery.

The field of plant and industrial equipment constantly requires not only high performance but also lesser environmental impact, such as energy and resource conservation and more compact sizing. KHI Group continues to develop new products with advanced technologies to meet these needs.

### 4 New "K7V Hydraulic Pump"—Shorter Overall Length, Reduced Weight

KHI develops and manufactures pumps as well as motors and a variety of valves for hydraulic shovels. The "K7V" is an environment-friendly hydraulic pump that reflects efforts to meet recent market demand for pumps that are more compact and deliver higher performance, through newly designed rotary components, including pistons and cylinders, which are core parts, and also reflects our commitment to make components more lightweight and to reduce the number of machining points. Compared with the "K3V", another Kawasaki-brand pump, the "K7V" is 13% shorter in overall length and an average 3 dB quieter. It boasts higher efficiency, up 1.5 points, and its bearing

life is 68% longer for extended product life. In addition, the compact size led to a 7% reduction in the amount of materials used to build the "K7V". Consequently, the "K7V" contributes to lower environmental impact. We will continue to pursue improvements that limit environmental impact still further.



The "K7V Hydraulic Pump"

Resource saving

Energy conservation

### 5 Debut of "BX Series" Spot-Welding Robots

The "BX series" features vertical, articulated robots optimized for spot welding automobile bodies and components. This series takes the excellent performance of the "Z series" of existing, large, general-purpose robots, to the next level. With their lightweight arms, small, high-output, high-revolution motors and the latest in antivibration control technology, "BX series" robots achieve a cycle time about 25% faster than equivalent models already on the market. In addition, the arm features a hollow section to accommodate the cable harnesses of a welding gun, thereby obviating the need to allow for possible interference with adjacent robots or peripheral equipment. We also designed a

compact body, which in conjunction with the in-arm harness housing feature, gives the "BX series" robots a footprint just half that of conventional models, and facilitates higher density installation.



"BX Series" Spot-Welding Robots

Resource saving

Energy conservation

### 6 Debut of "ESJ Model" Static Classifier-Equipped Opposed Jet Mill

KHI Group has a lineup of fluidized bed opposed jet mills with high grinding performance and easy-to-execute particle size adjustment. The new model augments the high grinding performance of its predecessors with a newly developed static classifier that works without the aid of any mechanical drive. Pressurized air is forced into the mill at the bottom in three directions at about 7 atm, causing particles to collide with each other inside these jets of air and thereby pulverizing the subject material. The mill structure is simple and the size is compact, facilitating disassembly, reassembly and maintenance. Also, the amount of compressed air used by this jet mill is roughly 20% less than that used by conventional jet mills with

a classifier rotor.

The "ESJ Model" is ideal for use in the battery and pharmaceutical industries where processing small amounts of various types of materials requires frequent cleaning and washing of the equipment and for pulverizing materials that must be free of foreign particles and impurities. The Model is also ideal for R&D applications.



Jet Mill "ESJ Model"

EarthTechnica Co., Ltd.

Resource saving

Energy conservation

## Environmental Solution Products -Energy-Related Products-

KHI Group has numerous high-performance products, including gas turbines, gas engines and various types of boilers, and we are providing a range of energy systems that incorporate these products to locations around the world. KHI Group is also working on renewable energy technologies (solar cooling/heating system, bio-ethanol production, photovoltaic power generation, etc.) and clean energy technologies (hydrogen and LNG facilities, etc.)

### 1 Sales Begin for “L30A”, a Japan-made 30 MW-Class High-Efficiency Gas Turbine

The “L30A” combines KHI’s many years of expertise in developing small- and medium-sized industrial gas turbines with its highly sophisticated component technologies in the area of state-of-the-art jet engines and industrial gas turbines. With generating efficiency that exceeds 40%, this new gas turbine has the highest rating in the world in the industrial-use 30 MW class. A cogeneration system using this gas turbine is able to achieve total efficiency above 83%, and a combined-cycle generating plant that utilizes the gas turbine with a steam turbine realizes a power generation rate in excess of 50%. The new gas turbine is equally noteworthy for its environmental

performance. Through a proprietary Dry Low Emission (DLE) combustion system, NOx emissions are held below 15 ppm—the lowest level in the world.

Demand for the “L30A” is sure to grow in Japan and worldwide, especially in light of rising interest in on-site power generation and tougher environmental standards.



