Environmental & Social Report 2007

Global Teamwork
Message from Top Management

The Basic Stance of Management
Our conventional management policy has remained unchanged since I became Chief Executive Officer in June 2007. That is, we promote self-initiated innovations in management and technology, pursue Quality and Reliability, provide the products—both hardware and software—that customers are happy to own, and maximize our corporate value. We at the Komatsu Group define our corporate value as the total sum of trust given to us by society and all stakeholders. To increase this corporate value, we have defined the following two management goals.

1. To maintain our top-level profitability and financial position in the industry and enhance our position in the global marketplace, especially in Greater Asia.
2. To continue management, while keeping market value in mind, which reflects the amount of trust given to us by society and shareholders.

To achieve these management goals, we have developed the mid-range management plan “Global Teamwork for 15” for the target year ending March 31, 2010. The title expresses our determination to achieve an operating income ratio of 15% or higher for the fiscal year ending March 31, 2010, as all employees of the Komatsu Group around the world promote teamwork with our partners, that is, sales agencies, suppliers, and customers.

The KOMATSU Way
The KOMATSU Way is a set of core values that we would like to continue upholding in the Komatsu Group into the future even when employees change. I think of it as Komatsu’s DNA. While I led The KOMATSU Way Division, we spent about a year and a half compiling the booklet The KOMATSU Way which was released in July 2006.

Unlike the business philosophies of other companies, we made The KOMATSU Way to include a wide scope of corporate domains ranging from Monozukuri or manufacturing competitiveness to corporate governance. The booklet contains the Top Management section in which we have identified five principles to be spearheaded by top management. Needless to say, I am committed to carrying out all five myself. With our common values that are grounded in The KOMATSU Way, we are now striving to achieve the mid-range management plan “Global Teamwork for 15.”

Environmental Activities
We at Komatsu are striving to reduce the environmental impact of all aspects of our business operations, including product development, procurement, manufacturing, logistics, sales, and after-sales service.

In product development, we have made it a top priority to introduce to the market DANTOTSU (Unique and Unrivalled) products featuring outstanding performance that focus in particular on enhancing fuel efficiency. We seek to mitigate global warming by promoting CO2 emissions reductions across the entire lifecycle of our products. To look at some examples of the development of environment-friendly products, first, in construction and mining equipment we have launched the WA500/600-6 wheel loader, a DANTOTSU product that brings tremendous improvements in fuel efficiency in complying with the Tier 3 emission standards of 2006. In the area of industrial machinery and vehicles, we have received high evaluations from customers as a result of our product development under the theme of energy conservation (CO2 emissions reductions). Besides introducing the world’s first electric hybrid forklift trucks to the market, we also launched a large AC servo press that brings together both significant energy conservation and noise reduction and higher productivity.

As for manufacturing and logistics, in January 2007 we established new plants immediately adjacent to the ports of Hitachinaka and Kanazawa in Japan, dramatically reducing the on-road transport distance for products and therefore reducing the amount of CO2 emitted through logistics. As we continue the various efforts we have undertaken over the years towards creating environment-friendly plants, we will in the future cooperate further with subsidiaries outside Japan as well as sales agencies, rental companies, and suppliers to strengthen our activities for reducing environmental impact.

Activities for Society
The “Global Teamwork for 15” plan states that in addition to enhanced business performance the Group should facilitate the development of both corporate strength and social responsibility in a well-balanced manner. Social responsibility for the Komatsu Group goes beyond contributing to customers’ businesses through its products and services; it extends to strengthening corporate governance and thorough regulatory compliance. We believe that our social responsibility involves making the Group an indispensable partner for a wide range of stakeholders by means of various efforts, such as deepening communication, fostering human resources, and engaging in social contribution activities. We have undertaken a variety of social contribution activities around the world, including the development of a demining machine for anti-personnel landmines using in-house technology to provide recovery assistance to regions suffering damage from landmines.

My mission is to solve management issues one by one through teamwork with all employees, sales agencies, and suppliers of the Komatsu Group, to further reinforce our business foundation and to promote sustainable growth. I will work to increase the trust given to us by stakeholders, with my efforts rooted in The Basic Stance of Management.
Notes from the Editor

Editorial Policy
Komatsu published its first Environmental Report in 1994 and its second in 1997. Since FY2000 the company has published this report annually to boost awareness of its efforts to reduce environmental impact in its business activities. Komatsu has conducted activities which demonstrate that fulfilling responsibilities to the greater society and making efforts to conserve the global environment rank among its top managerial priorities.

Beginning with the FY2004 report, Komatsu changed the title from its Environmental Report to its Environmental & Social Report. In the 2007 report, Komatsu has carefully modified the report to make it more interesting for the reader by listing major highlights and increasing the Special Stories to two. With regard to managerial structure, the company has sought to present information on activities regarding “The Basic Stance of Management” and “Quality and Reliability” in greater detail than in previous editions.


Komatsu conducts business operations directly and through more than 150 subsidiaries and more than 40 equity method affiliates organized under the laws of countries throughout the world. In this report on environmental and social activities, “Komatsu” and “Komatsu Group” are at times used informally to refer to the activities of all or some of the Komatsu family of companies, without regard to their separate legal identities.

Period Covered
This report covers the data for the period from April 1, 2006 to March 31, 2007 as a general rule. However, a portion of the report also touches upon the period after April 1, 2007.

Guidelines Used
* “Environmental Report Guidelines 2003” (Ministry of the Environment of Japan)
* “The 2002 Sustainability Reporting Guidelines” (Global Reporting Initiative [GRI])

Subsequent Reporting Schedule
* Japanese version: Expected July 2008
* English version: Expected August 2008

Komatsu’s Flagship Construction and Mining Equipment

Special Story
Komatsu’s Efforts to Combat Climate Change
Komatsu’s Relationship with the Environment and with Society
Komatsu Earth Environment Charter
Environmental Action Plan and Results for FY2006
Business Activities and Environmental Impact
Environmental Management Structure
Environmental Accounting
Providing Products and Services that Coexist with the Environment
Environmental Conservation in Manufacturing Operations
Environmental Risk Management
Activities for Reducing Environmental Impact from Upstream and Downstream Operations

Activities for Society
Technology for Construction Equipment Utilized in Clearing Landmines
Communication with Company Stakeholders
In Cooperation with Employees
Social Contributions

Data
Environmental Data by Manufacturing Facility in Japan
Overview of Komatsu’s Environmental and Social Activities to Date
External Commendations on Environmental Conservation and Social Activities and External Evaluations
Environmental Data by Manufacturing Facility outside Japan

Independent Review on
Environmental & Social Report 2007
**Company Profile**

**Company name:** Komatsu Ltd.

**Established:** May 13, 1921

**Head Office:** 2-3-6, Akasaka, Minato-ku, Tokyo 107-8414, Japan

**Representative:** President and Chief Executive Officer Kunio Noji

**Capital:** Consolidated ¥67,870 million (US$575 million*) (as of March 31, 2007)
Non-consolidated ¥758,529 million (US$6,428 million*)

**Net sales:**
- Consolidated ¥1,893,343 million (US$16,045 million*) (for the fiscal year ended March 31, 2007)
- Non-consolidated ¥1,893,343 million (US$16,045 million*), which excludes Komatsu Electronic Metals Co., Ltd.

**Number of employees:** (as of March 31, 2007)
- Consolidated 33,863
- Non-consolidated 6,231
- Consolidated subsidiaries in Japan 16,546
- Consolidated subsidiaries outside Japan 17,317

**Number of employees by region:** (as of March 31, 2007)
- Japan: 16,546
- The Americas: 8,062
- Europe and CIS: 3,566
- China: 1,985
- Asia (excluding Japan and China): 2,947
- Oceania: 2,947
- The Middle East and Africa: 757

**Sales by Operation (FY2006)**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Sales (billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing and others</td>
<td>1,089.8</td>
</tr>
<tr>
<td>Electronics</td>
<td>1,196.4</td>
</tr>
<tr>
<td>Electronics</td>
<td>1,701.9</td>
</tr>
<tr>
<td>Construction and mining equipment</td>
<td>1,893.3</td>
</tr>
<tr>
<td>Total</td>
<td>5,881.4</td>
</tr>
</tbody>
</table>

**Sales by Region (FY2006)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Sales (billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia (excluding Japan and China)</td>
<td>1,893.3</td>
</tr>
<tr>
<td>Osaka</td>
<td>129.4</td>
</tr>
<tr>
<td>China</td>
<td>129.4</td>
</tr>
<tr>
<td>Europe and CIS</td>
<td>324.1</td>
</tr>
<tr>
<td>The Middle East and Africa</td>
<td>162.1</td>
</tr>
<tr>
<td>J Japan</td>
<td>487.1</td>
</tr>
<tr>
<td>The Americas</td>
<td>25.7%</td>
</tr>
<tr>
<td>China</td>
<td>28.4%</td>
</tr>
<tr>
<td>The Middle East and Africa</td>
<td>25.7%</td>
</tr>
</tbody>
</table>

**Scope of This Report**
- Komatsu’s (parent company’s) manufacturing facilities, specifically the following four plants:
  - The Awazu Plant (including the Defense Systems Division, Industrial Machinery Division, Komatsu Machine Corporation), the Osaka Plant, the Osaka Plant (including Komatsu Cummins Engine Co., Ltd., Industrial Power Alliance Ltd., Komatsu Castex Ltd. [Yama Plant], and GIGAPHOTON, Inc.), and the Mooka Plant.
  - Komatsu Group’s manufacturing facilities in Japan, specifically the above four plants and the following seven business units:
    - Construction Equipment Electronics Division (including Komatsu Electronics, Inc.), the Koriyama Plant, Komatsu Utility Co., Ltd. (Tochigi Plant, Kawagoe Plant), Komatsu Engineering Corp. (Awazu Plant), Komatsu House Ltd., and Komatsu Castex Ltd. (Himi Plant).
  - Komatsu Group’s manufacturing facilities outside Japan, specifically the 18 business units appearing in the world map below.

**Major Changes since the 2006 Edition**
- In October 2006, 51% of the outstanding shares of Komatsu Electronic Metals Co., Ltd., were transferred to SUMCO Corporation from among the 61.9% of outstanding shares held by Komatsu Ltd. In keeping with this, Komatsu Electronic Metals (now SUMCO TECHXIV Corporation) and its subsidiaries have been excluded from the companies overviewed in this report, with related data also having been retroactively excluded from the aggregate data.
- In January 2007 in Japan, manufacturing began at the Barari Plant in Hachinohe, Akita Prefecture, which manufactures wheeled large construction and mining equipment, and at the Kanzawa Plant in Kanzawa, Ishikawa Prefecture, which manufactures large presses. In addition, in Chennai, India, manufacturing began at Komatsu India Pvt. Ltd., which manufactures mining equipment. Because their periods of business operations within FY2006 were so short, none of these three plants have been included in the environmental indicators in this report.
- In April 2007, Komatsu Zenoah Co.’s outdoor power equipment business was transferred to Husqvarna Japan Ltd. However, its business data is included in this report’s performance data and environmental accounting.
- In April 2007, the Koriyama Plant of Komatsu Zenoah Co., which manufactures hydraulic components, was absorbed by Komatsu Ltd. Its performance data is reported as a manufacturing facility of the Komatsu Group.
- In April 2007, the mini construction equipment business of Komatsu Zenoah Co. is reported as Komatsu Utility Kawagoe Plant, while Komatsu Forklift Co., Ltd. is reported as Komatsu Utility Tochigi Plant. (The pre-merger names may appear in this report in reference to activities undertaken during FY2006.)

*With regard to activities for society, this report cites some activities conducted by Komatsu Group companies not mentioned above.
2006 Highlights

Formulating The KOMATSU Way
In July 2006, Komatsu formulated The KOMATSU Way, in which the Group defined its strengths, as well as the convictions, attitudes, and know-how that support those strengths. The KOMATSU Way is the Group’s values and principles that cover topics ranging from Monozukuri or manufacturing competitiveness to corporate governance. Komatsu is currently spreading The KOMATSU Way internally as values that should be shared by the Group at the global level and passed on unbroken into the future.

Developing the WA500/600-6 Wheel Loader
Komatsu released the environment- and operator-friendly WA500/600-6 wheel loader.
In addition to complying with Tier 3 emission standards in the U.S., Europe, and Japan, effective 2006, this wheel loader features improvements to the bucket shape to make digging easier and numerous kinds of technology to reduce fuel consumption. Boasting a 20% gain in work capacity per unit of fuel, this vehicle has achieved outstanding economic efficiency and productivity.

Electric Hybrid Forklift Trucks
In the forklift market, advances have emerged towards converting to electric-powered vehicles that do not generate emissions. However, electric-powered vehicles have had various problems, such as long recharging times and the inability to operate the vehicle for long periods of time. By adding an electrical storage device known as a capacitor to the conventional battery, Komatsu’s new models feature two systems for electrical power, thereby eliminating those problems and bringing about energy savings of up to 20%.

Founding New Plants at Ports
In January 2007, construction was completed on both Komatsu’s Ibaraki Plant, which manufactures wheeled large construction and mining equipment adjacent to the port of Hitachinaka in Ibaraki Prefecture in Japan and Kanazawa Plant, which manufactures large presses next to the port of Kanazawa in Ishikawa Prefecture in Japan. By shipping products manufactured at these plants by sea using the ports, the amount of land-based transport can be reduced. Komatsu expects a total annual reduction of 2,500 tons of CO2 emissions for both plants.

Komatsu’s Efforts to Combat Climate Change
Komatsu has been taking steps to reduce the amount of CO2 emitted across its products’ entire lifecycles to mitigate climate change, the greatest environmental issue now facing the globe. In particular, in FY2006 its manufacturing facilities have succeeded in attaining ahead of schedule the targets established for FY2010 for the amount of CO2 emissions per unit of manufacturing value. This is the result of patient efforts such as energy conservation activities and conversions to energy sources that have low CO2 emissions.

Recovery Assistance in Areas Impacted by Natural Disasters, such as the Earthquake in Central Java
Komatsu frequently makes monetary donations and donates or lends construction equipment and other items necessary for rescue and recovery activities so that areas impacted by natural disasters can recover as early as possible. In FY2006 Komatsu assisted the areas affected by the earthquake in Central Java, Indonesia in May 2006 (see photo) and the earthquake off the Noto Peninsula, Japan in March 2007.

Official Recognition in Japan as a Company that Supports the Fostering of the Next Generation
Komatsu has continuously formulated and implemented action plans through which employees can pursue both their careers and child raising. In Japan, the company has attained its objectives by encouraging male employees to take child-rearing leave and establishing a web page viewable within the company that supports the simultaneous pursuit of parenting and a career. These activities were recognized by the Japanese Ministry of Health, Labour and Welfare and in 2007 Komatsu acquired the Ministry’s mark designating companies that assist in the growth of the next generation.

Developing a Demining Machine for Anti-personnel Landmines
Komatsu developed a demining vehicle by applying its construction equipment technology. This vehicle will lead to the effective clearing of anti-personnel landmines, which continue to cause trouble for people even after a conflict ends. The first machine is scheduled to be delivered to a landmine clearing NGO in Afghanistan in August 2007. The development process of this demining machine for anti-personnel landmines is introduced in detail in this report’s Special Story section.

Deepening Communication with Stakeholders
Through shareholders’ meetings (see photo) and other opportunities, Komatsu discloses information to a broad range of stakeholders in an appropriate and equitable manner to build and maintain a relationship of trust with them. Moreover, The KOMATSU Way explicitly states that top management should explain the company’s current state, objectives, and strategy in concrete and easy to understand terms.
The Basic Stance of Management

As the cornerstone of its management, the Komatsu Group has been committed to enhancing Quality and Reliability through strengthening corporate governance and Monozukuri, or manufacturing competitiveness, in order to maximize corporate value.

The Basic Stance of Management

As the cornerstone of its management, the Komatsu Group is committed to enhancing Quality and Reliability in order to maximize corporate value. Komatsu considers corporate value to be the total sum of trust given to it by society and all corporate stakeholders.

This principle of Quality and Reliability not only applies to the Komatsu Group’s products and services that bring satisfaction to customers, but also extends to all other aspects of the Group, including organizations, businesses, employees, and management.

Enhancing Quality and Reliability

In particular, the Komatsu Group has been working to strengthen corporate governance and Monozukuri in order to enhance Reliability, which has been a source of Komatsu’s strength.

■ Strengthening Corporate Governance

To maximize its corporate value, it is important for the Komatsu Group to design a framework in which the Group can enhance its corporate value in a steadfast manner. This task calls for not only maximizing the total market value of Komatsu shares and working to expand sales and profits but also striving to satisfy a broad range of stakeholders, especially customers, to the fullest extent.

Top management officers of Komatsu Group companies are expected to conduct steady management with full awareness of Corporate Social Responsibility (CSR) while making constant efforts to ensure Quality and Reliability in management. Moreover, the officers are stepping up the revitalization of the Board of Directors—the core body for corporate governance—and the establishment of an internal controls system while continuing to enhance the transparency and soundness of management.

All employees of Komatsu Group companies are expected not to postpone but to promptly work on solutions and corrections when they discover issues and/or problems related to the rules in all business areas and domains.

■ Strengthening Monozukuri

It is critical for Komatsu as a manufacturer to promote reform based on the Monozukuri concept in order to enhance its competitiveness.

This concept means that the Komatsu Group has to rise to every challenge toward creating safe and innovative products in the spirit of unified teamwork of every division and partner related to the value chain—the chain of entities through which added value emerges—spanning from research, development, procurement, manufacturing, sales, and after-sales service divisions to the management division as well as to partner companies and sales agents. Furthermore, the Group emphasizes environmental friendliness in all activities throughout the product lifecycle.

The KOMATSU Way

■ Formulating The KOMATSU Way

Komatsu defined the strengths it has built up through the process of growth and development, as well as the convictions, attitudes, and code of conduct that support those strengths, in The KOMATSU Way, which the Group formulated in July 2006.

The KOMATSU Way is a statement of values that the Komatsu Group should pass down in a lasting way wherever it operates, including in its management, to ensure its continuing commitment to

Topics

Priorities in Management

Komatsu has set forth principles for top management at Komatsu Ltd. and Group companies to follow strictly as they grasp up-to-date and authentic information originating at each workplace and carry out the following:

Five Principles for Top Management

1. Vitalize the functions of the board of directors.
2. Take the initiative in communicating with all our stakeholders.
3. Comply with the rules of the business community.
4. Never put off responses to risks.
5. Keep thinking about your successor.

Overview of The KOMATSU Way

Seven Ways of KOMATSU

In The KOMATSU Way, Komatsu positions the Seven Ways of KOMATSU as shared values that promote Monozukuri, or manufacturing competitiveness.

Seven Ways of KOMATSU

1. Commitment to Quality and Reliability: Quality is our top-priority commitment, and thus we will never make any compromise on quality.
2. Customer Oriented: By valuing the opinions of our customers, we continue to offer the products and services that they are proud to own.
3. Defining the Root Cause: By clearly defining all processes from product planning to machine conditions in the field, we always work to find and fix the root cause of problems in order to prevent the problem from recurring.
4. Workplace Philosophy: Workplaces (Genba in Japanese) offer information which should constitute the foundation of our policies, strategies, improvement plans and other vital initiatives. It’s important to emphasize and look at the facts of workplaces, making information “visible.”
5. Policy Deployment: As soon as top management policies are announced, employees on all levels understand their respective roles, make their own activity plans, and implement them on their initiative.
6. Collaboration with Business Partners: In all operations from development to sales and after-sales service, we work together with our business partners from around the world to solve problems and improve operations, share know-how and work for our mutual growth as “One Komatsu.”
7. Human Resource Development: It is the human resources, i.e., employees, that support sustainable corporate growth. Employees are the most valuable corporate asset and thus human resource development and educational programs for employees are indispensable worldwide.
Managerial Structure

enhancing Quality and Reliability in the service of corporate value. By sharing these values, the Group can build global teamwork that transcends nationalities and generations while amassing and fortifying the Komatsu Group’s “strength of job capabilities”—the dynamism of all employees and the entire organization plus the ability to improve their own workplaces and worksites—which in turn further enhances Quality and Reliability.

Enabling The KOMATSU Way to Spread and Be Shared by All

Komatsu has been spreading and cultivating The KOMATSU Way to enable it to firmly take root in each Group company, guided by The KOMATSU Way Division that was established in July 2006. To facilitate understanding of The KOMATSU Way, as of March 31, 2007 the Group had convened a total of 56 explanatory sessions at Group companies around the globe, with the executive officers in charge visiting locations in person to deliver the explanations.

Each division has compiled collections of more detailed conduct principles for individual workplaces into division-specific versions of The KOMATSU Way, paving the way for sharing values globally. As concrete ways of strengthening employees’ ability to improve their own workplaces, the Group also uses education for activating the Total Quality Management (TQM) that has been cultivated in the Group along with various kinds of management education.

Promoting Corporate Social Responsibility (CSR)

Komatsu has intensified corporate social responsibility (CSR) activities in which the Group conducts business management that gives serious consideration to the company’s stakeholders in order to enable the Group to keep earning trust from society on a global, Group-wide scale.

Organization Related to Corporate Social Responsibility

To fulfill the numerous aspects of its social responsibility, Komatsu has established departments that have responsibilities for handling matters in each particular area. Moreover, the Group has formed various committees to examine each of these areas, with executive officers also present to discuss the relevant issues. Established in May 2004 as the department to oversee these issues, the CSR Department has been reporting directly to the office of the President since April 2006.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Committee</th>
<th>Area of CSR oversight</th>
</tr>
</thead>
<tbody>
<tr>
<td>President and CEO</td>
<td>Executive Officer Supervising CSR</td>
<td>CSR Department, Corporate Planning Div., Environmental Affairs Dept., Compliance Dept., Internal Audit Dept., General Affairs Dept., Legal Dept., Corporate Communications Dept., Human Resources Dept., Quality Assurance Dept., Health and Safety Administration Center</td>
</tr>
</tbody>
</table>
Corporate Governance

To become a company that enjoys even greater trust from all its stakeholders, Komatsu is strengthening corporate governance Group-wide to advocate corporate ethics and maintain and improve transparent and sound management.

Organizational Profile

In 1999 Komatsu Ltd. introduced the executive officer system and has been working to separate management decision-making and supervisory functions from executive functions within the confines of the law. At the same time, the Company has maintained the Board of Directors with a small number of members and appointed outside directors and auditors. To improve the effectiveness of discussions in Board meetings, we have promoted reforms in the operational aspect of Board meetings to ensure thorough discussions of important management agendas and quick decision-making.

Corporate Governance of Komatsu
As of June 22, 2007

In addition to reporting the audit results above to the Board of Statutory Auditors, the Internal Audit Department maintains close and substantive collaborations with statutory auditors, for example, by providing information on a routine basis.

- **Directors’ and Statutory Auditors’ Remuneration**
  Concerning the director’s remuneration, in 1999 we established the Compensation Council membered mostly by experts outside of the Company to ensure transparency, objectivity, and validity. Total remuneration and other compensation for directors and statutory auditors are publicly announced.

- **International Advisory Board**
  In 1995 we established the International Advisory Board (IAB) to receive advice and suggestions from foreign experts for the implementation of important globalization strategies. As a general rule, it meets twice a year to discuss and engage in information exchange.

Improvement of Internal Control

- **System to Ensure Directors’ Execution of Duties**
  We implement the following measures to ensure the directors’ effective execution of duties.
  1) In addition to holding monthly Board of Directors meetings on a regular basis, we hold extraordinary Board of Directors meetings as needed. Through participation of outside directors, we are working to maintain transparent and sound management. We have also set up the operational rules of the Board of Directors.
  2) We have defined the separation of duties for directors, executive officers and other senior officers, and set up the internal rules to ensure appropriate and effective execution of duties by directors.
  3) To promote efficient management of the Board of Directors, we have established the Strategy Review Committee consisting of senior executive officers and senior managers. Based on the reviews of the Committee, each executive officer and each senior manager execute their duties within the authority delegated by the Board of Directors.

- **Framework to Ensure Appropriateness of Business Operations of the Komatsu Group**
  a) We have devised the Regulations for Affiliated Companies and related rules in order to contribute to appropriate and efficient management of the Komatsu Group, while respecting self-driven management of affiliated companies. Furthermore, we position the Komatsu’s Code of Worldwide Business Conduct as the code of business conduct applicable to all affiliated companies of the Komatsu Group. Based on these regulations and the code of business conduct, each company of the Komatsu Group has devised its own regulations designed to correctly promote business operations.
  b) Our important committees, such as the Compliance Committee, Risk Management Committee and Export Management Committee, shall implement their activities in light of the Komatsu Group, and the representatives of affiliated companies are required to participate in the meetings as needed.
  c) Especially important affiliated companies are required to report their business conditions, including risks and compliance, to the Board of Directors of Komatsu on a regular basis.
  d) Internal Audit Department of Komatsu not only audits Komatsu’s divisions but also audits affiliated companies of the Komatsu Group or oversees the audits, and monitors and instructs affiliated companies so that they will build their structure in conformity with Komatsu’s internal control and operate it correctly.
Compliance and Risk Management

Under the principle of “compliance comes first,” Komatsu is establishing a framework to ensure thorough compliance with best practices in business.

Promoting Compliance

Frameworks for Promoting Compliance
To make certain that the entire Komatsu Group complies with the rules of the business community, Komatsu has appointed an executive office in charge of compliance and established the Compliance Department to handle this issue exclusively. The Compliance Committee, chaired by the President and CEO, reviews the Group’s action policies and important issues, while regularly reporting the state of compliance-related activities to the Board of Directors.

Strengthening Compliance

■ Komatsu’s Code of Worldwide Business Conduct
The company has formulated Komatsu’s Code of Worldwide Business Conduct (established in 1998 and revised six times to date) as a compilation of best business practices to be observed by officers and employees of Komatsu Group companies both in and outside Japan. The code addresses such topics as fair business practices, non-discriminatory personnel systems, endeavors for the global environment, appropriate information management, and internal control structure. The text of the code has been released to the public in its entirety.

■ Towards Thorough Compliance
For continual awareness among employees about compliance, the Group is working to raise their consciousness of best business practices by displaying in every Komatsu Group business unit posters listing The Five Principles of Compliance, a condensed version of Komatsu’s Code of Worldwide Business Conduct. Beyond this, the Group strives to provide effective awareness-raising through the use of e-Learning as well as well-developed compliance-related education and training that is tailored to employees’ ranks and the types of operations they are engaged in. Furthermore, during internal audits of Komatsu business units and Group companies, the Komatsu Group not only conducts financial audits but also monitors their compliance with business rules and safety and environmental practices, enabling early detection of risks and improvement.

■ Internal Reporting System
Komatsu established the Business Rule Consultation Office in 1998 through which employees from any Group company can consult with the company about issues pertaining to best business practices or report questionable actions. By clearly stating in Komatsu’s Code of Worldwide Business Conduct and Group companies’ workplace rules that employees using the internal reporting system will not be penalized, the Group fosters active consultations and reporting.

The State of Compliance in FY2006

In July 2005, Komatsu Ltd. failed to realize that its dissolution of a finance subsidiary in the Netherlands that had already ceased business operations is considered a “material fact” (a fact that affects investors’ decision-making) under the Securities and Exchange Law of Japan, and began the redemption of some of its own shares from the market before the dissolution was disclosed. The results of the investigation by the Japanese Securities and Exchange Surveillance Commission (SESC) were that the dissolution of the subsidiary did constitute a material fact and that consequently Komatsu’s pre-disclosure redemption of its own shares was equivalent to a prohibited transaction under the Securities and Exchange Law (insider trading). In March 2007, under order from the Financial Services Agency of Japan, Komatsu Ltd. paid an administrative surcharge of 4.378 million yen.

After the start of the SESC investigation, Komatsu Ltd. promptly made public notification of this incident and, under the guidance of the authorities, launched measures to strictly prevent a recurrence, including a revision of its internal system and rules and education and training courses that thoroughly address the relevant laws.

Risk Management

Basic Principles and System for Risk Management
While Komatsu continues to make efforts to improve corporate value, it recognizes the problems related to compliance, in particular, environment, product quality, accidents, information security, and other matters, as major risks for continuous growth and is thus implementing the following countermeasures.

- Komatsu has established Risk Management Rules to correctly recognize and manage risks, for which the company has appointed personnel in charge of individual risks, further promoting the build-up of a solid foundation for risk management.
- Komatsu has established a Risk Management Committee to devise risk management policies of the Komatsu Group, evaluate risk measures in place, and take control of risks when they surface. The Risk Management Committee regularly reports its reviews and activities to the Board of Directors.
- Komatsu will establish an emergency headquarters when serious risks surface, and work to minimize damage(s) and implement appropriate measures.

The State of Risk Management in FY2006

■ Implementing a BCP* for Komatsu
Komatsu has formulated a BCP to carry out major operations without suspension, or restore them after only a short suspension, should a disaster or accident occur.

In FY2006, the company conducted a BCP simulation, assuming an earthquake occurring directly beneath the Greater Tokyo Metropolitan area, a disaster said to be highly likely. The simulation aimed to enable employees to take correct actions in the event of a real emergency, particularly through reinforcing the system dealing with the initial stages of response. Moreover, in order to reduce potential earthquake damage, the company installed an earthquake warning system at the Head Office building, which sounds an alarm just before a large vibration hits, and then held emergency drills.

*Business Continuity Plan: A plan that systematizes major operations across the entire company such that they can continue without suspension or can be brought back after only a brief suspension.

■ Promoting Risk Management throughout the Group
To reinforce the risk management structure across the Group, Komatsu is working to enhance the level of management at each Group company through explanatory meetings and study sessions on risk management and BCPs. Additionally, Komatsu is strengthening its Group-wide system for communications in times of emergency by introducing tools such as an emergency contact and safety confirmation system and broad-area wireless devices.

■ Consolidating Information Security
With the Information Security Committee established in 2005 at the core, Komatsu is developing a structure for information security for the entire Group and implementing various control measures.

In FY2006, Komatsu distributed an Information Security Guidebook to all employees in order to raise their consciousness of thorough compliance to rules. With this guidebook as a base, the company engaged in awareness-raising activities such as explanatory sessions and education and training (e-Learning) for every employee at its business units.
Quality and Reliability
In order to pursue Quality and Reliability, Komatsu has established a system for providing high-quality products and services that are innovative and safe, taking to heart the opinions of customers.

Fundamental Approach to the Pursuit of Quality Management

The fundamental principle of Monozukuri lies in Komatsu’s commitment to Quality and Reliability in order to provide products—both hardware and software—that customers are happy to own (see P. 4).

To achieve this, Komatsu puts the customer first as one of its Basic Managerial Policies, with the pursuit of maximum customer satisfaction at the foundation. The company engages in a continuous process of reform and improvement with all divisions responsible for putting this policy into practice, whether in development, manufacturing, sales, after-sales service, or management.

Scope of Komatsu Quality Management

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Komatsu's Mechanisms for Quality Assurance

At Komatsu, all employees in each division, from product planning to development, production, sales, and after-sales service, share a sense of working as a single unit to manufacture products that are safe, innovative, and of high quality. In addition, through a strengthening of Komatsu’s unique Monozukuri system, the company is able to introduce to the market competitive products featuring outstanding performance and provide services and systems with substantial features. Moreover, at each step of the development and production system, meetings are held to evaluate the product and activities are undertaken until the product is deemed to be suitable and specific objectives have been achieved. In this way, the company conducts quality assurance activities that firmly ensure Quality and Reliability.

Through such activities the company is able to provide products and services that take the global environment into account and comply with both international specifications and the regulatory requirements of individual countries even as it works towards improved safety assurance and satisfaction for its customers.

Komatsu's Mechanisms for Quality Assurance

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Based on its Principles Governing Quality Assurance, Komatsu is undertaking a variety of initiatives to increase customer satisfaction. First, Komatsu believes it is extremely important to give serious consideration to customers’ views and examine them on a continuous basis. Consequently, the company conducts regular customer satisfaction surveys, including post-launch field surveys. Komatsu uses the results to improve both the products themselves and the structure promoting quality assurance as well as to furnish new value to customers by developing products featuring outstanding performance that anticipate customer needs in advance and delivering services with distinct features.

By implementing these approaches, Komatsu is able to raise the level of customer satisfaction.

<table>
<thead>
<tr>
<th>Customers</th>
<th>Sales agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Product quality issues&lt;br&gt;• Customer needs</td>
<td>• Sales and service divisions&lt;br&gt;• Visiting customers&lt;br&gt;• Meetings with customers to exchange views on technologies&lt;br&gt;• Customer satisfaction surveys</td>
</tr>
</tbody>
</table>

### Structure for Quality Assurance

The majority of Komatsu’s products—construction and mining equipment, presses, and forklifts—are used as manufacturing equipment at customers’ sites of operation. These products are expected to contribute to customers through a higher rate of utilization and productivity over long hours every day.

In reflection of these product characteristics, sales and service staff at Komatsu not only visit customers directly to give detailed recommendations on products and the way to use them along with conducting maintenance activities but also provide feedback to relevant divisions regarding customers’ views and requirements for products. The company has created a system to increase customer satisfaction through rapid responses to such information (see chart below).

Moreover, Komatsu maintains a database on product quality in the market so that when discovering a problem on product quality in the market, the company can respond rapidly and have all the company’s sales and service divisions able to access ways to remedy the issue.

**Increasing the Degree of Customer Satisfaction**

As a part of its system for comprehensively assessing customers’ degree of satisfaction, Komatsu is moving forward with a post-launch field survey through which people from the company directly visit customers who have purchased newly-launched products and ask them to evaluate those products (see overview chart of the system on the next page).

In concrete terms, the company listens to customers’ feedback on a day-to-day basis regarding the degree of satisfaction in the quality and reliability of its products, as well as to the evaluations, views, and requests concerning its sales and after-sales service and replacement parts. Komatsu processes and analyzes the gathered data to decide upon objectives for improvement.

The resulting information is shared across the company, notably with top management, and provided as feedback to divisions at every step in the process, including development, manufacturing, and sales and after-sales service, to improve upon problems and revise the quality assurance system, thereby enabling the company to deliver products and services that satisfy customers.
Komatsu’s quality assurance activities at the global level enable it to provide products of uniform quality at all of its locations throughout the world. For that reason, the company aims for universally applied and uniform technical drawings, manufacturing systems, inspection methods, information collection, and quality management. Concrete efforts include labeling certain of the global manufacturing locations with product development capabilities as "mother plants." These plants serve at the center of global development and manufacturing activities, with the leading-edge technologies and techniques developed there transferred to other manufacturing locations around the world. This results in an improvement of technology and enhancement of product quality that are universal around the globe.

**Promotion of Product Safety to Ensure Customer Safety and Assurance**

In order for Komatsu’s customers to be able to use its products safely and with a sense of assurance, the company puts safety and assurance at the forefront in its quality assurance activities. By formulating Standards for Product Safety and associated Principles and having all employees comply with them, Komatsu aims to provide products that are safe, provide a sense of assurance, and are used for many years.

**The Komatsu Information System for Product Safety**

- **Customers, sales agents**
  - Internal proceedings (analysis, formulation of response measures)
  - Safety and regulatory affairs
    - Research division
    - Planning, development
    - Mass production
    - Sales
    - After-sales service
    - Purchase and use of products by customers
  - Quality assurance division at each plant
    - Incorporation of quality into products
    - System featuring persons responsible for vehicle inspection and safety
  - Quality assurance division at Head Office
    - Responses to regulatory issues via manufacturing, sales
    - Regulatory materials
  - Information analysis
    - Analysis, verification
    - Consideration of response measures
    - Information regarding product quality in the market
    - Audits of regulatory affairs
    - Remedial activities
  - Quality Assurance Meeting
    - Determination of response measures
    - Reporting to relevant divisions
    - Prevention of recurrence, standardization
    - Implementation of response measures
  - Information on accidents occurring with customers
  - General information received from customers
  - Direct display on products
  - Modification of product manuals, etc.
  - Informing of customers (via sealed letter)
  - Collection of affected products, repair

- **Relevant governing authorities, relevant organizations**
  - Legally-required registrations/applications
  - Affairs related to defective vehicles
  - Annual report
  - Reporting and submitting information to relevant authorities as provided under the law
  - Reporting to relevant organizations

**Post-launch field surveys**

1. Survey targets
   - Customers who have purchased newly-launched products or vehicles with recent model changes
2. Survey periods
   - Periods of about six and 12 months after product launches
3. Methods of conducting the surveys
   - Direct visits to customers, interviews
4. Survey items
   - (1) Degree of customer satisfaction (evaluations by owners and operators)
   - (2) Operator survey on capabilities and functions
   - (3) Ease of maintenance, serviceability
   - (4) Situation regarding replacement parts
   - (5) Surveys of service representatives (at sales agents)

**Evaluation of degree of customer satisfaction (Quality Meeting)**
Information System for Product Safety and Services

In order to get information at as early a time as possible regarding problems with product safety in the marketplace, Komatsu has established an information system for product safety and conducts rapid responses to issues. Furthermore, it continuously strives to make improvements so that the company, including top management, can respond quickly through coordinated efforts, including (1) assessments of the cause of the incident and procedures to be taken, (2) contacting the relevant governing authorities, (3) deciding to take remedial measures such as conducting a recall of products still on the market.

Principles Governing Quality Assurance (Regarding product safety)
Complying with international standards and the legal requirements particular to individual countries as a matter of course, and providing products and services that, from the perspective of the customer, have incorporated proper regard for safety and a sense of assurance and that do not easily malfunction, are fundamental to the job of every employee and constitute the responsibility of every employee.

Standards for Product Safety
(1) Compliance
The provision of products and services that comply with international standards and the legal requirements particular to individual countries is fundamental to the job of every employee and constitutes the responsibility of every employee.

(2) Safety via prevention
The provision of products and services that are safe and provide a sense of assurance, and do no harm to the customer is fundamental to every employee and constitutes the responsibility of every employee.

(3) Security regarding accidents
The provision of products and services that minimize any injury that might occur to a customer who has an accident is fundamental to every employee and constitutes the responsibility of every employee.

(4) Transparency
The ongoing provision of advance safety warnings after receiving information from the customer and, in the case of a defect arising in a product or service, the efforts to undertake prompt response measures and information provision, are fundamental to every employee and constitute the responsibility of every employee.

(5) Improvement of organizational climate
In order to create a corporate climate in which product safety is emphasized, the standardization of the safety management system and safety techniques as well as ongoing efforts to improve them are at all times fundamental to every employee and constitute the responsibility of every employee.

Provision of Product Safety Information to Customers
While Komatsu meets all legal requirements for providing safety information directly on products or in user’s manuals, the company supplements this through the provision of product safety information to customers, mainly using the methods listed below. Furthermore, the company seeks to address each particular situation, with, for example, engineers or top management visiting customers as the situation might require.

Methods for Provision of Product Safety Information to Customers
(1) Direct indication on the product itself or in the user’s manual
(2) Direct explanations to customers by Komatsu sales and service employees and sales and service employees of sales agencies
(3) Telephone consultations with the service division of each plant and the customer service representatives in quality assurance divisions

System for Dealing with Recalls

Customers have become more concerned about product safety in general and product recalls in particular. In response, Komatsu is enhancing organizational strength and improving its ability to generate comprehensive and rapid responses for ensuring safety in the marketplace.

Procedure Governing Recalls
(1) Proposal for rectification of the situation based on information regarding the defect; decision regarding what measures the company will take towards the market
(2) File notice with relevant authorities as provided under the law
(3) Inform customers by appropriate means
(4) Take appropriate corrective measures, including, for example, repair, replacement, or refund

Efforts to Prevent Recalls
(1) Strengthening of system for collecting information on product quality in the market
(2) Promotion of technical verification of the problem involved in the recall and timely decision-making
(3) Strengthening of check system that features persons responsible for vehicle inspection and safety
(4) Regular auditing of recall-related operations

Number of Incidents in which Recall Notices Were Filed in Japan
Komatsu strictly oversees compliance with legal requirements. Should a defect somehow be found in its products or services, the company initiates rapid correction measures and moves forward with proactive information disclosure.

The number of incidents in which recall notices have been filed in Japan (see graph below) shows an increase in FY2005, when Komatsu thoroughly investigated product quality information from the previous five years and decided voluntarily to file notices and take remedial action for ensuring the safety of vehicles for transporting goods by road. The company will continue to press forward with all-out efforts to pursue safety in the road ahead.

Number of Incidents in which Recall Notices Were Filed in Japan
Special Story

Komatsu’s Efforts to Combat Climate Change
Comprehensively pursuing energy conservation in manufacturing and logistics to mitigate global warming

Efforts to Combat Climate Change As the Responsibility of All Humanity

Global warming has been intensifying along with increases in the use of fossil fuels. The most recent report released by the Intergovernmental Panel on Climate Change (IPCC) stated that the years 1995 to 2006 are among the twelve warmest years recorded since observation equipment came into being in 1850. In the midst of growing concern about rising sea levels as mountain glaciers and snow coverage have shrunk in both the northern and southern hemispheres, efforts to address climate change, as epitomized by global warming, are the responsibility of all humankind.

Komatsu’s Efforts towards Mitigating Climate Change

To minimize the global environmental effects generated through its business activities and products, Komatsu is working to improve its products’ fuel efficiency while also reducing the environmental impact resulting across products’ entire lifecycles in manufacturing, procurement, logistics, sales, use, and disassembly. In particular, as part of its efforts to mitigate climate change, the company is keenly aware of the importance of reducing CO2 emissions and devotes significant attention to conserving energy during the manufacturing stage, improving logistics, and improving fuel and operational efficiency during the usage stage.

Energy Conservation Activities in the Manufacturing Division

Energy Conservation as the First Step

In response to the energy conservation law enacted in Japan in 1979, Komatsu has reduced the amount of energy used at its manufacturing facilities. The company found the patient efforts of the energy conservation teams created at each manufacturing facility and the investments made in energy-saving equipment to be very effective, with the Osaka Plant and Oyama Plant cited as excellent energy control-designated factories in 1982 and 2002, respectively, a commendation given by the Minister of Economy, Trade and Industry. The Energy Saving Working Group has led these activities.

Reorganizing the Energy Saving Working Group in 2000

Komatsu’s Earth Environment Committee has undertaken energy conservation efforts in manufacturing activities across the board. Launched in 1991, the committee established an Energy Saving Working Group as a task force under the Manufacturing Technology Meeting, a subordinate organization of the committee. To make those efforts even more thorough and far-reaching, the committee reorganized the Energy Saving Working Group in 2000 and launched activities that emphasize the following two angles:

1. Practices that have generated results at individual manufacturing facilities should be promoted throughout the entire Komatsu Group, and
2. Through the Working Group, Komatsu should communicate with other companies having environmental excellence and collect examples of practices and then promote the good practices of other companies within Komatsu.

The people responsible for better approaches to energy from each manufacturing facility in Japan from Tohoku to Kyushu convene twice annually, engaging in technical discussions and introducing effective practices. In addition, since 2001, well-planned efforts have been underway to improve energy conservation through Energy Service Company (ESCO) operations, which require no direct capital expenditures.

From Energy Conservation to CO2 Emissions Reductions

Energy Conservation Activities Transitioned Steadily

Energy conservation activities at Komatsu manufacturing facilities transitioned smoothly, with the company achieving in FY2003 a 22% reduction in the amount of energy used per unit of manufacturing value (the heat energy equivalent used per unit of manufacturing value) compared to the FY1990 level.

Establishing CO2 Emissions Reductions as a New Objective

At the same time, regardless of the degree of facilities’ excellence in energy conservation, there remains room for improvement in reducing CO2 emissions, which are regarded as a major cause of climate change. With that in mind, to mount an institutional response to climate change, Komatsu deemed it necessary to change its objective from reductions in the heat energy equivalent used per unit of manufacturing value to reductions in the amount of CO2 emissions. Consequently each manufacturing facility has been implementing various measures in line with the new policy of reducing CO2 emissions volume. The company has been working towards the dual goals of energy conservation and CO2 emissions reductions.