Gas Turbine “L30A”

High efficiency energy utilization

NOx reduction below 15ppm

### 2 KHI Wins Order for Japan’s First 110 MW Gas Engine Power Plant

KHI was sourced by Nihon Techno Co., Ltd., to construct a power plant for its Sodegaura Green Power Project. The plant, with 110 MW generating capacity, will comprise 14 units of the high-efficiency “Kawasaki Green Gas Engine” with unit capacity of 7,800 kW and power-generating efficiency of 49.0%. This will be the first gas engine power plant in Japan to have capacity exceeding 60 MW. The “Kawasaki Green Gas Engine” provides superior environmental performance. It requires no additional denitrification devices in most areas of Japan since NOx emissions are below 200 ppm (O<sub>2</sub> = 0%), and it cuts fuel costs by more than 5% over conventional gas engines in the same class.

Demand for distributed power supply systems is expanding. In Japan, the technology is attracting interest as a way to deal with power shortages since the Great East Japan Earthquake, and overseas, it will provide power needed to support industrialization and economic development. To meet heightened expectations, KHI is working to reinforce its production structure for the “Green Gas Engine.”



“Kawasaki Green Gas Engine”

High efficiency energy generation

High efficiency energy utilization

NOx reduction below 200ppm

### 3 Solar Absorption Chiller-Heater Optimized for Solar Thermal Energy Utilization

Technology for utilizing solar thermal energy is expected to become widely popular because it achieves annual energy transfer efficiency four times that of photovoltaic power generation. KHI Group offers a solar absorption chiller–heater optimized for solar thermal energy utilization. To promote greater interest in this unit, the Company installed a model plant at its Shiga Works. Test calculations indicate that the plant could realize energy savings of 14% over conventional equipment and cut CO<sub>2</sub> emissions by 18.3 tons per year.

The absorption chiller–heater uses water—not CFCs, HFCs or HCFCs—as the refrigerant and presents excellent environmental

performance since it utilizes solar thermal energy and natural gas combustion for both cooling and heating applications.

In addition, the unit has been specially designed to maximize the potential afforded by solar thermal energy, with an emphasis on preferential use and control system of hot water heated by solar thermal energy.



Kawasaki Thermal Engineering

Solar Absorption Chiller-Heater

Renewable energy

Unutilized energy use



## Environmental Solution Products -Waste Treatment and Environmental Pollution Prevention Products-

KHI Group began developing waste treatment technologies early on, and we currently have various such technologies for treating urban refuse, including stoker-type furnaces, fluidized bed gasification and melting furnaces and direct gasification and melting furnaces. KHI Group has delivered leading-edge waste treatment systems all over Japan.

To prevent pollution, KHI Group has worked with a number of technologies to protect and improve air and water quality. KHI Group has addressed boiler and other combustion gases since the 1970s by developing flue-gas desulfurization systems, and have delivered a number of these in Japan and abroad, where they are improving air quality.

### 4 Cement Plant Waste Heat Recovery Power Generation Contributes to Lower CO<sub>2</sub> Emissions

A cement plant waste heat recovery power generation is a facility that generates power by recovering heat from the waste gas discharged during production of cement and therefore exemplifies clean power generation technology that does not release CO<sub>2</sub>. The power that is generated is sufficient to cover about 30% of a cement plant's overall power consumption. KHI has earned a solid reputation for reliability, underpinned by expertise in waste heat boilers, which can tolerate high-temperature gas above 1,000°C and exhaust gas containing large amounts of dust. Since delivering its first waste heat power generation facility for a cement plant in 1980, the Company has built more than 180 systems for cement

plants in Japan and overseas. Some of these projects are still under construction. Many orders have been received, mainly from China and other parts of Asia, including South Korea, but also from Europe, including Germany and Turkey. Aggregate power generation by systems in use exceeds 2,100 MW, which has contributed to a reduction of more than 14 million tons of CO<sub>2</sub> emissions per year.



Cement plant waste heat recovery power generation

Waste heat utilization

### 5 KHI Wins Order to Build and Maintain Municipal Waste Incineration Plant

KHI was selected by the city of Miyakonojo in Miyazaki Prefecture to build and maintain the city's Clean Center. This design-build-maintain project bundles construction of a waste incineration plant and its maintenance over a 20-year period. The facility will be able to incinerate 230 tons of waste per day, and it will have a reduced impact on the environment thanks to an all-out effort to minimize air pollution. Specifically, the facility will be equipped with parallel flow stoker-type incinerators capable of high-temperature combustion at a low excess air ratio, and flue gas exiting the furnace will go through filter-type dust collectors, selective catalytic reduction system and

exhaust gas recirculation system. The facility will achieve superior environmental and energy-saving performance, with maximum power generation capacity of 4,990 kW and power generation efficiency of about 20% during normal waste-burning operation.