Major Energy-related Conversions

<table>
<thead>
<tr>
<th>Type of energy conversion</th>
<th>Equipment involved and overview of improvements</th>
<th>Facility undertaking the conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene → natural gas</td>
<td>Turbine plant fuel conversion</td>
<td>Oyama Plant</td>
</tr>
<tr>
<td>Coke → electricity</td>
<td>Change of melting furnace (cupola furnace → high-frequency furnace)</td>
<td>Komatsu Castex Ltd.</td>
</tr>
<tr>
<td>Heavy oil A → electricity</td>
<td>Elimination of on-site power generation that uses heavy oil A</td>
<td>Mooka Plant, Oyama Plant</td>
</tr>
<tr>
<td>Factory air pressure → low-pressure air</td>
<td>Using factory air pressure in drying process → using low-pressure air blowers</td>
<td>Oyama Plant</td>
</tr>
<tr>
<td>LPG → electricity</td>
<td>Change of heating furnace (gas firing → electricity)</td>
<td>Awazu Plant</td>
</tr>
</tbody>
</table>
1. Conversion to natural gas
At the Oyama Plant, a decision was made to convert the fuel for the turbine plant (cogeneration), which had been introduced as an energy conservation measure, from kerosene to natural gas. Through this, the plant as a whole achieved a 10% reduction in its CO2 emissions.

2. Elimination of the use of coke
At Komatsu Castex Ltd.'s Himi Plant, which manufactures castings, the cupola furnace utilized during melting was changed to a high-efficiency high-frequency furnace and coke is no longer used.

3. Elimination of on-site power generation that uses heavy oil A
The Mooka and Oyama Plants eliminated on-site power generation that uses heavy oil A, a low-cost source of energy.

For on-site power generation, electric power suppliers establish power-generating facilities within the premises of Komatsu manufacturing facilities and are responsible for the fuel, heavy oil A. Komatsu purchases the resulting energy. However, since the CO2 emitted originates from within the Komatsu premises, the CO2 emissions resulting from the power generation have been calculated at Komatsu’s.

Achieving a Medium-term Objective Ahead of Schedule
As a result of various energy-related conversions like these, the amount of CO2 emissions per unit of manufacturing value for FY2006 showed a 27.3% improvement over that of FY1990. The medium-term objective set to be attained in FY2010 could be achieved ahead of schedule.

Reduction of CO2 Emissions from Each Division
In order to bring about CO2 emissions reductions, Komatsu is working to advance various efforts beyond those made at manufacturing facilities. For example, in order to realize reductions in CO2 emissions generated during the transport of products, the logistics division is engaged in the following activities:

- Increasing the full-load ratio of trucks and trailers through a collaborative transport alliance, and
- Promoting a modal shift from truck-based transport to rail-based transport.

In addition, because it is difficult for the Research Division to reduce energy consumption during the course of operations, it has introduced a large-scale electric power storage system utilizing lead storage batteries through which nighttime electric power is used effectively, bringing about reductions in CO2 emissions. Beyond this, in the Head Office building as well, the lighting, air conditioning, and other systems have been thoroughly reviewed, resulting in a reduction of CO2 emissions of approximately 23% in FY2006 compared with FY1995.

Aiming at Still Greater CO2 Emissions Reductions

The Idea of Locating a Plant Adjacent to a Port
In many export destinations, construction equipment such as wheel loaders can be driven on public roadways. However, in Japan it is prohibited. For that reason, it has until now been necessary to disassemble each vehicle into five to eight pieces and transport the vehicle to port by trailer. Not surprisingly, CO2 emissions result from the disassembly, packaging, transport by trailer, cargo handling at ports, and reassembly at the vehicle’s final destination.

Komatsu envisioned constructing a plant immediately adjacent to a port as a radical means of addressing this issue, and in FY2006 in Japan it constructed the Ibaraki Plant adjacent to the port of Hitachinaka in Ibaraki Prefecture and the Kanazawa Plant next to the port of Kanazawa in Ishikawa Prefecture. After operations at both plants commence, CO2 emissions are expected to drop by 2,500 tons annually by reducing the amount of overland transport of products to the port.

For the Future of the Globe
Through various efforts in the years to come Komatsu will continue to respond to climate change, an issue affecting all humanity. In addition, the company believes that its activities can further its economic and social contributions while at the same time helping future generations enjoy a beautiful global environment.

Adoption of Cutting-edge Ecological Technology at the Ibaraki Plant
The Ibaraki Plant, which manufactures wheeled large construction and mining equipment, incorporates a large number of the latest ecological technologies. Solar cells sit atop the southern part of the building, generating an average of 20 kWh of electricity, which is used as a power source for the administration building’s indoor lighting, computers, and more. In addition, energy conservation has been pursued through a building design that emphasizes natural illumination and daylight. For smaller kinds of equipment as well, the plant adopts those having the most superior energy-conservation features among currently-available mass-marketed products. In deference to the fact that the plant has been constructed near a port, the plant has adopted careful protections to guard against salt damage.

Built in the spirit of “if Komatsu were to build an environment-friendly facility, this is what it would be,” the Ibaraki Plant represents a condensed form of Komatsu’s philosophy and its technologies. For that reason, a great deal is expected of this facility as a model plant depicting the future of Komatsu’s manufacturing.

Susumu Yamamura
Project Manager, General Affairs Section, General Affairs Dept., Osaka Plant (formerly with the New Plants Project)

The Kanazawa Plant Adopts “A People- and Environment-friendly Plant” as Its Motto
The Kanazawa Plant, which manufactures large presses and other industrial machinery, has been designed with the motto, “a people- and environment-friendly plant.” The plant is engaged in various measures to preserve the environment, including efforts to keep down its CO2 emissions, which are a major cause of climate change, as well as actions to reduce the release of volatile organic compounds (VOCs). Moreover, by such actions as developing a dust collecting machine that targets the microscopic mineral dust generated through welding operations (welding fumes), the plant reflects thorough consideration of worker safety. In addition, in consideration of its location next to a port in the Hokuriku District facing the Sea of Japan, the plant gives ample attention to measures to deal with wind, salt, and snow.

Because the winter in the Hokuriku District is quite cold, the Kanazawa Plant has been constructed with double-layered roofs and outer walls. This insulates the plant, keeping it warm and reducing the need for heating. In addition, the external lights of the plant’s parking facilities are supplied with solar and wind-generated power.

Isao Ohya
Manager, Kanazawa Manufacturing Section, Manufacturing Dept., Large-sized Press Div., Industrial Machinery Div.
In recognition of the fact that its business activities affect a number of stakeholders, most notably the residents of the area surrounding its activity sites, the Komatsu Group is promoting activities that will reduce environmental impacts.

Komatsu has focused its environmental activities chiefly in the area of construction and mining equipment, which exceeds 80% of the company's consolidated sales. As its primary initiatives, in addition to introducing an environmental management system based on ISO14001, Komatsu supplies products with environment-friendly designs and has been boosting its environmental performance.

In 2003, Komatsu undertook a revision of its progress to date, newly delineating the following as its corporate principles: (1) Contributions to realization of a sustainable society, (2) Simultaneous realization of environmental and economic performance, and (3) Observance of corporate social responsibility. Expanding the scope of its activities to all its areas of business, Komatsu is undertaking these initiatives throughout the entire Komatsu Group, with subsidiaries operating at the global level responsible for implementation.

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Komatsu Group seeks to promote activities that, from a global viewpoint, reflect its awareness of its social responsibilities.

Komatsu Earth Environment Charter (July 2003 revision)

Corporate Principles

1. Contributions to Realization of Sustainable Society
The Komatsu Group recognizes conservation of the earth’s environment for a sustainable society as among the most important tasks for mankind in the 21st century.

The Komatsu Group endeavors to contribute to this task by actively integrating environmental conservation into all of its business activities. The Komatsu Group reaffirms its long-term commitment to this effort as an important management priority.

2. Simultaneous Realization of Environmental and Economic Performance
The Komatsu Group is committed to improving both environmental performance and economic efficiency, as a group of companies working toward superior manufacturing for customer satisfaction. To this end, the Group constantly takes up the challenge of advancing technologies to develop creative products that improve both environmental performance throughout the product’s life cycle and the product’s economic performance at the same time.

3. Observance of Corporate Social Responsibility
Each company of the Komatsu Group seeks to be a respected corporate citizen of the local community in nations around the world. Each company strives to fulfill its corporate social responsibility, including compliance with applicable laws and regulations on environmental conservation, as well as voluntary involvement and participation in community programs to address environmental concerns, and through dialogue and coordination with regulatory authorities, local leaders, and the public. Each of the individual Komatsu Group companies is responsible for fulfilling its independent legal obligations.

Guidelines for Corporate Activity

1. Framework for Global, Group-wide Environmental Management System
1) Production facilities of the Komatsu Group, already with ISO certifications, will work to maintain and improve their environmental management system, while other production facilities, yet to be certified, will strive to acquire ISO certifications as soon as possible.

The Komatsu Group will also work to introduce and improve an environmental management system in all business domains other than production, and to implement a program of continuous improvement in environmental performance and in-house environmental auditing.

2) The Komatsu Environmental Committee develops environmental action plans for the Komatsu Group. Each division or affiliated company of the Komatsu Group is responsible for establishing its own mid- to long-term targets based on Group-wide action plans and for developing and implementing specific action plans.

The Komatsu Environmental Committee also develops common guidelines for an environmental manual for the Komatsu Group, and based on them, each division and affiliated company is responsible for providing for its own rules and procedures in accordance with respective circumstances.

2. Development of Products and Technology with Superior Environmental Quality and Economic Performance
1) The Komatsu Group seeks to develop and provide to customers superior products with world-leading environmental quality and economic performance. The Komatsu Group seeks to meet or surpass emission control performance and other environmental requirements applicable to its construction and mining equipment products. The Komatsu Group establishes common mid-range technology development goals for each business domain, and each development center is responsible for promoting the development of such technologies in a planned manner.

2) The Komatsu Group seeks to develop and provide superior environmental products and systems designed to offer customers optimal solutions in their environmental conservation efforts.

3. Promotion of Zero Emissions
1) The Komatsu Group works to facilitate Zero Emissions manufacturing at all of its manufacturing facilities worldwide by extending such activities as piloted and achieved at its manufacturing facilities in Japan.

The Komatsu Group also works to facilitate Zero Emissions and other environmental activities of its suppliers. To this end, the Komatsu Group seeks to expand its Green Purchase program and also offers technological support when suppliers may need to introduce environmental management systems.

2) The Komatsu Group promotes reduction of environmental impacts of its sales and product support activities. The Komatsu Group offers support to its distributor and affiliated rental companies in Japan by setting up model cases, providing environment-related information, establishing environmental management guidelines and undertaking other activities. For distributors and affiliated rental companies overseas, the Group also strives to extend similar activities, as appropriate considering their respective conditions.

3) The Komatsu Group works to improve life cycle assessment of its products and build a circulation-based business system designed to reduce environmental impact throughout product’s life cycle.

4. Management of Environmental Risks and Observance of Corporate Social Responsibility
1) Each division and affiliated company of the Komatsu Group is responsible for observing applicable environmental standards and regulations of the country or region where it is located as well as its own internal policies and standards, and working to improve its capability to anticipate and address environmental impacts.

2) The Komatsu Group promotes the consciousness of Group employees to the importance of environmental conservation and the responsibility of employees to fulfilling the Komatsu Group’s commitment to this principle. To this end the Group also promotes education on environmental conservation for employees and special training for environmental management and auditing personnel.

3) The Komatsu Group promotes disclosure of information concerning its performance of environmental conservation activities. Each division and affiliated company of the Group promotes such disclosure as appropriate based on local circumstances.
Environmental Action Plan and Results for FY2006

Komatsu has formulated an Environmental Action Plan (implementation policies) in each field for the practical implementation of the Komatsu Earth Environment Charter. Komatsu specifies its operational targets every fiscal year and keeps checking yearly developments, establishing establishment of a strong base to implement the Action Plan.

Environmental Management

<table>
<thead>
<tr>
<th>Implementation policies</th>
<th>Objectives for FY2006</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objectives</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Implement Environmental Action Plan</td>
<td>Draw up and promote the Plan</td>
<td>Conducted internal environmental auditing <strong>Weld regional (Europe, China) Environmental Affairs Meetings and conducted environmental inspections</strong></td>
<td>•Strengthens sales- and service-related environmental activities  •Strengthens environmental activities outside Japan</td>
<td>P. 20  P. 21</td>
</tr>
<tr>
<td>2. Environmental education and training: Implement the Plan</td>
<td>Draw up and promote the Plan</td>
<td>Held 13 lectures for over 8,000 attendees</td>
<td>Continue activities in Japan and extend activities to facilities outside Japan</td>
<td>P. 21</td>
</tr>
<tr>
<td>3. Environmental communication: Publish an environmental &amp; social report</td>
<td>Formulate and publish the communication plan</td>
<td>Published the report in July 2007 with enhanced coverage of environmental and social aspects</td>
<td>Reinforce quality of content; release report earlier than in previous years</td>
<td>—</td>
</tr>
<tr>
<td>4. Environmental accounting; Manage operations using standard indices for assessing environmental impact</td>
<td>Establish control with a standard set of indices in Komatsu Group facilities</td>
<td>Compared the development of Komatsu’s four manufacturing facilities by applying standard indices for assessing environmental impact</td>
<td>Expand horizontally to Group manufacturing facilities</td>
<td>P. 22-23</td>
</tr>
</tbody>
</table>

Research and Development

<table>
<thead>
<tr>
<th>Implementation policies</th>
<th>Objectives for FY2006</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objectives</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reduce the environmental impact of construction equipment  •Develop lower-emitting diesel engines  •Proactively meet exhaust emission standards  •Develop environment-friendly construction and mining equipment (GALEO series)</td>
<td>Develop engine compliant with standards</td>
<td>Met Tier 3 emission standards, effective 2006</td>
<td>Develop engine compliant with Tier 4 emission standards in the U.S., Europe, and Japan, effective 2011</td>
<td>P. 24-27</td>
</tr>
<tr>
<td>2. Reduce the environmental impact of industrial machinery  •Address environmental issues from forge rolling machines</td>
<td>Develop large AC servo press</td>
<td>Developed large 3000 ton AC servo TR press, realizing improvements in productivity (1.2 times) and substantial reductions in electrical energy used and noise (~20dB)</td>
<td>Expand number of servo press models</td>
<td>P. 26</td>
</tr>
<tr>
<td>3. Reduce the environmental impact of industrial vehicles  •Develop environment-friendly forklift</td>
<td>Develop forklift</td>
<td>Developed electric hybrid forklift trucks, achieving energy conservation of up to 20%</td>
<td>Expand number of electric hybrid forklift trucks</td>
<td>P. 26</td>
</tr>
<tr>
<td>4. Provide solutions for customers’ environmental activities  •Promote on-site recycling using mobile crushers/recyclers</td>
<td>Expand scope of application and promote social recognition of on-site recycling engineering</td>
<td>Promoted on-site recycling of construction residuals at point of generation by mobile crushers/recyclers</td>
<td>Expand range of machines in the mobile crusher/recycler series; expand areas of applicability</td>
<td>P. 27</td>
</tr>
<tr>
<td>5. Promote reuse and recycling  •Promote Reman business</td>
<td>Expand and promote Reman business</td>
<td>Promoted Reman business (remanufacturing of used components [parts]) on a global basis</td>
<td>Promote reuse and recycling through further improvements in recycling-related technology for parts</td>
<td>P. 27</td>
</tr>
</tbody>
</table>

Social Action Plan and Results for FY2006

<table>
<thead>
<tr>
<th>Implementation policies (★ indicates objectives for FY2006)</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objectives</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communicate with company stakeholders  Establish relationship of trust through the disclosure of appropriate information in a timely manner</td>
<td>•Convened shareholders’ meetings in Oyama and Sendai, Japan  •Provided more substantial information on Komatsu IR web page</td>
<td>Further implement these activities</td>
<td>P. 36-37</td>
</tr>
<tr>
<td>2. Employee affairs  Develop human resources and create an organization with dynamism</td>
<td>•Introduced an Active Aging Plan, a post-retirement career support program  •Strengthened systematic fostering of engineers through Meister advanced training system and newly-founded Komatsu Training Institute  •Held management seminars for subsidiaries outside Japan</td>
<td>Extend The Komatsu Way and TQM education company-wide; develop human resources globally</td>
<td>P. 38-39</td>
</tr>
<tr>
<td>3. Health and safety  Ensure a safe work environment that enables peace of mind and improve maintenance of the health of employees</td>
<td>•Conducted activities for introducing OSHMSs in all Komatsu plants  •Launched trial of computer-based diagnosis for prevention of lifestyle-related diseases and conducted stress diagnosis for self-employed mental health care</td>
<td>Eradicate work-related accidents through participation of all employees in safety activities and firm establishment of OSHMSs; improve maintenance of the mental and physical health of employees, including their family members, through health-related education and awareness activities</td>
<td>P. 40</td>
</tr>
<tr>
<td>4. Social contributions  Promote social contribution activities as a member of the local community</td>
<td>•Provided guidance regarding implementation of the system from persons at Komatsu overseeing occupational health and safety  •Conducted continuous follow-up activities</td>
<td>Further implement these activities</td>
<td>P. 41-43</td>
</tr>
</tbody>
</table>
### Manufacturing

<table>
<thead>
<tr>
<th>Implementation policies</th>
<th>Objectives for FY2006</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objectives</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental management system**</td>
<td>Acquire certification at one facility outside Japan</td>
<td>Acquire certification at new plants in Japan</td>
<td>No newly-acquired certification and new plants under inspection (certification acquired in May 2007) when four other plants at Komatsu had surveillance audits conducted</td>
<td>Acquire integrated certification for the entire Komatsu company</td>
</tr>
<tr>
<td>2. Mitigation of climate change (energy conservation)</td>
<td>Improve 1.5% year on year</td>
<td>*Improved 27.3% from the level of achievement in FY1990; attained a 12.5% improvement over the previous year</td>
<td>Achieve by FY2010</td>
<td>P. 28-29</td>
</tr>
<tr>
<td>3. Effective utilization of resources</td>
<td>Maintain/make further progress on attainment of zero emissions at the Komatsu Group’s manufacturing facilities in Japan</td>
<td>Attain recycling ratio of 99% or more</td>
<td>*Maintained recycling ratio of 99.6% across the entire Komatsu Group</td>
<td>Maintain zero emissions; attain zero emissions at the Komatsu Group manufacturing facilities outside Japan</td>
</tr>
<tr>
<td>4. Environmental risk management</td>
<td>Improve 2% year on year</td>
<td>*Achieved a 11.3% reduction in the volume of water used per unit of manufacturing value from the level of achievement in FY2005</td>
<td>Achieve by FY2010</td>
<td>P. 29</td>
</tr>
</tbody>
</table>

---

### Procurement and Logistics

<table>
<thead>
<tr>
<th>Implementation policies</th>
<th>Objectives for FY2006</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objectives</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Green procurement</td>
<td>Conduct support and awareness-raising activities for the establishment of environmental management systems at suppliers</td>
<td>*Established Midori-ka Environment Commission for partner companies (58 companies participating) to support activities to introduce environmental management systems</td>
<td>Have all suppliers acquire environmental management system certification by FY2008</td>
<td>P. 32</td>
</tr>
<tr>
<td>2. Environmental conservation in logistics</td>
<td>Fully implement integrated transport reform in Japan</td>
<td>*Attained a 90% truck loading ratio (objective for FY2006 was 85%)</td>
<td>Include as priority activities and promote the improvement of the loading ratio during transport and the increase in size of transport containers, both of which are effective in reducing CO2 emissions</td>
<td>P. 32-33</td>
</tr>
</tbody>
</table>

---

### Sales and Services

<table>
<thead>
<tr>
<th>Implementation policy*</th>
<th>Objective for FY2006</th>
<th>Results (Asterisks indicate results for FY2006)</th>
<th>Medium- and long-term objective</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Carry out occupational health and safety and environmental conservation activities at sales agencies and rental companies based on relevant guidelines</td>
<td>Enhance awareness of environmental issues through sessions to explain contents of guidelines</td>
<td>*Visited 13 sales agencies and rental companies to give instruction at sessions</td>
<td>Support activities by all sales agencies and rental companies through the Environmental Guidelines</td>
<td>P. 33</td>
</tr>
</tbody>
</table>

---

### Joining the National Initiative “Team Minus 6%”**

Komatsu has been participating in the national movement in Japan to mitigate climate change known as “Team Minus 6%.” Among efforts to reduce its CO2 emissions further, Komatsu sets the air conditioning to 28°C and encourages employees to wear clothing appropriate for hot and humid weather while at work in the summer (known in Japan as “Cool Biz”). Moreover, in the days around the summer solstice, the company participates in the Light Down Campaign, in which lighting on billboards is turned off.

*The name “Team Minus 6%” refers to Japan’s greenhouse gas emissions reduction target of 6% under the Kyoto Protocol.
Business Activities and Environmental Impact

The Komatsu Group procures various parts and materials and, through the manufacturing process, utilizes natural resources, including raw materials, water, energy, and chemical substances, among others, to provide products to its customers. Such business activities result in environmental impacts at each stage in the process.

The Komatsu Group will continue to provide more highly value-added products and services while at the same time seeking to understand the environmental impacts resulting from its business activities, formulating its medium- and long-term objectives, and implementing measures to reduce such impacts.

In addition to measuring quantitatively the relationship between business activities and the environment and understanding their environmental impact, Komatsu has formulated medium- and long-term objectives and is implementing measures that will reduce environmental impacts.

Environmental Impact Resulting from Business Activities of Komatsu Group Companies, including Facilities outside Japan (FY2006)

---

**Input**

**Direct Materials**
- Steel: 496,000 t

**Indirect Materials**
- Paints: 1,950 t
- Lubricants: 13,970 k

**Energies**
- Electricity: 673 GWh
- Heavy oil A: 16,000 k
- Kerosene: 8,000 k
- Light oil: 12,000 k
- Natural gas: 13 millionNm³
- LPG: 7,000 t
- Gasoline: 500 k
- LNG: 8 millionNm³
- Coke: 7,000 t

**Water Resources**
- Groundwater: 5.3 million m³
- Industrial water: 0.2 million m³
- Supply water: 0.8 million m³

**Development**
- Environment & Economy
- LCA design
- Medium-term targets for development of environmental technology

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**Procurement of Materials**

**Green procurement**

**Manufacturing**
(27 Komatsu Group Manufacturing Facilities in and outside Japan)

**Product**
- Product weight (construction equipment only): 731,000 t
- Number of products (construction equipment only): 44,288 vehicles

**Environmental Risks**
(Air, soil, and groundwater pollution)
- Measures for underground oil tanks: Completed
- Storage for PCB transformers: 570 units
- Groundwater observation wells: 95 wells
- Company on-site landfills: Closed

**Waste**
- Total amount generated: 119,000 t
- Substances under the Pollutant Release and Transfer Register (PRTR) Law: 85.0 t

**Waste Recycling**
- Recycling volume: 61,000 t

**Waste Disposal**
- Waste materials disposed by subcontractor: 59,000 t
- (Company on-site landfill of waste materials: 0 t)

**Atmospheric Discharges**
- CO₂: 470,000 t-CO₂
- SOₓ: 159 t
- NOₓ: 410 t
- Substances under the PRTR Law: 1,118.5 t

**Water-based Discharges**
- Wastewater: 4.2 million m³
- BOD emissions: 31 t
- COD emissions: 35 t
- Substances under the PRTR Law (public water areas): 0.0 t
- Substances under the PRTR Law (sewage): 0.1 t

---

**CO₂ emissions**: Calculated by multiplying the amounts of electricity, heavy oil, etc., used (see Energies section of Input column) by the "CO₂ coefficient" in each area. In Japan, the coefficient for fuel is calculated in keeping with the Law concerning the Rational Use of Energy [Revised] and the Mandatory Greenhouse Gas Accounting and Reporting System that entered into force in April 2006. The coefficient for electricity is calculated in keeping with the guidelines for calculation stipulated by the Ministry of the Environment of Japan in FY1999, which are based on the Act on Promotion of Global Warming Countermeasures.

**SOₓ emissions**: Calculated by multiplying the “S content by percentage” (based on element tables of suppliers) by the amounts of heavy oil, kerosene, light oil, and coke used.

**NOₓ emissions**: Calculated by multiplying the “nitrogen oxide emissions units” obtained at each Komatsu facility by the amounts of heavy oil, kerosene, light oil, natural gas, and LPG used.

Emissions and transfer of substances covered by the PRTR Law: Calculated by multiplying the “content ratio of specific chemical substances” contained in indirect materials multiplied by the “discharge or transfer rate.” This calculation is based on the PRTR Law, which was designed to mandate the disclosure of the volume of specific chemical substances released into the environment to promote the management of such substances.
Environmental Impact Indicators and Environmental Accounting, Broken Down by Region

**Energies**
- Light oil
  - Japan: 1,180 kJ

**Packaging**
- Steel: 3,642 t
- Resins: 156 t
- Paper: 2,505 t

**Sales and Services**
- Provision of environment-friendly products and services
- Creation and operation of a transaction network for used components (parts), information on “Reman” sales, etc.

**Use**
- Reduction of environmental impact during the product usage stage
- Provision of solutions for customers’ environmental activities
- Promotion of energy-conserving operation

**Recovery and Disassembly**
- Promotion of “Reman,” in which used components (parts) are recovered, remanufactured, and supplied back to the market

**Atmospheric Discharges**
- CO₂: 79,600 t-CO₂

**Noise and vibration**
- CO₂

**Waste Disposal**
- Hazardous waste manifests

Coverage of Data
- *1 Related to construction machinery in Japan (excluding Komatsu Utility Co., Ltd.)
- *2 Komatsu manufacturing facilities
- *3 Komatsu Group’s manufacturing facilities in Japan
- *4 Logistics from procurement to sales related to construction machinery in Japan
- *5 Related to construction machinery manufactured in Japan
Komatsu has established an environmental management structure grounded in ISO14001, a widely accepted international standard for environmental management, for its Group companies, including manufacturing facilities outside Japan. Also, as part of its efforts to fulfill its corporate social responsibility, Komatsu conducts thorough environmental education and training for its employees.

**Overview of Environmental Management Structure**

Recognizing that environmental issues are an integral part of its corporate mandate, the Komatsu Group established the Earth Environment Committee in 1991 and created its environmental management structure. Following this environmental initiative, the Group formulated the Komatsu Earth Environment Charter in 1992 and launched its environmental conservation activities.

The Group acquired ISO14001 certification, an international standard for environmental management, for its Group companies, including manufacturing facilities outside Japan. Also, as part of its efforts to fulfill its corporate social responsibility, Komatsu conducts thorough environmental education and training for its employees.

**Organizational Chart of the Environmental Management Structure**

- President and CEO
- Strategy Review Committee
  - The highest executive body to study and review basic policies, plans, and strategies involved in top-priority corporate affairs. This committee consists of the standing executive directors.
- Earth Environment Committee
  - The Earth Environment Committee has ultimate authority for approving Komatsu’s environmental conservation measures. Its meetings are held annually. Its mission includes formulating specific environmental action plans based on the Guidelines for Corporate Activity of Komatsu’s Earth Environment Charter and determining Komatsu Group’s overall direction in environmental conservation. Chaired by an executive director in charge of environmental management, it consists of executive officers responsible for individual divisions.
- Global Safety and Environmental Affairs Meeting
  - Chaired by an executive in charge of safety and environmental issues, this meeting consists of officers responsible for environmental management in Komatsu’s manufacturing facilities both in and outside Japan. Meeting every two years as a rule, it provides a platform to implement measures formulated by the Earth Environment Committee and to exchange information related to environmental conservation worldwide.

**ISO14001**

Komatsu has been engaged in a Group-wide undertaking to acquire ISO14001 certification, an international standard for environmental management systems, with a view to enhancing management quality through strengthening systematic steps towards environmental conservation. Through these measures, all manufacturing facilities in Japan acquired certification by FY2002.

In FY2006, the Komatsu Group engaged in several environmental management activities, such as conducting assessments of the new Ibaraki and Kanazawa Plants before they launched operations. As a result, in April 2007 both plants acquired certification, having undergone inspection while surveillance audits were conducted at Komatsu’s four other plants. From now on, Komatsu (non-consolidated), including its Head Office, will work to acquire integrated certification even as the Group moves forward in acquiring certification at its new plants outside Japan.

**Environmental Auditing**

With regard to environmental auditing, in accordance with ISO14001 stipulations, Komatsu conducts internal auditing as well as periodic review by external certification bodies. Moreover, beginning in FY2004 the Komatsu Group launched internal environmental auditing focused primarily on environmental performance and legal compliance by environmental experts from within the Group. It was decided that after newly creating the Komatsu Environmental Risk Check Sheet and having each manufacturing facility use it to conduct a self-evaluation, the Group would undertake environmental audits.

In FY2006, the Group performed audits on three manufacturing facilities, namely Komatsu Utility Kawagoe Plant, Komatsu Utility Tochigi Plant, and Komatsu Castex Himi Plant. In FY2007, the Group plans to conduct audits at all Group manufacturing facilities in Japan. Apart from the above internal audits, the Komatsu Internal Audit Department implements business audits, including a review of the environment-related activities of each individual Group company, about every four years, with each company bearing independent responsibility for the findings and follow-up.
Environmental Education and Training

The Komatsu Group’s fundamental education system distributes the responsibility for education such that the parent company develops educational materials and provides educational services on commonly relevant academic issues for use by Komatsu Group companies, whereas instruction regarding more hands-on matters, including unique features and points particular to individual business units, are conducted by relevant divisions in each business unit.

In FY2006, Komatsu conducted almost the same curriculum for environmental education and training as in FY2005. As a means of further enhancing understanding of environmental issues, the company held e-Learning courses for managers and employees after a two-year hiatus. Furthermore, to accelerate understanding of compliance issues, the company conducted refresher courses for internal auditors.


courses in Environmental Education and Training in Japan (excluding general environmental courses)

<table>
<thead>
<tr>
<th>Venue</th>
<th>No.</th>
<th>Course name</th>
<th>Target</th>
<th>Participants FY2003</th>
<th>FY2004</th>
<th>FY2005</th>
<th>FY2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Office</td>
<td>1</td>
<td>Advanced environmental education (held every two years)</td>
<td>Environmental specialists (Komatsu and affiliates)</td>
<td>17</td>
<td>—</td>
<td>28</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Overview of the ISO14000 series</td>
<td>Administrators (Komatsu, affiliates, and partner companies)</td>
<td>30</td>
<td>24</td>
<td>42</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Training of internal auditors/Refresher courses</td>
<td>Environmental auditors (Komatsu, affiliates, and partner companies)</td>
<td>25</td>
<td>19</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Development and manufacturing (introductory)</td>
<td>Development and manufacturing staff (for second-year employees)</td>
<td>89</td>
<td>59</td>
<td>56</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Training of assistant foremen/Training of manufacturing engineers</td>
<td>Assistant foremen/Manufacturing engineers</td>
<td>—</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Training new employees</td>
<td>New recruits</td>
<td>69</td>
<td>70</td>
<td>89</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Lectures on mitigating climate change</td>
<td>Komatsu Group managers and employees</td>
<td>—</td>
<td>468</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Education for enhanced environmental understanding (e-Learning)</td>
<td>Komatsu Group managers</td>
<td>—</td>
<td>1,294</td>
<td>767</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Education to refresh environmental understanding (e-Learning)</td>
<td>Komatsu Group managers and employees</td>
<td>4,675</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative divisions of plants</td>
<td>1</td>
<td>Basic environmental education</td>
<td>Managers and employees</td>
<td>169</td>
<td>784</td>
<td>269</td>
<td>241</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Overview of the ISO14000 series</td>
<td>Managers and employees</td>
<td>72</td>
<td>87</td>
<td>62</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Training of internal auditors</td>
<td>Environmental auditors</td>
<td>86</td>
<td>113</td>
<td>232</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Training new employees</td>
<td>New recruits</td>
<td>511</td>
<td>859</td>
<td>707</td>
<td>418</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Regulatory education and personnel exchange</td>
<td>Managers and employees</td>
<td>243</td>
<td>144</td>
<td>590</td>
<td>1,084</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Specialist training</td>
<td>Environmental conservation practitioners (persons involved in regulatory affairs, etc.)</td>
<td>553</td>
<td></td>
<td>277</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Inspections at Chinese Subsidiaries

Three representatives involved in environmental affairs at Komatsu Ltd. Head Office visited five subsidiaries in China from March 14 to 20, 2007, ex changing views on the environment and inspecting environment-related facilities. During this trip the representatives also toured the premises of the subsidiaries’ suppliers and waste disposal companies.

The Group will compile the findings and stipulate points in order to establish guidelines for Group companies to follow for environmental conservation, thereby moving towards the betterment of the environmental achievement of the Group as a whole.

What’s more, in light of the growing importance of the climate change issue, each business unit held environmental lectures focused specifically on global warming.

The number of persons who have some environment-related certificate has far exceeded the minimum requirement. However, from the viewpoint of risk management, employees are encouraged to obtain a suitable certificate.

Number of Persons Having Environment-related Certificate

<table>
<thead>
<tr>
<th>Certificate name</th>
<th>Number of persons with certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution control administrators</td>
<td>250 (60)</td>
</tr>
<tr>
<td>Energy administrators</td>
<td>40 (11)</td>
</tr>
<tr>
<td>Environmental management system auditors</td>
<td>8</td>
</tr>
</tbody>
</table>

Figures in parentheses indicate the number of officers required.

In addition to the education and training courses listed in the chart above, Komatsu also held explanatory sessions at partner companies regarding the introduction of environmental management systems and at sales agents regarding the Group’s Environmental Guidelines (see P. 33).
Environmental Accounting

In order to bring about the greatest possible environmental performance at the lowest possible cost, Komatsu manages its environmental activities based on a standard set of indices. The company will apply this concept to Group manufacturing facilities both in and outside Japan.

Concept of Environmental Accounting

Komatsu began releasing environmental accounting data in FY1999 in order to manage ongoing and effective environmental conservation activities and disclose to its customers, shareholders, and all other stakeholders the content, cost, and effects of those activities. In FY2000, the company expanded this environmental accounting to its manufacturing facilities outside Japan. The costs of environmental conservation are calculated in accordance with guidelines and manuals published by the Ministry of the Environment of Japan.

Environmental accounting is still in the developmental stages. In the future, Komatsu intends to monitor efficiently the costs and effects of environmental conservation in light of the life cycles of its products and build a new environmental accounting system that can be an effective tool for evaluating environmental management.

Costs and Environmental Effects of Environmental Conservation

Komatsu’s investment in Japan increased to 1,304 million yen, a 7% year-on-year jump despite the previous year’s already high figures, as a result of increases in environmental conservation-related investment in keeping with the expansion in production capacity that occurred against the backdrop of expansion of the global market for construction and mining equipment, among other factors. In particular there was an increase in investment in measures to control environmental impact in manufacturing facilities, namely improvements in pollution mitigation and prevention equipment, including enhanced functioning capacities of wastewater processing facilities, and energy conservation-related measures.

Research and development costs in Japan remained at a very high level just as in the previous fiscal year, at 12,832 million yen. Substantial research and development expenditures were devoted to reducing the environmental impact of products, especially in the development of new products that meet Tier 3 emission standards, which became effective in 2006. As a result, the environmental conservation costs arising from R&D activities accounted for over 70% of the company’s total expenditures, as in the previous fiscal year. With regard to expenditures at its manufacturing facilities, Komatsu was able to reduce the cost of maintaining equipment through improvements in control efficiency, offsetting fees for ESCO services and other energy conservation-related costs as well as fees resulting from greater amounts of waste for disposal resulting from increases in production volume (waste processing fees), ultimately resulting in holding expenditures to the same level as the previous fiscal year. These costs reflect expenses involved in surveys related to soil and groundwater contamination conducted at land tracts owned by the company as well as remedial countermeasures. Furthermore, concerning the effects of environmental conservation, numerical data about the following items have been disclosed.

- Environmental performance improvements that can be measured quantitatively
- Net economic effects that contribute to earnings through cost reduction and avoidance and that can be directly measured in monetary terms: In FY2006, Komatsu was able to achieve considerable positive economic effects as a result of energy conservation improvements. Moreover, the reuse of furnace slag in roadbed materials has increased steadily.

The effects of reducing the environmental impact of Komatsu’s products during use and the non-economic effects of external activities are still being estimated.

Management Based on Environmental Impact Point*2 (EIP)

With the aim of obtaining maximum ecological benefit (environmental performance) with minimum economic cost (financial performance), Komatsu integrated a standard set of indices for assessment of all environmental impacts attributable to its manufacturing facilities. This has made it possible not only to express quantitatively (numerically) such qualitative terms as “environment-friendly plant” but also to show clearly the progress of targets and measures. Furthermore, as a rational environmental impact assessment index (JEPIX)*2 well adapted to the actual conditions of environmental activities in Japan, it was developed, Komatsu decided to adopt this analytical technique in

### Environmental Accounting

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Business area cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pollution prevention cost</td>
<td>1,063</td>
<td>1,071</td>
<td>Investment for installation and conversion of pollution mitigation/prevention facilities</td>
<td>2,823</td>
<td>3,027</td>
<td>2,075</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(installation of effluent processing facilities, conversion of coating booths, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Global environmental conservation cost</td>
<td>457</td>
<td>349</td>
<td>Investment for implementing energy conservation measures</td>
<td>903</td>
<td>836</td>
<td>606</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(introduction of solar energy generation, installation of new ventilation systems, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Resource circulation cost</td>
<td>123</td>
<td>53</td>
<td>Investment for reducing the volume of waste materials</td>
<td>971</td>
<td>1,164</td>
<td>1,001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(conversion of recycling facilities, introduction of equipment for separating waste, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Upstream/downstream cost</td>
<td>13</td>
<td>14</td>
<td>Investment for beautifying manufacturing sites</td>
<td>259</td>
<td>311</td>
<td>740</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Administration cost</td>
<td>142</td>
<td>219</td>
<td>Investment in research facilities for reduction of environmental impact</td>
<td>13,449</td>
<td>12,832</td>
<td>602</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) R&amp;D cost</td>
<td>144</td>
<td>219</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Social activity cost</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Environmental remediation cost</td>
<td>0</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,219</td>
<td>1,304</td>
<td></td>
<td>17,291</td>
<td>17,457</td>
<td>3,843</td>
</tr>
</tbody>
</table>

*All figures are rounded off to the nearest million yen.
FY2002. In addition, in order to enable visualization and facilitate understanding of which process is working, what environmental impact, the analytical method known as the "material flow network" was adopted in FY2003. Since FY2004, the company has raised the level of environmental management by increasing the number of wastes undergoing thermal recycling and chemical substances being assessed. Aiming to create truly zero emissions plants, Komatsu will be considering improvements from even more diversified aspects in the years to come.

As a result, it was found that the manufacturing facility that was most effective in reducing its environmental impact in FY2006 was the Mooka Plant, which had implemented energy conversion. Concurrently carrying out energy conversion, the Oyama Plant succeeded in decreasing total environmental impact, especially its volume of CO₂ emissions, despite an increase in manufacturing volume. In FY2006 the Mooka Plant furthermore obtained the equivalent value added (manufacturing value) with the least integrated environmental impact, achieving efficiency roughly double that of the Awazu Plant. From these facts, it follows that the Mooka Plant is the "most environment-friendly plant" when expressed in quantitative terms.

Komatsu considers it important to continue evaluating the degree of conformance to environmental standards set based on time-serial data obtained by using the two indices of overall environmental impact improvement efficiency and overall environmental impact utilization efficiency. In addition, Komatsu has plans to introduce this concept to the Komatsu Group's manufacturing facilities both in and outside Japan in order to practice ecological business management on a consolidated basis.

**Approaches to Environmental Accounting**

Komatsu made an attempt to integrate the environmental impact of operations at each of its manufacturing facilities, associate the values obtained with environmental accounting, and use the two indices shown in the diagram below to evaluate the degree to which indices are being met for each of its manufacturing facilities.

**Comparison and Trend of EIP Improvement Rates/EIP Utilization Efficiency**

<table>
<thead>
<tr>
<th>Year</th>
<th>Awazu Plant</th>
<th>Osaka Plant</th>
<th>Oyama Plant</th>
<th>Mooka Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>10.0</td>
<td>16.1</td>
<td>9.9</td>
<td>12.3</td>
</tr>
<tr>
<td>2003</td>
<td>10.5</td>
<td>15.0</td>
<td>9.7</td>
<td>15.5</td>
</tr>
<tr>
<td>2004</td>
<td>11.0</td>
<td>15.5</td>
<td>8.6</td>
<td>16.5</td>
</tr>
<tr>
<td>2005</td>
<td>10.5</td>
<td>15.8</td>
<td>10.5</td>
<td>15.4</td>
</tr>
<tr>
<td>2006</td>
<td>10.5</td>
<td>15.7</td>
<td>10.6</td>
<td>21.1</td>
</tr>
</tbody>
</table>

EIP improvement rate: •Effect of environmental impact reduction in relation to cost (EIP/yen) for environmental conservation activities, enabling Komatsu to measure the extent of environmental impact reduction for each monetary unit of 1 yen for environmental conservation activities. •This enables the company to assess the effectiveness of environmental conservation activities.

EIP utilization efficiency: •Manufacturing value in relation to the degree of environmental impact improvement (EIP/yen), enabling Komatsu to measure the amount of monetary value added (manufacturing value) in relation to the degree of environmental impact. •This enables the company to assess the environmental impact utilization efficiency rate directly related to business activities.

Cost of environmental conservation activities: costs + investment amounts - depreciation amount EIP: Environmental Impact Point

**Environmental Effects**

<table>
<thead>
<tr>
<th>Environmental impact reduction effects</th>
<th>Economic benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items of environmental impact</td>
<td>Tangible benefits</td>
</tr>
<tr>
<td></td>
<td>Monetary value</td>
</tr>
<tr>
<td></td>
<td>(millions of yen)</td>
</tr>
<tr>
<td>CO₂ emissions</td>
<td>13,584</td>
</tr>
<tr>
<td></td>
<td>-11,567</td>
</tr>
<tr>
<td></td>
<td>-4.5</td>
</tr>
<tr>
<td></td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Water consumption</td>
<td>110,897</td>
</tr>
<tr>
<td></td>
<td>47,003</td>
</tr>
<tr>
<td></td>
<td>-2.0</td>
</tr>
<tr>
<td></td>
<td>-5.8</td>
</tr>
<tr>
<td>Waste materials generation</td>
<td>-2,985</td>
</tr>
<tr>
<td></td>
<td>9,227</td>
</tr>
<tr>
<td></td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>-9.4</td>
</tr>
</tbody>
</table>

*Figures are rounded off to the nearest million yen.

Note: Komatsu used statements instead of numeral figures to describe the “Avoidance benefits of environmental risks” and the “Contribution to profits.” The company will further develop concepts and ways to understand effects in these categories. The sales amounts of businesses for content presented in “Contributions to profits” in FY2006 are as follows:
- Mobile recycling equipment business: 11.4 billion yen
- Engine business: 80.3 billion yen (While sales of engines, the power source for construction equipment, are derived from Komatsu’s overall construction equipment business, the engine sales here indicate the total for intra-Group sales of engines from the Engine & Hydraulics Business Division, including both sales to companies not belonging to the Group and intra-company sales.)
- Reman business: 24.6 billion yen (Worldwide Reman business sales from April 2006 to March 2007)

**Effects on Society during the Product Use Stage**

<table>
<thead>
<tr>
<th>Environmental impact reduction effects</th>
<th>Tangible benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>•Environmental impact reduction from on-site recycling methods</td>
<td>Proceedings from mobile recycling equipment</td>
</tr>
<tr>
<td>•Environmental impact reduction from product operation</td>
<td>Proceedings from value added due to reduced environmental impact of products (engines)</td>
</tr>
<tr>
<td>•Waste components reduction resulting from Reman business</td>
<td>Proceedings from Reman business</td>
</tr>
</tbody>
</table>

*Concerning the effects on society derived from product use by customers, the major items of qualitative information are shown here as a reference.*
Providing Products and Services that Coexist with the Environment
Komatsu provides optimal environment-friendly solutions through its safe and innovative products and services.