Waste Incineration Plant

High efficiency power generation from waste products

#### CO<sub>2</sub> Emissions Reduction through Products for Major Products Delivered in Fiscal 2012

| Field                                   | CO <sub>2</sub> Emissions Reduction | Major Products   | Technologies, Remarks |
|---|-------------------------------------|--|-----------------------|
| Energy-related products                 | 215,000t-CO <sub>2</sub> /year      | • Gas turbine cogeneration system  | 1,2                   |
|   |                                     | • Gas engine power generation system   | 1                     |
|   |                                     | • Binary turbine power generation system                                       | 3                     |
|   |                                     | • Waste heat recovery power generation in cement plant                         | 3                     |
|   |                                     | • High-efficiency boiler system  | 2                     |
|   |                                     | • Absorption Chiller/Heater  | 2                     |
| Transportation-related products         | 102,000t-CO <sub>2</sub> /year      | • Next-generation mid-sized "Boeing 787" (reduced weight)                      | 4, shared production  |
|   |                                     | • LNG carriers, LPG carriers, bulk carriers (improved propulsion capabilities) | 4                     |
|   |                                     | • Battery Power System (BPS) for Railways                                      | 3                     |
|   |                                     | • intermediate-pressure compressor for the "Trent" engine                      | 4                     |
| Industrial equipment and other products | 4,000t-CO <sub>2</sub> /year        | • Sewage aeration blowers ("Kawasaki MAG Turbo series")                        | 5                     |
|   |                                     | • Electro-hydraulic hybrid system ("Kawasaki Eco Servo")                       | 5                     |
|   |                                     | • Large General-purpose Robot  | 5                     |
| Total                                   | 312,000t-CO <sub>2</sub> /year      | -  | -                     |

**Technologies:**  
 1. High-efficiency power generation;  
 2. High-efficiency energy use;  
 3. Waste heat/exhaust energy use;  
 4. Reduced fuel costs;  
 5. Energy-saving equipment and other systems

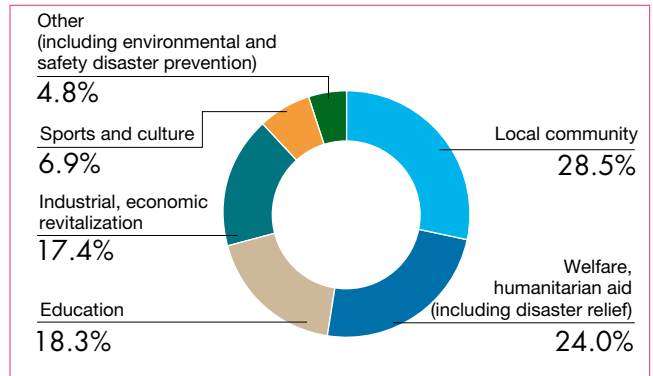
**CO<sub>2</sub> emissions reduction effect calculation reference points:**  
 (1) Emission factors for electricity, heat, fuel and other types of energy were set to comply with the manual for the Law Concerning the Promotion of Measures to Cope with Global Warming.  
 (2) CO<sub>2</sub> emissions reduction effect through improved efficiency is based on a comparison with products before replacement or with standard products on the market.  
 (3) All energy derived from the use of waste energy and energy produced from waste products is counted toward the CO<sub>2</sub> reduction effect.

## Social Contribution Activities (Fiscal 2012)

The KHI Group donates funds for a variety of charitable activities and for disaster relief and also undertakes voluntary programs, including management of the corporate museum Kawasaki Good Times World, various events for children, support for culture and sports, involvement in local economic development projects, and corporate forest restoration projects.

Continuing from fiscal 2011, in fiscal 2012 we directed support toward the area devastated by the Great East Japan Earthquake. We also enthusiastically promoted activities in new pursuits, including the first-ever Kobe Marathon 2011, where our level of sponsorship got our name on the runners' number bibs, and participation in science events for elementary school children.

Social Contribution Expenditures in Fiscal 2012



### Polio Vaccines for the World's Children

—CO<sub>2</sub> reduction through Ecocap Movement—



**Hikaru Furutsuka**  
Environmental Affairs  
Department

KHI participates in the Ecocap Movement. Through this effort, plastic bottle caps are separated and collected and then sold to recyclers, thereby curbing CO<sub>2</sub> emissions (3.15 kg of CO<sub>2</sub> is released in the incineration of 400 caps), and the profits from the sale of the caps goes toward

purchasing vaccines for children around the world. It takes 800 caps to buy one vaccine.