**Environment & Economy**

Komatsu’s Environment and Economy means that it provides satisfactory solutions for both environmental impact reduction and economic efficiency through superior manufacturing technologies with Monozukuri. Developing environment-friendly products must be done at competitive cost. Otherwise, these products cannot establish a presence in the market and will not contribute to reducing environmental impact. In FY2006, Komatsu implemented Environment and Economy through the development of such products as:

- The WA600-6 wheel loader, PC128US-8 hydraulic excavator, and other construction and mining equipment compliant with Tier 3 emission standards, which became effective in 2006.
- Industrial machinery such as the large AC servomotor.
- Asbestos and lead.

These efforts resulted in increased user-friendliness as well as in reductions in CO₂ emissions.

**Reducing Environmental Impact of Products**

Responding to the heightening of environmental conservation awareness around the world, Komatsu has been redoubling its efforts from an early stage to reduce substances of environmental concern, such as asbestos and lead. In addition, in FY1999, using chemical substances banned under J apan’s Law Concerning the Examination and Regulation of Manufacture of Chemical Substances Control and developed countries’ regulations as a base, Komatsu stipulated its own list of substances banned from use and substances approved for use only in limited circumstances (see chart below) and began comprehensive control of substances of environmental concern. The company has implemented reductions in use for those substances approved for limited use in keeping with its medium-term targets for development of environmental technology.

Furthermore, in response to the enactment of the EU regulation concerning Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) in FY2007, Komatsu plans to review the list of substances approved for limited use and change the designation of certain substances to be “reduced” or “banned” as appropriate. Through cooperation with suppliers, the company is strengthening control of substances of environmental concern in products as well as engaging in the creation of a control system.

**Substances of Environmental Concern Banned or to Be Reduced for Use in Products**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number of substances</th>
<th>Name of substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banned</td>
<td>5</td>
<td>PCBs, Asbestos, Specified chlorofluorocarbons, Trichloroethylene, Triethanolamine</td>
</tr>
<tr>
<td>To be reduced (subject to limited use)</td>
<td>13</td>
<td>Mercury, Lead, Cadmium, Arsenic, Selenium, Chromium (VI), Hydrofluorocarbons, Vinyl chloride, Chloroprene rubber, Brominated flame retardants, Polycyclic aromatic hydrocarbons, Methanol, Hexachlorobenzene</td>
</tr>
</tbody>
</table>

**Life Cycle Assessment (LCA) Calculations**

As general guidelines for reduction of the environmental impact of construction and mining equipment, in FY1999 Komatsu set medium-term targets for development of environmental technology based on Life Cycle Assessment (LCA). The first step was the company’s target for FY2005, which all major equipment types except for hydraulic excavators have already attained. In addition to implementing horizontal development for other equipment types, the company is pushing ahead to its second step target for FY2010 by advancing the development of elemental technologies.

- The company is working to further decrease the amount of CO₂ emissions per unit of operations through the use of engines designed to meet Tier 4 emission standards, which will become effective in 2011.
- The company aims to reach its recyclability ratio target through the use of chlorine-free hoses and its reduction target for substances of environmental concern through the use of chromium (VI)-free and other options.

**Medium-term Targets for Development of Environmental Technology Based on LCA (Set in FY1999)**

<table>
<thead>
<tr>
<th>Category</th>
<th>FY2010 Target*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ emissions</td>
<td>-10%</td>
</tr>
<tr>
<td>Recyclability ratio</td>
<td>99.5% or more</td>
</tr>
<tr>
<td>Substances of environmental concern</td>
<td>-75%</td>
</tr>
</tbody>
</table>

*As compared with FY1998
Equipped with a new-model engine featuring ecot3, the latest diesel engine technology, the PC128/138US-8 meets Tier 3 emission standards, which became effective in 2006. Besides having an economy mode that emphasizes fuel efficiency, this vehicle boasts other functions to assist in conserving energy, including “ecogage” and cautions during idling. Clearing the noise standard in Japan, the strictest in the world, this machine is designed to take into account the surrounding environment during operations, thereby representing a step forward in environment-friendliness.

WA500/600-6 Wheel Loader

To make the WA500/600-6 a vehicle that is both environment- and operator-friendly, Komatsu considered from various angles what a loader should be and put that into concrete form. The vehicle is equipped with Komatsu’s leading-edge ecot3 diesel engine technology, putting it into compliance with Tier 3 emission standards, which became effective in 2006. This vehicle has also resulted in greater fuel efficiency during operation by coupling that engine with a large-capacity torque converter.

A 20% Increase in the Work Capacity per Unit of Fuel

The WA500/600-6 achieves energy savings during load and carry operations through the torque converter with lock-up transmission. Besides being able to travel within a job site, the excavated load can be transported as is, making it possible to reduce conventional dump truck usage. Moreover, improvements to the shape of the bucket make it easier to dig, resulting in an 11% improvement in loading efficiency compared to the previous model.

The combined result of these various energy saving technologies is that the work capacity per unit of fuel has increased tremendously, jumping 20%.

Life Cycle Assessment for the WA600-6

When a construction equipment model is changed, a Life Cycle Assessment (LCA) is conducted in order to manage the emissions volumes of CO2 and NOx. Through this process Komatsu is able to confirm that compared to the previous model, the WA600-6 has brought emissions reductions of approximately 27% and 34%, respectively.

LCA Provisional Calculations for the WA600-6

<table>
<thead>
<tr>
<th>Effect on environmental impact</th>
<th>Raw materials</th>
<th>Manufacturing</th>
<th>Operation</th>
<th>Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2*1 Previous model WA600-6</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOx*2 Previous model WA600-6</td>
<td></td>
<td></td>
<td>65.5</td>
<td></td>
</tr>
</tbody>
</table>

*1 For CO2, the LCA of the previous model is set as the index level of 100%.
*2 For NOx, a comparison of emissions volume is conducted, with the volume of the previous model indicated here as 100%.

Provisional Calculations of Total CO2 Emissions Reductions for Komatsu Construction Equipment in Operation in Japan

For most kinds of construction equipment, over 90% of the CO2 emitted over the course of their lifecycle is generated during the usage stage (see the graph entitled “LCA Provisional Calculations for the WA600-6”). That is why Komatsu has focused on improving fuel and operational efficiency in its construction equipment. The company has conducted provisional calculations for the volume of CO2 emissions reductions in the usage stage for Komatsu construction equipment operated in Japan compared to a fiscal 1990 base year.

Calculation Method

For all Komatsu construction vehicles currently in use in Japan (hydraulic excavators, wheel loaders, bulldozers, dump trucks, etc.), the volume of CO2 emissions reductions in the usage stage were calculated provisionally, assuming a transition from the FY1990 fuel consumption level to an improved level that is in compliance with Tier 3 emission standards, which became effective in 2006.

Assumptions for Making the Calculations

* The number of vehicles of Komatsu construction equipment in operation in Japan compared to a fiscal 1990 base year.
In recent years, even for forklifts, advances have rapidly emerged towards powering the vehicles with batteries so as not to release emissions. However, electric-powered vehicles have a number of shortcoming, such as short operating times between charges compared with engine-powered vehicles, decreasing power to the vehicle as battery energy is consumed, long recharging times, and difficulty in refilling the water.

To resolve these issues, in May 2005 Komatsu Utility Co., Ltd. launched electric hybrid forklift trucks that feature two systems for electrical power, with an electrical storage device known as a capacitor in addition to the conventional battery.

■ Saving Energy by up to 20%*

Taking advantage of its ability to efficiently store and release electrical energy in no time, a capacitor can quickly store the regenerative energy that is lost as heat in conventional electric-powered vehicles. The two systems for electrical power are selected automatically as the situation demands, reducing power consumption and thereby saving energy by up to 20%*. In addition, the output voltage is controlled so that even as battery power is consumed, the speed does not decrease, enabling the vehicle to maintain its powerful operating capacity.

Features of the Large 3000 ton AC Servo TR Press

• Through a free-motion mechanism, high-speed forming of processing-resistant materials (such as high-tensile steel) is possible.
• Touch speed to the die assembly can be reduced, resulting in a 20dB* decrease in noise.
• Utilization of the servo motor regenerating function leads to a substantial decrease in electrical energy used.
• The drive has been simplified wherever possible, leading to greater ease of maintenance.

*A 20dB decrease in noise means the acoustic pressure drops by 1/10 and the strength of the sound (sound energy) drops by 1/100.

Energy Savings through Electric Hybrids

Batteries cannot store significant amounts of regenerative energy, which then escapes as heat.

Electric hybrid system

Capacitor efficiently stores regenerative energy

Conventional system

Batteries cannot store significant amounts of regenerative energy, which then escapes as heat.

Development of a Large B-class AC Servo Press

Following on the development of a large A-class AC servo press in FY2005, Komatsu developed a large B-class AC servo press. As with the A-class model, the AC servo drive has resulted in enormous gains in energy conservation, resource conservation, and lowered noise and vibrations, to a degree that conventional mechanical presses have not been able to attain.

Development of a Large 3000 ton AC Servo TR Press

By replacing the drive and die cushion used in a conventional mechanical press with an AC servo drive, the world’s first large 3000 ton AC servo TR press achieved a substantial increase in production capacity of 1.2 times the capacity of previous Komatsu machines. This has made it possible to realize tremendous gains in energy conservation, resource conservation, and lowered noise and vibrations, to a degree that conventional mechanical presses have never attained.

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*A 20dB decrease in noise means the acoustic pressure drops by 1/10 and the strength of the sound (sound energy) drops by 1/100.
The Reman business consists of remaking used machine components of construction and mining equipment such as engines and transmissions into components of the same quality as newly-manufactured ones by various processes and supplying them to the market. The Komatsu Group is promoting the Reman business at Reman Centers located at seven of its operation bases around the world.

“Reman,” an abbreviation of “remanufacturing,” offers customers the following benefits.

- The same quality and performance as those of new components are guaranteed.
- The cost of a “remanned” component is lower than that of a new one.
- A proper level of inventory of “remanned” components permits reducing the idle time of construction equipment.
- The reuse and recycling of components helps save resources and reduce waste.

A new Reman company was established in Jakarta, Indonesia in January 2007 to provide “remanned” components globally. The Group will promote reuse and recycling activities in new regions for “remaning” operations as well as in existing regions.

This model, changed after a six-year interval, satisfies Tier 3 emission standards, which became effective in 2006, and features enhanced operability and ease of maintenance. Furthermore, the BR380J G has succeeded in strikingly improving its cost performance through innovative features such as the well-received fully automatic discharge setting adjustment system and a function to protect the hydraulic crusher.

In addition, this model features a sealed battery to eliminate the need to refill the water, the most burdensome task in battery maintenance. Moreover, with its motors entirely AC-powered and a reduced need for consumables and replacement parts, this vehicle pursues greater energy savings all around.

*Varies according to operating conditions
Environmental Conservation in Manufacturing Operations

Komatsu is advancing energy conservation to mitigate climate change as well as pursuing zero emissions by utilizing waste as resources.

Through a series of activities from manufacturing to logistics, Komatsu has been promoting measures designed to be industry-leading in the areas of climate change mitigation measures, activities for the efficient use of resources, and reductions of substances of environmental concern, in keeping with its medium- to long-term environmental planning. In particular, with regard to greenhouse gases, Komatsu has been concentrating on improvements in CO₂ emissions reductions. Despite increases in manufacturing volume, the company has succeeded in reducing emissions compared with the previous fiscal year.

From now, Komatsu will further improve the degree of environmental conservation across the company, including operations outside Japan, enhancing its approach as a truly global company. Komatsu will also continue to carry out its responsibilities to society as it promotes a Monozukuri (manufacturing competitiveness) revolution, with safety, environment, and compliance as major premises for the continuation of its operations.

Komatsu’s manufacturing operations generate environmental impact through “input” to manufacturing, including the use of electricity and other forms of energy as well as various forms of natural resources, such as water and raw materials, and also through “output” from manufacturing, including air emissions, waste materials, and effluent. Based on this understanding, Komatsu plants are aiming to minimize environmental impacts from both input and output and Komatsu is actively committed to implementing environmental conservation activities at its manufacturing facilities. In addition, Komatsu is expanding this way of thinking into Komatsu manufacturing activities around the globe, thus resulting in global and Group-wide environmental conservation activities.

Environmental Conservation in Manufacturing Operations

Mitigation of Climate Change (Energy conservation)

Basic Elements of Komatsu’s Efforts

In order to mitigate climate change, Komatsu has adopted as an indicator CO₂ emissions per unit of manufacturing value with regard to electricity, fuel gas, fuel oil, and any other type of energy used in its manufacturing operations. The company undertakes various activities to cut these CO₂ emissions with a target of achieving a 25% reduction by FY2010 from the FY1990 level. In FY2006, Komatsu has spread various improvements horizontally, guided primarily by the Energy Saving Working Group. As a result, CO₂ emissions per unit of manufacturing value have decreased by 27.3% compared to the FY1990 level, enabling Komatsu to meet its medium- to long-term objectives ahead of schedule.

Means for Further Improvement

As for energy conservation on the demand side, the manufacturing divisions are at the core of efforts undertaken for reductions in amounts of energy consumed and other areas, as depicted in the chart on the right. With Energy Saving Working Group activities, horizontal development among all business units is taking place. As for conservation on the supply side, the utility administrative divisions are the main focus of implementation, and significant effects have already been achieved, in particular as a result of successful attempts since FY2001 to introduce energy conservation equipment through Energy Service Company (ESCO*) operations. Moreover, in FY2006, Komatsu undertook several major improvements, including a fuel conversion to natural gas and a change from a cupola furnace to an electrical furnace.

Environmental Conservation in Manufacturing Operations

Three Major Targets

- Mitigation of climate change (energy conservation)
- Effective utilization of resources (zero emissions)
- Environmental risk management

Activities for Reducing Environmental Impact from Upstream and Downstream Operations

- Green procurement
- Environmental conservation in logistics
- Support for environmental activities at sales agencies and rental companies

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In tandem with reducing the volume of waste generated during manufacturing operations, Komatsu concentrates on zero emissions* activities to recycle waste materials.

From FY2006, Komatsu has established new medium-term targets and been undertaking activities to achieve it. The new targets are (1) continuing zero emissions and (2) achieving a 15% or more reduction by FY2010 in the volume of waste generated per unit of manufacturing value compared with the FY2005 level.

Komatsu has continued to achieve zero emissions through strict waste separation and utilization of waste material as valuables, resulting in a recycling ratio of over 99%. However, reduction in the volume of waste generated per unit of manufacturing value was 0.1% compared with the FY2005 level. While the company did not attain its single-year target of a 3% reduction compared with the previous fiscal year, it did achieve about a 30% reduction in the volume of waste generated per unit of manufacturing value regarding wood waste compared with the previous fiscal year. In particular, the Osaka Plant, Engine & Hydraulics Business Division Koriyama Plant, and the Komatsu Utility Kawagoe Plant reduced their usage volume around 30% on a unit basis compared with the previous fiscal year. As its next step, the company will pursue further improvements to attain its medium-term target.

*Komatsu defines “zero emissions” as a waste material recycling ratio of 99% or more.

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### Activities for the Effective Utilization of Resources

#### Waste

In tandem with reducing the volume of waste generated during manufacturing operations, Komatsu concentrates on zero emissions* activities to recycle waste materials.

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*Komatsu defines “zero emissions” as a waste material recycling ratio of 99% or more.

### Conserving Water Resources

Since FY2006 Komatsu Group manufacturing facilities in Japan have taken up a new medium-term target—achieving a 10% or more reduction by FY2010 in the volume of water used per unit of manufacturing value from the FY2005 level. By practicing reuse during processing and eliminating wasteful practices on a day-to-day basis, Komatsu reduced the volume by 11.3% compared with FY2005, reaching its FY2010 medium-term target in advance. In particular, the Osaka Plant, Engine & Hydraulics Business Division Koriyama Plant, and the Komatsu Utility Kawagoe Plant reduced their usage volume around 30% on a unit basis compared with the previous fiscal year. In the years to come Komatsu will make further attempts to reduce the volume of water resources used.
Environmental Risk Management

In order to minimize the environmental risk that accompanies manufacturing activities, Komatsu is committed to acting in strict compliance with the legal requirements of national and local authorities. In addition to thoroughly implementing pollution mitigation and prevention measures, Komatsu is making efforts to reduce the volume of chemical substances that it handles and uses.

Compliance and Pollution Mitigation and Prevention

Komatsu Group companies are responsible for positively implementing periodic reporting of results of environmental measurement and keeping of measurement data in strict compliance with the applicable laws and regulations of the national and local authorities. In FY2006, the Komatsu Group experienced no environmental infractions or accidents in Japan.

Improvement of Underground Tanks

The replacement of existing underground tanks with above-ground tanks, the doubling of their tank walls, and the consolidation of underground tanks were carried out according to a plan. All of the tanks in operation for 20 years or more (142 tanks) have already undergone improvements. In the future Komatsu will take measures to address in order of precedence underground tanks that newly pass the 20-year mark.

Renovation of Underground Tanks in Operation More Than 20 Years at Komatsu and the Komatsu Group’s Manufacturing Facilities in Japan

Management of PCB Wastes

Komatsu conducts proper storage and management of PCB wastes from transformers and other such items in accordance with Japan’s Law Concerning Special Measures Against PCB Waste and Waste Disposal and Public Cleansing Law. As of March 2007, the Komatsu Group as a whole was in possession of approximately 630 drums of PCB wastes.

Komatsu has commissioned the Kitakyushu Office of the Japan Environmental Safety Corporation (JESCO) to treat its PCB wastes since December 2004. However, starting with treatment of the Head Office’s PCB wastes in FY2008, Komatsu plans to arrange for early treatment in regional facilities.

Soil and Groundwater Contamination

The Earth Environment Committee has established guidelines for the investigation of soil and groundwater contamination in Japan. Namely, Komatsu investigates the condition of soil/groundwater contamination at business units that are planned to be sold, closed, or demolished and, if necessary, takes suitable measures under the supervision of the local authority concerned. In addition, Komatsu conducted soil contamination investigations at business units currently in operation to check for contamination by organic chlorine-based chemical compounds, which had in the past been used in cleaning solvents and other such items.

In FY2006, soil and groundwater investigations were conducted at five business units, including those where investigations were still underway at the end of FY2005. At one of these units no contamination surpassing the environmental quality standards for soil was detected, while three did have a higher concentration detected in certain parts of their premises. In FY2007, Komatsu will pursue these investigations to confirm the state of contamination and undertake necessary cleanup operations. Furthermore, the business unit at which contamination was detected in FY2005 has begun cleanup operations by excavating and removing the contaminated soil under the supervision of the local authorities, with cleanup expected to finish within FY2008.

Chemical Substance Control

The enforcement of the Pollutant Release and Transfer Register (PRTR) Law of Japan obligates industrial plants to, on an annual basis, keep track of the amounts of Class I specific chemical substances (for substances handled in quantities of 1 ton or more) released and transferred and file notice with the authorities. Komatsu has been supervising the management of all relevant substances, even when quantities handled are less than 1 ton.

Reduction of PRTR-related Substances

Among chemical substances subject to the PRTR, toluene, xylene, and ethylbenzene are the three substances making up almost 99% of the volume emitted by Komatsu and Komatsu Group manufacturing facilities in Japan. A breakdown of those emissions shows that most are released into the air. For some of these substances, Komatsu has been able to reduce its emissions volume through changing the constituent parts to those that have less impact on human health. However, due to an increase in the usage volume of paints as a result of substantially greater production volume, the volume emitted has continued to increase.

The Komatsu Group will continue to undertake initiatives to reduce the amount of environmental impact through improvements toward the proper control of such substances, mainly through the reduction of VOC releases (explained in greater detail later).

Komatsu’s Guidelines for the Control of Chemical Substances

In order to develop products that take the environment fully into account and reduce environmental risk, Komatsu is implementing comprehensive control in keeping with the Komatsu Guidelines for the Control of Chemical Substances. Based on the established criteria for risk assessment, Komatsu has classified chemical substances subject to supervision into the three ranked categories of prohibited substances: 1,414 types, substances to be reduced: 2,771 types, substances to be controlled properly: 1,200 types and is controlling the amounts of release and transfer of each individual chemical substance. At the end of FY2003, in order to implement these guidelines, Komatsu introduced a Chemical Substance Management System, including to its affiliated companies. Furthermore, in FY2004, by the use of this management system, Komatsu was able to improve its ability to prevent environmental pollution by assessing and addressing environmental impacts in advance.

In the context of forthcoming increases in manufacturing volume, how to achieve reductions in the volume of chemical substances handled and released will indeed be a critical issue.

Changes in the Amounts of PRTR-related Substances Released at Komatsu and the Komatsu Group’s Manufacturing Facilities in Japan

![Graph showing changes in the amounts of PRTR-related substances released](image-url)
**Reductions in Release of VOCs**

VOCs found in paints account for over 90% of the volume of chemical substances released by Komatsu. Significant reductions in VOC releases have already been achieved by changing the system for painting from a base coat/top coat dual-coat method to a system using single-coat paints that deliver the same performance through only one application.

However, as mentioned earlier, VOC releases continue to rise due to the significant increase in manufacturing volume. For that reason, Komatsu reformulated the target and created a revised plan based on concrete strategies coordinated with its action plan. The revised target now is to achieve reductions in VOC releases per unit of manufacturing value of over 20% and 50% by FY2008 and FY2010, respectively, compared with the FY2005 level. In the future the company will be thoroughly implementing revisions such as (1) conversion to high-solid type paints (to reduce the amount of VOCs contained therein), (2) increases in coating efficiency, (3) conversion to water-based paints, and (4) conversion to powder coatings.

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

*2 VOCs: Volatile Organic Compounds (primarily paint solvents)

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### Breakdown of the Amount of PRTR-related Substances Released and Transferred at Komatsu and the Komatsu Group's Manufacturing Facilities in Japan

- **Ethylene glycol**: 24.2%
- **Xylene**: 18.6%
- **Ethylbenzene**: 12.4%
- **Toluene**: 6.0%
- **Other**: 4.9%

**Note:** Substances handled in quantities of 1 ton or more

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### Names of Class I Specific Chemical Substances and the Volumes Released and Transferred (Handed volume of 1 ton or more)

<table>
<thead>
<tr>
<th>Number under the PRTR Law</th>
<th>Name</th>
<th>Volume handled</th>
<th>Volume released</th>
<th>Volume transferred</th>
<th>Chemically transformed or eliminated</th>
<th>Volume contained in products</th>
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*During chrome plating, chromium (VI) compounds become chromium compounds. Therefore, the volume transferred and the volume contained in products are listed under “chromium and chromium (III) compounds.”

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### Volume of VOCs Released by Komatsu and the Komatsu Group’s Manufacturing Facilities in Japan

- **Formaldehyde**: 9.5 tons
- **Benzene**: 7.6 tons
- **Ethylene glycol**: 2.1 tons
- **Methyl alcohol**: 1.9 tons

**Note:** Numbers are shown in tons (Unit: tons)
Activities for Reducing Environmental Impact from Upstream and Downstream Operations

Komatsu advances and supports the establishment of environmental management systems at its business associates and the implementation of safety and environmental activities at its sales agencies and rental companies. The company continually improves transport and packaging, aiming for greater efficiency in manufacturing and logistics by establishing new plants.

In procuring raw materials, components and parts, and indirect materials needed for manufacturing products, Komatsu adopts Green Procurement, the preferential purchasing of goods and products with low environmental impact.

In an integrated manner with its major business associates, the company proactively establishes environmental management systems and supports environmental management activities (control of chemical substances, reduction of VOCs, energy conservation, etc.) at its business associates.

In addition, Komatsu will prepare to create a Chemical Substance Management System to reduce the amount of substances of environmental concern.

Green Procurement

Supporting Active Efforts to Enhance Environmental Awareness

To enhance environmental management at its business associates, in July 2006 Komatsu established a Midori-kai Environment Committee (see P. 37), in which the procurement division takes the initiative and its major business associates in Japan serve as the committee members. In FY2006 the committee convened twice, with 59 persons from 58 companies participating. Komatsu and its business associates will further the activities of the Midori-kai Environment Committee on an ongoing basis in the years to come.

Promoting the Creation of Environmental Management Systems

Komatsu has been urging its major business associates to acquire certification in an environmental management system. Komatsu will strongly encourage the acquisition of ISO14001, Eco-stage, or equivalent environmental management system (EMS) certification by no later than 2008 for all of its major business associates in Japan.

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In addition, Komatsu will prepare to create a Chemical Substance Management System to reduce the amount of substances of environmental concern.

Environmental Conservation in Logistics

Founding New Plants

Ibaraki Plant

In January 2007, Komatsu’s Ibaraki Plant, which manufactures wheeled large construction and mining equipment, was founded immediately adjacent to the port of Hitachinaka in Ibaraki Prefecture, Japan. The new plant manufactures primarily dump trucks and wheel loaders for the market outside Japan, with over 90% exported around the world to North America, Europe, Asia and the Pacific, Africa, and Latin America. For reducing its CO2 emissions, this plant has greatly shortened shipping distances by ship loading and exporting products at the immediate neighbor, the port of Hitachinaka.

Furthermore, even for the large construction equipment produced at the Ibaraki Plant loaded onto ships and exported from Tokyo or Yokohama, Komatsu has launched exclusive-use inland shipping for large construction equipment between the Ibaraki Plant and the ports of Tokyo or Yokohama, resulting in CO2 emissions reductions through the modal shift from land-based transport in trailers. These innovations are expected to yield reductions in CO2 emissions by some 2,300 tons annually.

Moreover, the new plant is a model environment-friendly plant boasting eco-friendly features such as solar panels for energy conservation.
Support for Environmental Activities by Sales Agencies and Rental Companies

Komatsu is pursuing corporate social responsibility (CSR)-related activities that are guided by an emphasis on safety and the environment in the sales and service divisions as well.

Distribution of the Komatsu Group’s “Environmental Guidelines”
As one example of these activities, in April 2005, Komatsu distributed to the 33 sales agencies and 25 Group rental companies in Japan at the time “Environmental Guidelines: A Manual for Komatsu Sales Agencies and Rental Companies.” Using a Plan-Do-Check-Action (PDCA) approach in implementing the Environmental Guidelines, Komatsu encourages these agencies and companies to improve their environmental activities.

Promoting Active Efforts at Sales Agencies and Rental Companies
In order to steadily expand PDCA activities into its sales agencies and rental companies, Komatsu distributed “Environmental Guidelines: A Manual for Komatsu Sales Agencies and Rental Companies” to them in FY2005. In FY2006 the company visited 13 agencies and companies to hold sessions explaining the contents of the Environmental Guidelines and conducted checks on the environmental aspects of their sites, conditions, and equipment to give guidance directly on site and propose remedial actions when necessary. In addition, Komatsu provides support for them in safety and the environment, such as through safety promotion activities when industrial accidents occur at these agencies and companies and the distribution of a Safety and Environment Newsletter. As a result, an awareness of the environment has thoroughly permeated them and improvement in problematic areas has been seen.

As a next step, Komatsu will be preparing support for the sales agencies and rental companies already at a high level of environment-friendliness to enable them to advance to the next step, introducing an environmental management system.
Anti-personnel Landmines: A Semi-permanent Source of Terror

As conflicts broke out in various areas around the world, anti-personnel landmines came to be laid in enormous quantities. Many of them continue to be explosive semi-permanently even after peace is restored, giving rise to an estimated 20,000 victims annually, including ordinary people going about their daily lives and children playing in the fields.

The Ottawa Treaty entered into force in 1999 with a view to resolving this tragic situation. This convention comprehensively prohibits the use, stockpiling, production, and transfer of anti-personnel landmines. More than 150 nations, including Japan, are signatories. Momentum for the abolition of anti-personnel landmines has spread throughout Japan and the world.

Starting along the Path to Development

In 2002, the Japanese government announced its interpretation that demining machines for anti-personnel landmines are not a form of weapon. In the following year, Komatsu responded to a call for applications placed by the Ministry of Economy, Trade and Industry and the New Energy and Industrial Technology Development Organization (NEDO) and thus began developing demining machines for anti-personnel landmines.

The base of the machine utilizes a bulldozer with a chassis weight of some 27 tons. In addition to excellent reliability and durability, such a machine has the ability to cover rocky terrain, damp ground, and sloping land quickly and thereby clear even large areas effectively. Replacement parts are easy to obtain, and by changing the vehicle’s front attachment, the machine can also be used as a bulldozer for ground leveling operations. It can be used in road construction work and other operations in the future.

Moreover, this machine features the remote control technology for construction equipment already having practical application in disaster recovery areas. Through remote operation, the operator’s safety can be further enhanced.

Technology for Construction Equipment Utilized in Clearing Landmines

Development of a Demining Machine for Anti-personnel Landmines

It takes an inordinate amount of time to detect anti-personnel landmines manually and remove them with meticulous attention. For example, in Cambodia, where six million landmines are said to have been laid during the civil war, only approximately 350,000 had been cleared in the 15 years after the war ended (1992 to 2006, source: Cambodia Mine Action Centre). The eradication of landmines there has been calculated at requiring more than 240 years, which would mean that this task of removing landmines manually directly in front of the worker—an activity courting great danger—would continue until then.

However, if a machine is used it is possible to minimize the danger of accidents while dramatically hastening the speed at which the work can be performed. This machine—a demining machine for anti-personnel landmines—can crush or explode landmines buried near the surface by scratching at and pounding upon the ground. In many cases, such machines utilize a structure or function that is extremely similar to chasses or attachments for construction equipment.

It can be said that developing a demining machine for anti-personnel landmines that is efficient and has high levels of safety is an area for contributions to society in which the specialized technology and experience in manufacturing uniquely possessed by construction equipment manufacturers can be used to the greatest extent possible.

Sharing Proprietary Technologies with Humanitarian Activities

Atsushi Nagira
Group Manager, Market Development Dept., Construction & Mining Equipment Marketing Div.
Turning Minefields into Fields that Provide the Necessities of Life

Since many countries have now completely abolished anti-personnel landmines, demonstration testing of demining machines’ capabilities should take place in actual minefields. In Afghanistan since 2004, Komatsu has thoroughly tested the capabilities of the machines it has developed.

About 80% of Afghanistan’s land is arid and mountainous, and during the long period of conflict approximately ten million anti-personnel landmines are estimated to have been laid around the country. Furthermore, anti-tank landmines can be found in minefields in addition to anti-personnel landmines. Demining machines must be able to withstand even those more massive explosions and protect their occupants, and they must be able to extricate themselves from minefields safely. Tests to confirm the functionality and reliability of the vehicle were conducted repeatedly with great caution, also making use of remote operation.

Field tests began in Cambodia in 2006. The objective was to verify the machine’s capability to clear the terrain, which, unlike Afghanistan, features mud flats and areas covered with bushes. The results of the testing were that the Komatsu demining machine for anti-personnel landmines succeeded in demonstrating clearance capabilities of 500 square meters per hour on average. This is from 25 to over 50 times the speed of manual clearance (although this varies according to conditions during the clearance operations).

Operation of a demining machine for anti-personnel landmines for two to three days can produce one hectare of safe land. In Cambodia, converting that land into fields will enable two or three families to support themselves.

A Look to the Region

What is essential for safe and efficient anti-personnel landmine removal operations is not only the development of vehicles but also technical training of local operators of the equipment. In the spring of 2004, Komatsu invited people from landmine removal NGOs operating in Afghanistan to Japan for the first time and conducted technical training.

Interaction among people is enhanced around a single demining machine for anti-personnel landmines. In addition, through getting to know the countries now working towards reconstruction and interacting with the local people who so intensely support that reconstruction, a new consciousness has come about within Komatsu that it should assist those regions still more. Currently, Komatsu is considering new social contribution activities it should undertake towards areas suffering from landmines.

The First Machine Going into Service

The demining machine for anti-personnel landmines has had its capabilities and reliability thoroughly verified and is now complete. In August 2007, the vehicle is scheduled to be transferred to an NGO in Afghanistan through ODA funding from the Japanese government and commence actual landmine removal operations there.

With the specialized vehicle’s development, the unusually extensive verification process for capabilities and safety, the small number of vehicles required, and the selection of where the vehicles should ultimately be sent to maintain peace, the demining machine for anti-personnel landmines is not an area of operations that can generate profits. However, based on pride in knowing that its machines feature technology that helps people suffering from the legacy of conflicts, Komatsu believes that, as part of its corporate social responsibility, it must contribute to the world by making efforts to develop and provide demining machines for anti-personnel landmines.

Launching the development of the second and third demining machines for anti-personnel landmines would constitute a new challenge for Komatsu that would lead to new partnerships with countries, NGOs, and local peoples.

Even now in Afghanistan, my homeland, 60 people fall victim to landmines and unexploded ordnance daily, with 17% of victims being children between the ages of five and 15. Beyond the damage caused in human terms, the explosives still in the ground are a threat to all of the infrastructure a country requires in its reconstruction, including the provision of water and food and the health care and education necessary to lead a truly human existence. Until now, we have been manually removing landmines that were detected through dogs’ sense of smell. Using Komatsu’s demining machine for anti-personnel landmines, we will be able to remove landmines more safely and efficiently. I think we can achieve our goal of restoring an Afghanistan free of landmines and unexploded ordnance by 2013. For that, we are looking forward to Komatsu’s support for many years to come.

I am extremely grateful to the relevant organizations and people in Japan who have given us such support.

Shah Walli Ayubi
Executive Manager of Operation, Mine Detection and Dog Centre (MDC)
Communication with Company Stakeholders

Taking advantage of various opportunities for communication with stakeholders, Komatsu strengthens partnerships with them while also incorporating their views into business operations.

Komatsu has adopted the basic managerial approach that corporate value is the total sum of trust given to it by society and all corporate stakeholders. Activities in which the company communicates with its stakeholders are critical for increasing the sum of this trust. In communication with the people in the local communities as well as with shareholders and investors—stakeholders with whom I share a particularly deep relationship—it is increasingly important to share information regarding a greater breadth of areas, including non-economic indicators such as environmental efforts and social contribution activities which are necessary for a company's sustainable growth.

At Komatsu, a large variety of divisions have built relationships of trust with stakeholders from their unique perspectives. I believe that by having every division continually share information that is timely, accurate, and easy to understand, these partnerships will become increasingly solid.

Comms unication with Shareholders

Along with striving for high managerial transparency, Komatsu provides proper and timely information on business results through constructive approaches to investor relations (IR) both in and outside of Japan. On the same day that quarterly business results are announced, the company holds explanatory sessions in Japan for institutional investors and securities analysts and also releases this information as well as significant questions and responses on its website. Furthermore, for the benefit of institutional investors around the world, explanatory sessions are conducted two to three times annually, with primary focus given to the U.S., Europe, and Asia.

Shareholders’ Meetings

To furnish an opportunity to communicate with individual investors, Komatsu convenes shareholders’ meetings at two different locations in Japan each year, with top management explaining the company’s performance and management strategy.

Shareholders’ meetings were held in December 2006 in the cities of Oyama in Tochigi Prefecture and Sendai in Miyagi Prefecture with 315 and 165 shareholders attending, respectively. A wide range of questions was answered, covering such topics as forecasts for future performance, the dividend payout ratio, and social contribution activities. Since their launch in 1997, these meetings have been convened 23 times, with over 6,900 shareholders participating to date.

Further Information on Communication with Customers can be found in the section "Quality and Reliability" on page 8.

To reflect the views of shareholders and create a better relationship with them, Komatsu Ltd. enacted the following in FY2006.

Change in the Number of Shares Constituting One Investing Unit (Tangen)

In order to make it easier for investors to purchase shares in Komatsu Ltd., since August 1, 2006 the number of shares constituting one investing unit has been reduced from 1,000 shares to 100 shares.

Statements on Targeted and Actual Dividend Payout Ratios

Komatsu Ltd. has set a goal of a consolidated payout ratio of 20% or higher and is redoubling its efforts to provide stable dividends. Starting with the announcement of interim business results for the fiscal year ending March 2007, in order to further increase the transparency of the company’s dividend policy, the company has begun announcing in publicly released documents both basic policy for dividends and actual degree of attainment.
Information Disclosure on the Komatsu Website

Soon after their publication, Komatsu makes sales and profit gains reports, annual reports, the company fact book, financial statements, interim reports, reports on business operations, and various types of IR materials available on its website in a section titled “Investor Relations.” Beyond this, Komatsu broadcasts footage of interviews with the President and CEO on a quarterly basis to explain the company’s business activities in the words of top management in ways that are easy to understand. What’s more, every six months the website introduces the presentation materials and a spoken explanation regarding the announcement of consolidated business results.

● Komatsu “Investor Relations” website
http://www.komatsu.com/CompanyInfo/ir/

Communication with the Local Community

A company cannot continue to operate without a good relationship with the people in the local community. Each of Komatsu’s business units tries to harmonize its interests with the local community and make the company open to society as a responsible corporate citizen. In order for the community to gain a better understanding of its business activities, Komatsu’s manufacturing facilities in Japan assertively seek to bring representatives from the city and prefecture to tour each plant and participate in discussions. Besides this, the company regularly holds “open house” days at each manufacturing facility and “Kids’ Tours of Working Vehicles” at the Komatsu Techno Center in Izu, Shizuoka Prefecture (see P. 41, “Social Contributions,” for more detailed information).

Communication with Employees

At least once every six months, the company’s top management convenes a Meeting with the President at each business unit, at which top management explains the state of the company and future directions in its own words to all employees at the unit. These meetings are held immediately after the announcements of interim and term-end business results. In a question and answer session following the explanation, top management responds directly to questions from the employees. These meetings are also broadcast on the company’s Intranet in order to share the information with employees of the Komatsu Group around the world.

Communication with Business Associates and Sales Agents

Partnerships with business associates (suppliers) and sales agents (responsible for sales and service) form the foundation of the Komatsu Group’s business activities. Each division responsible for dealing with business partners constructively exchanges information with them in order to facilitate steady and stable relationships of trust.

Strengthening Partnerships with Business Associates

The Komatsu “Midori-kai” group, an association of the company’s suppliers in Japan, has 145 member companies, which supply roughly 70% of Komatsu’s total procurement in Japan.

Komatsu holds various events to foster communication with Midori-kai group members, convening general conferences, round-table discussions for managers, and New Year’s informal business functions. These three annual meetings are attended by representatives from each Midori-kai group company as well as Komatsu’s top management, making it possible for participants to interact and exchange views. Chinese and North American versions of the Midori-kai group were launched in 2007, and now some 90 companies outside Japan participate in total. As its next steps, Komatsu intends to establish an association of partner companies in Europe and strengthen global partnerships with business associates.

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Communication with Employees

To enhance Quality and Reliability in products and services (see P. 8), Komatsu and its subsidiaries in countries other than Japan must strengthen their teamwork with sales and service agents.

Every year, Komatsu convenes a distributors meeting in each country and region. Communication with these agents is deepened through the participation of Komatsu’s top management, or representatives of subsidiaries in countries other than Japan.

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In Cooperation with Employees

Komatsu endeavors to create a safe work environment that enables peace of mind by implementing measures to reduce risks in the workplace as well as establishing a personnel system that will accurately reflect the abilities and achievements of employees, who are an extremely important corporate asset.

Efforts regarding personnel and health and safety all have people—namely, Komatsu’s employees—as stakeholders. However, the beneficiaries are not only the employees themselves, but also their families and other relevant parties, with the effects reaching the local community.

The role of supervising personnel and health and safety can be summarized in a single phrase—specifically, ensuring a safe work environment that enables peace of mind. The company tries its utmost to furnish a workplace in which individual employees can be healthy in both body and spirit, energized in his or her work with a forward-looking attitude. I intend to fulfill my responsibilities completely, confirming anew that employees are treated fairly and that, with regard to health and safety, the creation of a safe work environment that enables peace of mind becomes possible, not through quick fixes but rather through a series of steady efforts with the participation of all employees.

Komatsu’s Relationship with Employees

Enhancing the Quality and Reliability of Employees

For a business, it is said that people, goods, money, information, and time are valuable assets and resources. Among these, even if the four elements other than “people” remain constant, if “people” are different, the results will be different. Therefore, “people”—the employees of Komatsu Group companies—are an irreplaceable asset for the Group. Komatsu recognizes the role of the personnel system in raising the quality and the reliability of the company’s human resources and endeavors to create a system by which it can provide a workplace with opportunities for both creative and challenging endeavors. The company works to maximize the sum of trust from its employees.

Basic Policy on Global Human Resources

Personnel systems reflect the history and the culture of each particular region, and it is therefore important to understand correctly and recognize those differences. At Komatsu, the fundamental principles common to all Komatsu Group companies for personnel systems are found in Komatsu’s Code of Worldwide Business Conduct as stated below. Each region uses these principles to create a personnel system that has a competitive edge compared with other companies.

1. The uniqueness, character, and privacy of individual employees shall be respected.
2. Employees shall be fairly appraised and treated. They will not be unjustly discriminated against for reason of nationality, race, religion, age, sex, or disability. Should any form of violation be discovered, such as sexual harassment or any other unlawful employment practices, it will be investigated and appropriate actions will be taken.
3. Komatsu will develop and implement personnel policies with a consideration for employees’ needs. Human resource policies and procedures shall be disclosed to the employees as fully as is appropriate.
4. In each region, the Komatsu Group will comply with the ordinances concerning the rights of employees. (Taken from Chapter 5 of Komatsu’s Code of Worldwide Business Conduct)

In addition to these principles, Komatsu also prohibits the use of child labor, which is a problem in certain regions around the world. Furthermore, during the hiring of new employees, Komatsu has set forth Komatsu’s Five Principles for Hiring in the same way, namely:

1. The company does not consider age or gender in hiring decisions.
2. The company does not consider national or regional origins in hiring decisions.
3. The company does not consider religious affiliation or beliefs in hiring decisions.

Personnel System that Reflects Accurately the Abilities and the Achievements of Employees

Typically in Japan, personnel systems are based on the assumption that employees will work for a single company for a long time. Therefore, during the designing of the system, a company must consider the degree to which the element of continued service should be reflected. In keeping with the view that personnel systems emphasizing length of service do not necessarily fairly reflect employees’ abilities and achievements, Komatsu has been accurately evaluating the achievements of individual employees for many years. It has also made great efforts to utilize a system that reflects employees’ achievements and abilities, considering the reflection of employee performance within the personnel system to be the basis for making fair evaluations of its employees.

Komatsu has undertaken a further strengthening of this approach since 2003 and revised its personnel system accordingly. The most significant revisions have been as follows.

Wages for Non-managerial Employees Calculated in Conjunction with Achievements and a Performance-based Grade System (2004)

Wages are now linked with improvements in employees’ working capabilities, and have been decoupled with continued service to the extent possible.

Salaries for Managers based on Managerial Duties (including the Abolition of the Qualification System) and Monetary Awards for Divisional Achievements (2003)

Salaries for managers are determined based on the importance of the positions held and the degree of responsibility carried. Moreover, insofar as competition among divisions contributes to a heightening of Komatsu’s overall competitiveness, performance of the division is also reflected in managers’ salaries. Since FY2006, this system was extended to non-managerial employees at the level of assistant manager.