I was aware of this movement, and I thought it was something we at KHI could support. The Environmental Affairs Department kicked off the collection effort in 2009.

As the objective of this movement percolated through the Company, more people got involved, some even bringing bags of caps from home. Through everyone's efforts, especially at the Kobe Head Office and Kobe Works, we have sent a total of about 400,000 caps to Ecocap Movement to date. This represents a CO<sub>2</sub> reduction of 3,133 kg and facilitated the purchase of enough vaccines to inoculate 497 children. We will continue to participate in the cap-collection effort to reduce CO<sub>2</sub> emission and deliver vaccines to the world's children.



Collected caps



### Support for victims of the flood (Thailand)

Kawasaki Motors Enterprise (Thailand) Co.,Ltd. (KMT), the local manufacturing and marketing base for Kawasaki-brand motorcycles in Thailand, was not directly affected by the severe floods that inundated Thailand in autumn of 2011.

The KHI Group supported relief and recovery efforts with cash donations of 4 million baht (about ¥10 million) to the Thai Red Cross and 4 million baht (about ¥10 million) to the Thailand Board of Investment, and also equipment, notably 10 Kawasaki MULE™ utility vehicles, for a total donation value of ¥30 million.

A total of 40 Kawasaki motorcycle-riding volunteers took advantage of the mobility afforded by motorcycles to expedite relief efforts to the people affected by this disaster. In addition to providing spare parts, oil, gasoline and other motorcycle-related necessities at no cost, KMT dispatched three repair specialists to the area to support the volunteers riding through the flooded region.

For customers affected by the floods, KMT undertook free motorcycle repairs and offered discounts on spare parts.



Volunteer riders



## Kobe Marathon Runners' Bib Sponsor

KHI's corporate sponsorship for the inaugural Kobe Marathon 2011, held on November 20, 2011, in Kobe, was reflected on the men's number bibs. The Company was also represented by 86 volunteers who manned the water station and cheered the runners on from the sidelines.



Volunteers at water station

### Participating as a Volunteer

My name wasn't drawn to run in the race, but I knew the Company was recruiting people for its team of volunteers, and that's how I got involved. I had never been backstage, so to speak, at a race, and the hard work of a volunteer and the fun of cheering were aspects of a race that I had never known when I was a runner.



**Kishige Funato**  
Kawaju Akashi  
Engineering Co., Ltd.

## Community Forest Maintenance Starts in Miyagi Prefecture

—Realizing a society coexisting with nature—

Seeking to coexist with local communities, the KHI Group is also involved in the preservation and maintenance of forests. Employees have participated in forest-building projects, starting in Kochi Prefecture in 2007 and then Hyogo Prefecture in 2008. Community forest maintenance activities began in 2011 in Miyagi Prefecture as a third project area.

In September 2011, Group employees in the Sendai area, along with the volunteer group Miyagi Forest ReCreators Club, cleared undergrowth and pruned and thinned trees in an area on the outskirts of Sendai. Members of the club explained the significance of forest preservation and the need for maintenance, and then work began. Woods where light barely got through the tree branches became bright, and participants were able to really feel that their efforts that day would contribute to forest renewal.

Forest maintenance in Miyagi Prefecture will continue as a local activity in the area affected by the Great East Japan Earthquake.



Community forest maintenance group

## Make Your Own Helicopter!

—Part of Kansai Science Yard—

On a sunny day off from school in March, children gathered at Kansai Science Yard, a hands-on science and technology event for elementary school children in the Kansai region. Leave a Nest Co., Ltd., the event sponsor, brought KHI in for a session entitled "Make Your Own Helicopter!" which saw the children make a model helicopter out of balsa wood.

We showed the children how a helicopter and its rotor are assembled and estimated the rotor's lift force—the force that lifts the helicopter—and described some insider secrets, such as the trick to stop the whole helicopter from spinning.



Making model helicopters

The children gained a love for the skies and an interest in science born from this love, and enjoyed building their own helicopters.

### Participating as Teachers

The smiles on those children's faces kept growing, first with the lift force experiment and then as the helicopter took form in their hands. These children experienced the power of science and the fun of building something. This event may well prompt some of these children toward a career in engineering.