Bonuses Awarded Based on Achievements (2004)

Bonuses as given in Japan are not an incentive as they are in other countries; instead, they are as a rule given to all employees. Through an agreement reached between labor and management, Komatsu has stipulated its bonus system as being connected to corporate performance, with the amount calculated based on a pre-determined formula.
In the spring of 2007, Komatsu opened the two-year Komatsu Training Institute in cooperation with Komatsu College in the city of Komatsu, Ishikawa Prefecture, Japan. Selected from among the Komatsu Group’s young employees, all students live in dormitories and master knowledge and technical capabilities in manufacturing technology, TQM, information systems, and communication skills needed for a workplace leader of the next generation. In the years to come, the college plans to accept students from Group suppliers as well.


This system for retirement allowances and pensions lies in between the defined-contribution system and the defined-benefit pension plan. Under this system, retirement allowances are not determined by years of continued service. Instead, they reflect the performance demonstrated in each fiscal year and the contributions made to the company.

Formulation of The KOMATSU Way and Extension of TQM Education Company-wide

As Komatsu has grown and developed, there has emerged a clear sense of what is quintessentially Komatsu-like—that is, what Komatsu enjoys as its strengths. The values and fundamental principles that support those strengths and the style by which the company puts them into practice were set down in writing as The KOMATSU Way in 2006. Komatsu has been doing its utmost to make it something shared by all Group companies, including those outside of Japan. The KOMATSU Way constitutes a continuation of the reform under which Quality and Reliability are pursued; emphasis on the importance of the individual workplace; and the ability to develop a principle quickly and completely and transfer it into practice. As a problem-solving method to support this ability to develop and apply a principle, Komatsu has for many years utilized Total Quality Management (TQM) and will develop it as an educational method, along with The KOMATSU Way, to be shared by all Group employees around the world.

Development of Human Resources Globally

Under The KOMATSU Way, recognizing anew that one of Komatsu’s vital strengths dwells in the development of human resources and the vitality of its employees, the company educates its employees globally to enhance their capabilities. Every manager at various positions assumes his or her serious responsibilities—for top management it involves being a good manager, and to non-managerial employees since 2001. The company has also set up a consultation office through which employees can express complaints and concerns.

Moreover, Komatsu is undertaking efforts to create a basis upon which employees can take on greater challenges. The public posting of personnel vacancies was introduced in 1986, with positions posted twice annually on a regular basis. Additionally, Komatsu is working to create well-developed educational programs both inside and outside the company, in which employees can participate voluntarily.

Further Enhancement of Diversity in the Workplace

Gender-equal Opportunity

Currently the number of women in managerial positions is low compared with the number of men, and Komatsu recognizes this as an issue to be addressed. In addition, the thorough realization of working conditions such as child-care leave and shorter working hours would contribute to an environment that facilitates productive careers, particularly for women. Through the revised labor agreement of 2003, Komatsu increased its flexibility in this area, allowing, for example, child-care leave to be taken for up to two years between the date of childbirth and the date on which the child enters nursery school (after reaching his or her first birthday) and shorter work hours for childrearing (no less than five hours per workday) from the child’s first birthday up to the March 31st immediately following the child’s fourth birthday. Komatsu will continue to enhance its efforts to create workplaces that take into account the needs of working mothers and parents.

Official Recognition in Japan as a Company that Supports the Fostering of the Next Generation

Komatsu continually formulates and implements action plans through which employees can pursue both their careers and child raising. In Japan, the company has attained its objectives by encouraging male employees to take child-rearing leave and establishing in October 2006 a web page viewable within the company that supports employees in pursuing both parenting and a career simultaneously. These activities were recognized by the Japanese Ministry of Health, Labour and Welfare and in 2007 Komatsu acquired the Ministry’s mark designating companies that assist in the growth of the next generation.

Creation of a Safe Work Environment that Enables Peace of Mind

In Japan, the company has attained its objectives by encouraging male employees to take child-rearing leave and establishing in October 2006 a web page viewable within the company that supports employees in pursuing both parenting and a career simultaneously. These activities were recognized by the Japanese Ministry of Health, Labour and Welfare and in 2007 Komatsu acquired the Ministry’s mark designating companies that assist in the growth of the next generation.
Employment of Persons with Disabilities

Insofar as the manufacturing division’s operations involve dealing with heavy objects, the hiring of persons with physical disabilities brings with it various challenges. Komatsu recognizes its hiring rate of persons with disabilities as warranting attention, and the company is determined to work to employ more disabled persons.

Health and Safety

Message from the Komatsu President Regarding Health and Safety

In June 2007, the Message from the Komatsu President Regarding Health and Safety was revised. President and CEO Kunio Noji delivered the message that, with a view to creating a company and workplace with no safety incidents or illness, all employees must make concerted and proactive efforts towards management of health and safety and respond to relevant issues in a prioritized and timely fashion. The major points of his address were as follows.

(1) The Komatsu Group shall, first of all, strive to “ensure a safe and comfortable work environment” and “maintain and promote employees’ health.”

(2) The Komatsu Group shall promote “proactive occupational safety and health activities” in order for all employees to achieve the above conditions by working together as one team.

(3) Each and every person in a senior management position of the Komatsu Group shall acknowledge as top priority tasks the above two matters and shall take the initiative in demonstrating the execution of daily duties accordingly.

Overview of Health and Safety System

The Komatsu Group is working towards thorough implementation of the system depicted in the chart below.

Overview of Health and Safety System

<table>
<thead>
<tr>
<th>Organization</th>
<th>Komatsu Head Office</th>
<th>Group companies and Komatsu divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Safety Administration Center (Centralized Group-level office)</td>
<td>Health and Safety Administration Center (Centralized Group-level office)</td>
<td>Plant managers, division head (managers supervising overall health and safety)</td>
</tr>
<tr>
<td>Human Resources Department (Centralized Group-level office with consultative services)</td>
<td>Human Resources Department (Centralized Group-level office with consultative services)</td>
<td>Division head supervising general affairs and human resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Section head supervising health and safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Managers supervising health and safety in each division, persons assigned to the promotion of health and safety, persons overseeing health and safety, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employees</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meetings</th>
<th>Group companies and Komatsu divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Health and Safety Committee</td>
<td>Group Health and Safety Committee</td>
</tr>
<tr>
<td>Group Safety Supervisor Meeting</td>
<td>Group Safety Supervisor Meeting</td>
</tr>
<tr>
<td>Group Safety and Health Conference</td>
<td>Group Safety and Health Conference</td>
</tr>
</tbody>
</table>

Workplace Safety

In FY2006 Komatsu launched Occupational Safety & Health Management Systems (OSHMSs) in its plants and began activities for introducing these systems. Furthermore, the company incorporated proactive activities to enhance safety using risk assessments into a push towards “zero accidents” in order to propel safety activities forward through the participation of all employees. In FY2007, while further promoting “zero accidents” efforts, the company intends to acquire OSHMS certification and firmly establish the system. In the years to come, Komatsu plans to spread these systems throughout the Komatsu Group, thereby eradicating work-related accidents throughout the Group.

Health Management

Management of Physical Health

In FY2006, in addition to the regular health checks given for years, Komatsu began taking steps to prevent lifestyle-related diseases in employees by conducting computer-based diagnostic interviews in order to assess daily lifestyle habits. In FY2007, medical checkups will be given to prevent metabolic illnesses.

Management of Mental Health

Over the years, the Komatsu Group has introduced mental health education and activities to enhance awareness along with counseling from mental health professionals and the Employee Assistance Program (EAP), which makes use of specialized external institutions, enabling employees and their families throughout the Group to find solutions to their concerns.

In FY2006, Komatsu introduced computer-based diagnoses of stress in order for workers to be more aware of themselves. In FY2007, the company will launch e-Learning that, based on the results of the stress diagnoses, will introduce areas of care that employees can perform on their own.

Incidence Rate of Work-related Accidents

Frequency rate of missed work

<table>
<thead>
<tr>
<th>Year</th>
<th>All industries</th>
<th>Komatsu (non-consolidated)</th>
<th>Construction and mining equipment manufacturing industry</th>
<th>Komatsu Group manufacturing facilities in Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>0.45</td>
<td>0.36</td>
<td>0.33</td>
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<tr>
<td>2003</td>
<td>0.40</td>
<td>0.33</td>
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<td>0.33</td>
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<tr>
<td>2004</td>
<td>0.43</td>
<td>0.43</td>
<td>0.43</td>
<td>0.43</td>
</tr>
<tr>
<td>2005</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.43</td>
</tr>
<tr>
<td>2006</td>
<td>0.78</td>
<td>0.78</td>
<td>0.78</td>
<td>0.78</td>
</tr>
</tbody>
</table>
Social Contributions

In order to bring about a rich society as it acts in harmony with people as a responsible corporate citizen, Komatsu has formulated five basic principles concerning social contributions and is taking action in three distinct areas.

Basic Stance on Social Contributions

Komatsu believes it essential for the Group not only to conduct business but also to contribute to society as it acts in harmony with society as a responsible corporate citizen. For that reason, as one part of fulfilling its corporate social responsibility, the Group as a whole is actively taking on social contribution efforts on a continuing basis.

Komatsu’s basic stance on social contributions (the purpose and the five basic principles concerning social contributions) is as follows.

**Purpose**
The Komatsu Group and its employees, as local community members, will contribute to society.

**Basic Principles**
Contributions shall be:
- Consistent
- In the public interest
- Voluntary
- Acceptable by employees
- Not aimed at advertisement

Major Areas of Activities

Komatsu’s main activities for social contributions are in the following three areas.
- Promotion of culture and education and development of the local community
- Promotion of sports
- Recovery from disasters and humanitarian assistance

Promotion of Culture and Education and Development of the Local Community

Support for the Flower Association of Japan

As one of its contributions to society, Komatsu has been supporting the Flower Association of Japan ever since its founding in 1962. Through its cultivation and nurture of cherry trees, the Association is helping create a beautiful natural environment and a rich society.

National Cherry Tree Symposium

Every year, the Flower Association of Japan holds the National Cherry Tree Symposium as a forum for the presentation of various research findings related to cherry trees. The 2007 Symposium was held on April 9–10 in the city of Iida, Nagano Prefecture in Japan, with some 800 people participating, including cherry tree researchers from around the country and representatives of local governments with notable sites for cherry blossom viewing. Topics included reports on the preservation of notable cherry blossom viewing sites as well as on activities to revitalize local tourism in which cherry blossom viewing was the main attraction.

Creating Local Communities Rich in Flowers

Activities to create local communities rich in flowers are grounded in the fundamental philosophy of having coexistence between the natural environment and human beings. Through the creation of a sound resource-recycling society and a living environment that is beautiful and comfortable, the Flower Association of Japan aims to raise the quality of life for local residents. The Association serves as the secretariat for the Competition of Japan in Bloom (sponsored by the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Land, Infrastructure and Transport), held in October every year, and over 1,200 entries are fielded annually.

Reinforcing Activities to Raise Awareness

The Flower Association of Japan dispatches speakers to workshops sponsored by local governments to boost projects to create notable sites for cherry blossom viewing and local communities rich in flowers. In FY2006, the Association released a CD-ROM that takes up the topic of creating popular cherry blossom viewing sites.

Releasing a CD-ROM

A CD-ROM was released to mark the 45th anniversary of the founding of the Flower Association of Japan. The Association created this CD-ROM to enable non-specialists to understand and take part in the creation of noteworthy sites for viewing cherry blossoms.

This CD-ROM introduces some 380 kinds of cherry trees and features simulations of growing cherry trees in a typical neighborhood. It also has a section in which viewers can come to understand revitalization techniques used at famous viewing locations in which cherry trees no longer have many blossoms. This CD-ROM presents an opportunity for viewers to enjoy deepening their knowledge about cherry trees while developing a greater interest in famous cherry blossom viewing sites nearby.

Support for Education and Learning

Industry-academia Tie-ups

Komatsu has entered into industry-academia tie-up agreements with four universities in Japan and China, namely Shandong University (China, 2003), Yokohama National University (Japan, 2004), The Graduate School of Engineering of Osaka University (Japan, 2005), and Kanazawa University Graduate School of Natural Science & Technology (Japan, 2005). In addition to pursuing leading-edge technology collaboratively, through partnerships with nearby Komatsu business units, Komatsu is assisting in returning some of outcomes of these activities to the local communities.

Creating Places Renowned for Their Cherry Trees

Ever since its founding, the Flower Association of Japan has endeavored to create beautiful local environments, focusing on the donation of some 2.2 million cherry tree saplings and the protection and management of established cherry trees. In a model undertaking launched in 2002 in order to leave for future generations notable venues for viewing cherry blossoms, the Association planted cherry tree saplings in seven places across Japan in cooperation with people from the local communities. Now, five years later, the Association is conducting surveys on how the trees in the model communities have fared and holds classes for the local residents on how to preserve and care for the trees. Through these activities, the Association is furthering the community-based creation of notable sites for cherry blossom viewing.

Support for the Flower Association of Japan

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Support for the Flower Association of Japan

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Dispatching of Lecturers to Universities and Engagement in Joint Research
Komatsu dispatches lecturers upon request to instruct university students in internal corporate technology development or corporate management. The company is also involved in joint research to pursue state-of-the-art or future-looking technologies, after discussing the intersection between Komatsu “needs” and university “seeds.”

Study Tours of Plants for Elementary and Junior High School Students
In response to requests for social studies-related study tours from local elementary and junior high schools, Komatsu conducts study tours of the plant and recycling operations and provides opportunities to ride construction equipment.

Promotion of Sports

■ Komatsu Women’s Judo Club
The Komatsu Women’s Judo Club was founded in April 1991 as part of the company’s 70th anniversary commemorative activities. Since that time the club has won the championship of the All Japan Company Judo Club Competition four times. Members of the club have also demonstrated a record of excellence in individual competitions both in and outside of Japan, winning the gold medal at the Athens Olympics in 2004, among other awards. The club gladly offers non-Japanese teams opportunities to wrestle with its members, thereby contributing to the spread and development of judo around the world.

■ Judo Lessons for Children
In addition to its regular practice, the Komatsu Women’s Judo Club offers lessons twice a week to support the growth of the next generation of athletes.

Humanitarian Assistance and Recovery from Disasters

■ Development of a Demining Machine for Anti-personnel Landmines
Making use of technologies developed for construction equipment, Komatsu has developed a vehicle that safely and efficiently removes dangerous anti-personnel landmines remaining in regions of conflict around the world. For further information, please refer to the “Special Story” on pages 34 and 35.

■ Recovery Assistance in Areas Impacted by Natural Disasters
Komatsu constructively involves itself in various efforts so that areas impacted by natural disasters can recover as early as possible. Beyond making monetary donations, the company donates or lends construction equipment and prefabricated houses necessary for rescue and recovery activities and dispatches personnel, among other activities.

Activities in FY2006

- Earthquake in Central Java (Indonesia, May 2006)
  1. Donated 10 million yen to the Japanese Red Cross Society
  2. Transported emergency relief supplies from Group companies in Indonesia
  3. Lent commercial vehicles from Indonesian subsidiaries and dispatched a rescue team

- Earthquake off the Noto Peninsula (Japan, March 2007)
  1. Donated 30 million yen to Ishikawa Prefecture
  2. Gathered volunteers from manufacturing units in Ishikawa Prefecture and dispatched them to the disaster area
  3. Provided prefabricated houses (facilities for psychological care) to the towns of Monzen and Anamizu

Business Units Open to the Public
In addition to opening up its gymnasium, field, tennis courts, and various other recreational facilities, Komatsu holds various events so as to foster harmony and feelings of coexistence with local communities.

“Open House” Day
Komatsu holds “open house” days at its business units on a regular basis, taking advantage of various events to enhance the local community’s understanding of its business operations.

Contributions to Local Communities

■ Kids’ Tour of Working Vehicles at the Komatsu Techno Center
Twice a year, the Komatsu Techno Center (Izu, Shizuoka Prefecture in Japan) holds a “Kids’ Tour of Working Vehicles,” which allows the children to come into direct contact with large construction equipment. Through this tour Komatsu aims to foster children’s dreams and furnish an opportunity for parents and children to play together, thereby encouraging deeper understanding towards construction equipment and Komatsu’s corporate ideal.
Social Contribution Activities around the World (FY2006)

Each of the Komatsu Group’s manufacturing facilities outside Japan carries out social contribution activities in keeping with the circumstances of their country and region.

The United States

Participating in the Windy City Rubber Ducky Derby
In July 2006, Komatsu America Corp. (KAC) invited athletes in the Special Olympics to the dedication ceremony for its new head office and encouraged others to participate in the Windy City Rubber Ducky Derby held nearby.

In the Rubber Ducky Derby, donors write their names on toy ducks that float down the river, with the ducks racing down the river to a collection point. Not only did KAC participate in the Derby, but also its employees took part as individuals, with approximately 600 rubber ducks from KAC entering the race held in August. The money donated to the Derby provides operating funds for the Special Olympics, which promotes sports for people with intellectual disabilities around the world.

Australia

Donating Construction Equipment to a Vocational Education and Training Program
Komatsu Australia Pty. Ltd. (KAL) cooperates with the Beacon Foundation, which provides vocational training to youth. In August 2006, KAL donated a skidsteer loader to the "Something Concrete" program, supported by this Foundation.

The Something Concrete program is a project assisting the people in the East Kimberley region of Australia’s northwest. By building homes, this program improves the residential environment while simultaneously increasing job opportunities. The donated skidsteer loader will be used to train five young people in construction for 12 months.

Indonesia

Expanding Wide-reaching Local Community Contribution Activities through a Fund
Upon launching a social contributions fund in 2005, PT Komatsu Indonesia Tbk (KI) has been expanding its activities under three major themes of contributions to the local community, a scholarship system, and natural disaster recovery. For contributions to the local community, KI supports occupational training in sewing skills and repair skills for automobiles and motorcycles. Through its scholarship program the company offered scholarships to 53 students in FY2006 and cooperated with a program to raise the quality of teachers. Furthermore, corresponding to an unusually large number of natural disasters occurring in Indonesia in FY2006, the fund provided emergency assistance supplies to victims of the eruption of volcano Mount Merapi and flooding in Jakarta as well as people affected by the earthquake in Central Java (see P. 42).

China

Creating a Social Contribution Fund for Sustaining Activities to Support Education
Komatsu Industries (Shanghai) Ltd. made a donation of 250,000 RMB (approx. 3.75 million yen) to Dangchang county in the inland Chinese province of Gansu to upgrade the schoolhouse of the “Komatsu Eight-year School of Hope” in Awu, Dangchang. In September 2006 a ceremony was held at the school to mark the completion of construction.

In order to further invigorate social contribution activities, in March 2007, Komatsu’s 11 Chinese subsidiaries established the Komatsu (China)’s Social Contributions Fund. With source capital contributed by the 11 subsidiaries and donated by their employees, the fund will make a donation of one million RMB (approx. 15 million yen) annually for the promotion of education and other social contribution activities in accordance with decisions of its governing board comprising representatives from each subsidiary.

South Africa

Continuing Employment Education for Women
Komatsu Southern Africa (Pty) Ltd. (KSAf) provides employment education to married women who are unable to find jobs so as to increase the economic stability of families in the nearby area. The "Komatsu Outreach Project" launched in 1984 features a program in which KSAf employees voluntary serve as trainers, giving instruction in handicrafts, cooking, and other skills. After completing this education, some students have gone on to open eateries and succeed in business. This project has been underway for 23 years, and KSAf intends to ensure that it never comes to end.
Environmental Data by Manufacturing Facility in Japan

**Overview**

<table>
<thead>
<tr>
<th>Manufacturing facility</th>
<th>Awazu Plant (established in 1921)</th>
<th>Osaka Plant (established in 1952)</th>
<th>Oyama Plant (established in 1962)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Komatsu, Ishikawa Prefecture</td>
<td>Hirakata, Osaka Prefecture</td>
<td>Oyama, Toshigi Prefecture</td>
</tr>
<tr>
<td>Main products</td>
<td>Small and medium builders, small hydraulic excavators, small and medium wheel loaders, large presses, armored vehicles, etc.</td>
<td>Large builders, midsize and large hydraulic excavators, mobile crushers/recyclers (crushers, soil stabilizers, tub grinders, etc.)</td>
<td>Engines for construction/industrial machinery, diesel generators, hydraulic equipment, excimer lasers, etc.</td>
</tr>
<tr>
<td>Site/building area</td>
<td>(1,000 m²)</td>
<td>554/157</td>
<td>463/83</td>
</tr>
<tr>
<td>Number of employees</td>
<td>3,873</td>
<td>2,785</td>
<td>2,700</td>
</tr>
<tr>
<td>Date of ISO14001 certification acquisition</td>
<td>September 1997</td>
<td>July 1997</td>
<td>May 1997</td>
</tr>
</tbody>
</table>

*The number of employees includes those working for Komatsu affiliates on the premises.

---

**Air**

<table>
<thead>
<tr>
<th>Item</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen oxides (NOx)</td>
<td>ppm</td>
<td></td>
<td></td>
<td>ppm</td>
<td></td>
<td></td>
<td>ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating furnace</td>
<td>180 3</td>
<td>110</td>
<td></td>
<td>Metal furnace</td>
<td>180 25.6</td>
<td>116</td>
<td></td>
<td>Gas turbine</td>
<td>70 20</td>
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<tr>
<td>Diesel engine</td>
<td>950 840</td>
<td>19.7</td>
<td></td>
<td>Paint drying furnace</td>
<td>230 7</td>
<td>173</td>
<td></td>
<td>Boiler</td>
<td>80 73</td>
</tr>
</tbody>
</table>

*Regulated values are in accordance with the Air Pollution Control Law and local regulations.