**Yoshinari Tobinaga** **Gen Tazawa**  
Planning Department, Planning Division  
Aerospace Company

## Interaction Opportunities with the Local Community (Akashi Works)

Taking advantage of the Labor Day holiday, in November 2011, we welcomed neighborhood elementary school children and their families—a total of 201 people—to tour the Akashi Works by bus and then enjoy some time at the corporate museum Kawasaki Good Times World. At the works, the site manager explained the activities and history of the works to the children as if he were telling a story, and to the adults, he emphasized the corporate objective to develop operations along with the community. Lunch was offered at the cafeteria on-site. At the museum, when the group was asked "What did you find most interesting?" a little boy eagerly exclaimed, "The bullet train!"



Akashi interaction group

### Takehiko Isobe, professor at Keio University's Graduate School of Business Administration offers his opinion on the KHI Group's CSR Report for 2012.



**Takehiko Isobe,**  
Professor and Ph.D. in Business  
Administration, Graduate School of  
Business Administration, Keio  
University

#### Overall Impression and Assessment

It may be because fiscal 2012 brought the medium-term management plan to a close, but I feel the story quality—that is, the quality of your message—was supported loud and clear throughout the report this year. In particular, the environmental activities and social contribution sections presented a very clear picture of the environmental management image that the KHI Group seeks to establish. In addition, regarding self-assessment of actions to address CSR issues, activities with an internal focus have garnered a high rating in the past, but this time, issues with an external connection, such as to shareholders or customers, also earned a higher grade. I would say the CSR activities that you have put steady effort into are nearing final form. However, I am unable to compare assessments of corporate actions and internal company-specific actions. Going forward, a comparative analysis of corporate and internal company-specific actions is an issue you still need to address.

#### B-to-B Brand Efforts

The April 2012 establishment of the Marketing Division, which the president mentioned in his message, is going to play a major role, I would expect. In today's global era, even B-to-B companies will have to have sharp marketing

capabilities. What KHI sells is not so much products or technology but rather solutions that solve customers' concerns. Therefore, you have to identify customer needs and present approaches to address such needs, which will generate higher customer satisfaction.

#### KHI Group's Technology Strengths

The business fields of the internal companies are all different from each other, but these business segments do share access to environmental and energy solution technologies. Moreover, these are leading-edge technologies on the world stage. Plus, these technologies need not stand alone but can be systematically integrated to provide even greater value to society. You must, however, specifically indicate the kind of value that society might expect from the combination of technologies. A case in point: The distributed energy system that came out of your experiences in the Great East Japan Earthquake is a concept with very unique value.

#### Dialogue with Experts

Many valuable opinions were voiced at the first dialogue with experts. An opinion shared by all the experts was that you need activities that tie CSR and business activities together. Environmental Vision 2020, which is described in this report, shows that environmental management itself is a core competence of the KHI Group and fortifies the "Global Kawasaki" brand. I believe you have to recognize that the environmental management requirements placed on companies by society presents the greatest business opportunity for the KHI Group.

#### Response to the Third-Party Opinion

We must extend our gratitude to Dr. Isobe for the valuable thoughts he offered during the dialogue with experts and here again with his evaluation of the Group's activities in his third-party opinion in the CSR Report. The points he made regarding issues that KHI must address in the future will be shared within the Company and discussed among the many people involved in CSR activities, and necessary measures will then be implemented with a forward-looking perspective.

In particular, with regard to business activities, the hints about providing solutions to customers' concerns and systematically integrating the intellectual assets of the KHI Group are well-taken. Moving forward, we will be even more proactive about conveying the kind of society we regard as ideal and the kind of new value we hope to provide.

**Yoshizumi Hashimoto, Executive Officer and General Manager of the CSR Division (left)**

**Yutaka Fukuda, Senior Manager, CSR Department (right)**





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## Corporate Profile

### Kawasaki Heavy Industries, Ltd.

|              |   |                            |  |
|--------------|---|----------------------------|--|
| Incorporated | October 15, 1896  | Representative             | Satoshi Hasegawa, President                                |
| Head Offices | Tokyo Head Office:<br>World Trade Center Bldg., 4-1,<br>Hamamatsu-cho 2-chome, Minato-ku,<br>Tokyo, 105-6116 Japan    | Paid-in Capital            | ¥104,484 million (As of March 31, 2012)                    |
|              | Kobe Head Office:<br>Kobe Crystal Tower, 1-3,<br>Higashikawasaki-cho 1-chome, Chuo-ku,<br>Kobe, Hyogo, 650-8680 Japan | Number of<br>Shares Issued | 1,671,892,659 shares<br>(As of March 31, 2012)             |
|              |   | Net Sales                  | ¥1,303,778 million<br>(As of March 31, 2012, consolidated) |
|              |   | Number of<br>Employees     | 33,267<br>(As of March 31, 2012, consolidated)             |