---

**Wastewater**

<table>
<thead>
<tr>
<th>Item</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>160 mg/l</td>
<td>25 6.2 1.1 2.9</td>
<td>25 17.3 5.3 10.9</td>
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</tr>
<tr>
<td>Suspended solids (SS)</td>
<td>200 mg/l</td>
<td>80 7.2 2.2 4.0</td>
<td>50 13.6 4.8 9.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur oxides (SOx)</td>
<td>— K-value regulation</td>
<td>1.744 0.006</td>
<td>K-value regulation</td>
<td>7.0 0.87</td>
<td></td>
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</tr>
<tr>
<td>Soot and dust</td>
<td>g/Nm³</td>
<td>0.3 0.004</td>
<td></td>
<td>0.03 0.003</td>
<td>0.1 0.035</td>
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</tr>
<tr>
<td>Copper</td>
<td>g/m³</td>
<td>3 0.7</td>
<td>3 0.2 0.4</td>
<td>5 1</td>
<td>1 ND 0.7</td>
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</tr>
<tr>
<td>Zinc</td>
<td>g/m³</td>
<td>2 0.4</td>
<td>2 0.13</td>
<td>2 0.08</td>
<td>ND 0.06</td>
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<tr>
<td>Nitrogen</td>
<td>120 mg/l</td>
<td>120 8 8</td>
<td></td>
<td>20 9.2</td>
<td>3.7 6.3</td>
<td></td>
</tr>
<tr>
<td>Phosphorus</td>
<td>16 mg/l</td>
<td>16 3.7</td>
<td>16 0.3 0.16 0.23</td>
<td>2 0.7</td>
<td>0.2 0.3</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.1 mg/l</td>
<td>0.1</td>
<td>0.01 ND ND ND 0.1</td>
<td>0.1 ND ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.1 mg/l</td>
<td>0.1</td>
<td>0.01 ND ND ND 0.1</td>
<td>0.1 ND ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>0.3 mg/l</td>
<td>0.03</td>
<td>0.02 ND ND ND 0.03</td>
<td>0.03 ND ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Dichloromethane</td>
<td>0.2 mg/l</td>
<td>0.2</td>
<td>0.02 ND ND ND 0.2</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>1,1,1-trichloroethane</td>
<td>3 mg/l</td>
<td>3</td>
<td>0.0018</td>
<td>1</td>
<td>0.0016</td>
<td>3 ND ND</td>
</tr>
</tbody>
</table>

*Regulated values are in accordance with the Air Pollution Control Law and local regulations.

---

**Environmental impact**

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual value</th>
<th>Item</th>
<th>Actual value</th>
<th>Item</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CO₂ emissions</td>
<td>59,011 t-CO₂</td>
<td>Total CO₂ emissions</td>
<td>37,329 t-CO₂</td>
<td>Total CO₂ emissions</td>
<td>78,756 t-CO₂</td>
</tr>
<tr>
<td>NOx total amount</td>
<td>121,955 kg</td>
<td>NOx total amount</td>
<td>3,024 kg</td>
<td>NOx total amount</td>
<td>16,997 kg</td>
</tr>
<tr>
<td>SO₂ total amount</td>
<td>6,605 kg</td>
<td>SO₂ total amount</td>
<td>1 kg</td>
<td>SO₂ total amount</td>
<td>96 kg</td>
</tr>
<tr>
<td>Total emissions of waste</td>
<td>2,793 t</td>
<td>Total emissions of waste</td>
<td>2,178 t</td>
<td>Total emissions of waste</td>
<td>6,704 t</td>
</tr>
<tr>
<td>Amount recycled</td>
<td>2,962 t</td>
<td>Amount recycled</td>
<td>2,178 t</td>
<td>Amount recycled</td>
<td>6,704 t</td>
</tr>
<tr>
<td>Recycling ratio</td>
<td>99 %</td>
<td>Recycling ratio</td>
<td>100 %</td>
<td>Recycling ratio</td>
<td>100 %</td>
</tr>
<tr>
<td>BOD emissions</td>
<td>21,915 kg</td>
<td>BOD emissions</td>
<td>275 kg</td>
<td>BOD emissions</td>
<td>6,205 kg</td>
</tr>
<tr>
<td>COD emissions</td>
<td>22,823 kg</td>
<td>COD emissions</td>
<td>418 kg</td>
<td>COD emissions</td>
<td>8,760 kg</td>
</tr>
<tr>
<td>Wastewater</td>
<td>2,894,441 m³/year</td>
<td>Wastewater</td>
<td>95,788 m³/year</td>
<td>Wastewater</td>
<td>568,800 m³/year</td>
</tr>
</tbody>
</table>

*Regulated values are in accordance with the Water Pollution Control Law and local regulations.

---

**Energy consumption**

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual consumption</th>
<th>Item</th>
<th>Actual consumption</th>
<th>Item</th>
<th>Actual consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>80,890 MWh</td>
<td>Electricity</td>
<td>78,514 MWh</td>
<td>Electricity</td>
<td>100,713 MWh</td>
</tr>
<tr>
<td>Heavy oil A</td>
<td>6,350 kl</td>
<td>Heavy oil A</td>
<td>0 kl</td>
<td>Heavy oil A</td>
<td>394 kl</td>
</tr>
<tr>
<td>Kerosene</td>
<td>25 kl</td>
<td>Kerosene</td>
<td>173 kl</td>
<td>Kerosene</td>
<td>5,192 kl</td>
</tr>
<tr>
<td>Light oil</td>
<td>1.741 kl</td>
<td>Light oil</td>
<td>0.3 kl</td>
<td>Light oil</td>
<td>3,398 kl</td>
</tr>
<tr>
<td>Total</td>
<td>1,224,175</td>
<td>Total</td>
<td>931,001</td>
<td>Total</td>
<td>1,672,341</td>
</tr>
</tbody>
</table>

*Data for the Awazu Plant include data for Komatsu Engineering (Awazu).
Koriyama Plant (established in 1995)  
Mooka Plant (established in 1971)  
Construction Equipment Electronics Division (established in 1968)  
Research Division (established in 1985)

<table>
<thead>
<tr>
<th>Koriyama, Fukushima Prefecture</th>
<th>Mooka, Tochigi Prefecture</th>
<th>Hiratsuka, Kanagawa Prefecture</th>
<th>Hiratsuka, Kanagawa Prefecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-value regulation 11.5 0.17</td>
<td>K-value regulation 8.0 1.85 r/ks</td>
<td>K-value regulation 11.5 0.58</td>
<td></td>
</tr>
<tr>
<td>Tempering (electric) furnace 0.2 0.003 r/ks</td>
<td>Boiler 0.3 0.004</td>
<td>Tempering (electric) furnace 0.2 0.003 r/ks</td>
<td>Boiler 0.3 0.004</td>
</tr>
<tr>
<td>Baking (electric) furnace 0.2 0.003 r/ks</td>
<td>Diesel engine 0.1 0.088</td>
<td>Baking (electric) furnace 0.2 0.003 r/ks</td>
<td>Diesel engine 0.1 0.088</td>
</tr>
<tr>
<td>Cogeneration engine 0.2 0.016</td>
<td>Cold/hot water generator 0.2 0.016</td>
<td>Cogeneration engine 0.2 0.016</td>
<td>Cold/hot water generator 0.2 0.016</td>
</tr>
</tbody>
</table>

### Table Data

<table>
<thead>
<tr>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Facility</th>
<th>Regulated value</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cogeneration engine</td>
<td>950 720</td>
<td></td>
<td>Boiler</td>
<td>180 84</td>
<td></td>
<td>N/A</td>
<td>—</td>
<td>—</td>
<td>Service generator</td>
<td>180 135</td>
<td>—</td>
</tr>
<tr>
<td>Diesel engine</td>
<td>950 610</td>
<td></td>
<td>Cold/hot water generator</td>
<td>134 45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-value regulation</td>
<td>11.5 0.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tempering (electric) furnace</td>
<td>8.0 1.85 r/ks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baking (electric) furnace</td>
<td>0.2 0.003 r/ks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cogeneration engine</td>
<td>0.2 0.016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Information

- **Wastewater**
  - **Koriyama Plant** 16,228 m³/year
  - **Mooka Plant** 17,992 m³/year
  - **Research Division** 17,992 m³/year

- **Total CO₂ emissions**
  - **Koriyama Plant** 13,435 t-CO₂
  - **Mooka Plant** 10,718 MWh
  - **Research Division** 5,164 MWh

- **SOx total amount**
  - **Koriyama Plant** 97,745 kg
  - **Mooka Plant** 94,264 kg
  - **Research Division** 648 kg

- **NOx total amount**
  - **Koriyama Plant** 1,044 kg
  - **Mooka Plant** 779 kg
  - **Research Division** 11 kg

- **Recycling ratio**
  - **Koriyama Plant** 100%
  - **Mooka Plant** 100%
  - **Research Division** 94%

- **BOD emissions**
  - **Koriyama Plant** 58 kg
  - **Mooka Plant** 83 kg
  - **Research Division** 24 kg

- **COD emissions**
  - **Koriyama Plant** 166 kg
  - **Mooka Plant** 291 kg
  - **Research Division** 291 kg

- **Wastewater**
  - **Koriyama Plant** 16,228 m³/year
  - **Mooka Plant** 17,992 m³/year
  - **Research Division** 5,434 m³/year

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual consumption</th>
<th>Converted to calorie equivalents (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>10,718 MWh</td>
<td>106,853 GJ</td>
</tr>
<tr>
<td>Oil</td>
<td>3,018 kℓ</td>
<td>118,004 GJ</td>
</tr>
<tr>
<td>Kerosene</td>
<td>0 kℓ</td>
<td>478 GJ</td>
</tr>
<tr>
<td>Light oil</td>
<td>0 kℓ</td>
<td>9,784 GJ</td>
</tr>
<tr>
<td>LPG, et al.</td>
<td>19,083</td>
<td>8,816 GJ</td>
</tr>
<tr>
<td>Total</td>
<td>243,941</td>
<td>51,694 GJ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual consumption</th>
<th>Converted to calorie equivalents (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>21,085 MWh</td>
<td>210,220 GJ</td>
</tr>
<tr>
<td>Oil</td>
<td>363 kℓ</td>
<td>14,201 GJ</td>
</tr>
<tr>
<td>Kerosene</td>
<td>0 kℓ</td>
<td>13 kJ</td>
</tr>
<tr>
<td>Light oil</td>
<td>256 kℓ</td>
<td>9,784 GJ</td>
</tr>
<tr>
<td>LPG, et al.</td>
<td>8,816</td>
<td>8,816 GJ</td>
</tr>
<tr>
<td>Total</td>
<td>243,499</td>
<td>51,694 GJ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual consumption</th>
<th>Converted to calorie equivalents (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>5,164 MWh</td>
<td>51,485 GJ</td>
</tr>
<tr>
<td>Heavy oil A</td>
<td>0 kℓ</td>
<td>0 GJ</td>
</tr>
<tr>
<td>Kerosene</td>
<td>0 kℓ</td>
<td>0 GJ</td>
</tr>
<tr>
<td>Light oil</td>
<td>29 kℓ</td>
<td>1,108 GJ</td>
</tr>
<tr>
<td>LPG, et al.</td>
<td>209</td>
<td>492 GJ</td>
</tr>
<tr>
<td>Total</td>
<td>52,456</td>
<td>52,456 GJ</td>
</tr>
</tbody>
</table>
## Environmental Data by Manufacturing Facility in Japan

### Overview

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>Oyama, Tochigi Prefecture</td>
<td></td>
<td>Himi, Toyama Prefecture</td>
</tr>
<tr>
<td><strong>Main products</strong></td>
<td>Forklift trucks, automated guided vehicles, automated warehouses, refrigerated warehouses, etc.</td>
<td>Mini construction equipment</td>
<td>Iron castings, steel castings, molds for casting, etc.</td>
</tr>
<tr>
<td><strong>Site/building area</strong></td>
<td>(1,000 m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of employees</strong></td>
<td>1,034</td>
<td>846</td>
<td>850</td>
</tr>
<tr>
<td><strong>Date of ISO14001 certification acquisition</strong></td>
<td>February 1998</td>
<td>J July 2002</td>
<td>J January 2000</td>
</tr>
</tbody>
</table>

*The number of employees includes those working for Kornatsu affiliates on the premises.

*Kornatsu Castex Ltd. is the successor company of the former Kornatsu Castex Ltd. established in 1952.

### Compliance Conditions to Major Regulations

- Regulated values are in accordance with the Water Pollution Control Law and local regulations. *ND (“not detected”) indicates a value below the lower limit of detection.
- ND is considered to be the lower limit of detection when calculating the average.
- Other items are confirmed to be below the regulated value.

### Air

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (NOx) ppm</td>
<td>—</td>
<td>7.0</td>
<td>1.59</td>
<td>K-value regulation</td>
<td>9.0</td>
<td>0.12</td>
<td>K-value regulation</td>
</tr>
<tr>
<td>Sulfur oxides (SOx) g/Nm³</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Soot and dust g/Nm³</td>
<td>—</td>
<td>0.004</td>
<td>0.004</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Wastewater

<table>
<thead>
<tr>
<th>Item</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
<th>Regulated value</th>
<th>Actual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>5.8–8.6</td>
<td>5.8–8.6</td>
<td>7.4</td>
<td>7.1</td>
<td>7.2</td>
<td>5.0–9.0</td>
</tr>
<tr>
<td>BOD</td>
<td>160 mg/l</td>
<td>160 mg/l</td>
<td>25</td>
<td>11</td>
<td>6.7</td>
<td>200</td>
</tr>
<tr>
<td>COD</td>
<td>160 mg/l</td>
<td>160 mg/l</td>
<td>25</td>
<td>12.4</td>
<td>4.9</td>
<td>200</td>
</tr>
<tr>
<td>Suspended solids (SS) 200 mg/l</td>
<td>200 mg/l</td>
<td>200</td>
<td>11.6</td>
<td>12</td>
<td>5.4</td>
<td>500</td>
</tr>
<tr>
<td>Mineral oils 5 mg/l</td>
<td>5 mg/l</td>
<td>5</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Copper 3 mg/l</td>
<td>3 mg/l</td>
<td>3</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>3</td>
</tr>
<tr>
<td>Zinc 2 mg/l</td>
<td>2 mg/l</td>
<td>2</td>
<td>0.12</td>
<td>ND</td>
<td>0.11</td>
<td>2</td>
</tr>
<tr>
<td>Nitrogen 120 mg/l</td>
<td>120 mg/l</td>
<td>20</td>
<td>6.5</td>
<td>3.3</td>
<td>3.0</td>
<td>240</td>
</tr>
<tr>
<td>Phosphorus 16 mg/l</td>
<td>16 mg/l</td>
<td>2</td>
<td>1.02</td>
<td>0.14</td>
<td>0.30</td>
<td>32</td>
</tr>
<tr>
<td>Cadmium 0.1 mg/l</td>
<td>0.1 mg/l</td>
<td>0.1</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.1</td>
</tr>
<tr>
<td>Lead 0.1 mg/l</td>
<td>0.1 mg/l</td>
<td>0.1</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.1</td>
</tr>
<tr>
<td>Chromium (VI) 0.5 mg/l</td>
<td>0.5 mg/l</td>
<td>0.5</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.5</td>
</tr>
<tr>
<td>Trichloroethylene 0.3 mg/l</td>
<td>0.3 mg/l</td>
<td>0.3</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.3</td>
</tr>
<tr>
<td>Tetrachloroethylene 0.1 mg/l</td>
<td>0.1 mg/l</td>
<td>0.1</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.1</td>
</tr>
<tr>
<td>Dichloromethane 0.2 mg/l</td>
<td>0.2 mg/l</td>
<td>0.2</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>0.2</td>
</tr>
<tr>
<td>1,1,1-trichloroethane 3 mg/l</td>
<td>3 mg/l</td>
<td>3</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>3</td>
</tr>
</tbody>
</table>

*Regulated values are in accordance with the Air Pollution Control Law and local regulations. *Regulated values of NOx, soot and dust are in accordance with self-regulatory measures, because these boilers are small.

### Environmental impact

- Refer to the Business Activities and Environmental Impact (P. 18) for details on the methods used to calculate amounts.
- Total emissions of waste are expressed as a composite of the amount recycled and the amount disposed.
- Recycle ratio is calculated by dividing the amount recycled by the amount generated.
- Total emissions of BOD and COD are calculated by multiplying the average concentration by the amount of wastewater.

### Energy consumption

*The heat energy conversion factor employs the Law concerning the Rational Use of Energy (Revised, entered into force April 2003).

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual consumption</th>
<th>Converted to calorie equivalents (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity 13,371 MWh</td>
<td>13,371</td>
<td>13,371</td>
</tr>
<tr>
<td>Heavy oil A 1,418 k</td>
<td>55,444</td>
<td>1,232 k</td>
</tr>
<tr>
<td>Kerosene 8 k</td>
<td>294</td>
<td>0 k</td>
</tr>
<tr>
<td>Light oil 123 k</td>
<td>4,695</td>
<td>235 k</td>
</tr>
<tr>
<td>LPG, et al. 21,771</td>
<td>14,386</td>
<td>LPG, et al. 105,069</td>
</tr>
</tbody>
</table>

Total 215,511 130,281 1,516,150
Overview of Komatsu's Environmental and Social Activities to Date

1962 - Continuous support of the Flower Association of Japan since its founding
1990 - Annual Directors' Caravan for Inter-office Communication (discussion sessions held when executive directors visit business units) launched
1991 - Clarification of Komatsu's corporate approach: change of company name in Japanese public relations to "Komatsu," adoption of new corporate brand logotype
- Earth Environment Committee established
1994 - Board of Statutory Auditors established
- First Environmental Report published
1997 - Compliance Department established
1998 - Ethics Committee established (renamed Compliance Committee in 2001)
- First edition of Komatsu's Code of Worldwide Business Conduct published
1999 - Executive Officer system established; Board of Directors reorganized (smaller Board; election of an external director)
- Compensation Council established
2000 - All four Komatsu manufacturing facilities acquire ISO14001 certification
- First Global Environmental Affairs Meeting convened
- Environmental Report again published; thereafter, published annually
2002 - All seven Komatsu Group manufacturing facilities in Japan acquire ISO14001 certification
- All four Komatsu manufacturing facilities attain zero emissions
- Environmental Affairs Department established
- Komatsu Earth Environment Charter revised
2003 - Corporate Social Responsibility Department established
2004 - Second Global Environmental Affairs Meeting convened
2005 - Environment-friendly construction equipment GALEO series put on the market, satisfying Tier 3 emission standards, which became effective that year
- Second Global Environmental Affairs Meeting convened
2006 - Third Global Safety and Environmental Affairs Meeting convened
- All manufacturing facilities in Japan attain zero emissions
- The KOMATSU Way explicitly defined and promotion activities launched
- Seventh edition of Komatsu’s Code of Worldwide Business Conduct published

External Commendations on Environmental Conservation and Social Activities and External Evaluations

May 2006
- Received Japan Construction Mechanization Association's 2006 Contribution Prize for development of ultra-low noise technology for large-scale construction equipment
- Received Toyo Keizai/Green Reporting Forum's Ninth Green Reporting Award
- Received Tohmatsu environmental rating of A (34 companies earning A or above)
- Received British Royal Society for the Prevention of Accidents Gold Award for Occupational Health and Safety (Komatsu UK Ltd.)

Jun. 2006
- Ranked 185th among 500 global corporations in Newsweek Japan's Global 500 survey; ranked 44th among 118 Japanese corporations

Sep. 2006
- Ranked 35th in Nikkei Keizai Shimbun newspaper's 2006 Nikkei Global 500
- Received Japanese public relations to “Komatsu,” adoption of new corporate brand logotype
- Komatsu Earth Environment Charter and Environmental Action Plan formulated

Oct. 2006
- Ranked 1st in Security Analysis Association of Japan’s 2006 Award for Excellence in Disclosure, Machinery Division
- Received Excellence Prize in IR Category in Nikkei Keizai Shimbun newspaper’s 55th Nikkei Advertising Awards

Dec. 2006
- Ranked 51st (Komatsu Ltd.), 82nd (Komatsu Zenoah Co.), and 232nd (Komatsu Forklift Co., Ltd.) among 541 manufacturers in Nikkei Keizai Shimbun newspaper’s Nikkei Environmental Management Ratings
- Received The Japan Machinery Federation's JMF Award for FY2006 (27th Award) for Energy-Conserving Machinery, for a bulldozer featuring a new-model blade and automatic transmission dozing for high fuel efficiency

Jan. 2007
- Ranked 1st in Nikkei Keizai Shimbun newspaper's Nikkei PRISM (Private Sector Multi Evaluation System) evaluation of top companies in Japan

Mar. 2007
- Ranked 31st among 61 companies appearing in Fortune magazine’s Global Admired Companies 2007 (Japanese companies category)

Komatsu Ltd. is included in the Socially Responsible Investing (SRI) indexes indicated to the right.
## Environmental Data by Manufacturing Facility outside Japan

### The Americas

<table>
<thead>
<tr>
<th>Manufacturing facilities</th>
<th>KAC</th>
<th>KMX</th>
<th>KDB</th>
<th>Hensley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chattanooga Manufacturing Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candiac Manufacturing Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peoria Manufacturing Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newberry Manufacturing Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>283</td>
<td>259</td>
<td>502</td>
<td>136</td>
</tr>
<tr>
<td>Date of ISO14001 certification acquisition</td>
<td>April 1998</td>
<td>October 1999</td>
<td>March 2002</td>
<td>March 2004</td>
</tr>
<tr>
<td>Electricity MWh</td>
<td>10.32</td>
<td>7.227</td>
<td>18.823</td>
<td>3.723</td>
</tr>
<tr>
<td>Heavy oil, light oil, et al. tLPG</td>
<td>554</td>
<td>--</td>
<td>109</td>
<td>--</td>
</tr>
<tr>
<td>Natural gas thousand m³</td>
<td>1.619</td>
<td>445</td>
<td>3.057</td>
<td>31</td>
</tr>
<tr>
<td>LPG, et al. t</td>
<td>LPG</td>
<td>28</td>
<td>LPG</td>
<td>29</td>
</tr>
<tr>
<td>Total energy consumption GJ</td>
<td>187,029</td>
<td>42,735</td>
<td>288,304</td>
<td>39,558</td>
</tr>
<tr>
<td>CO₂ t-CO₂</td>
<td>10.219</td>
<td>912</td>
<td>23,492</td>
<td>2,186</td>
</tr>
<tr>
<td>Water consumption t</td>
<td>16,763</td>
<td>5,649</td>
<td>50,747</td>
<td>447</td>
</tr>
<tr>
<td>Total emissions of waste t</td>
<td>2,440</td>
<td>1,382</td>
<td>4,214</td>
<td>115</td>
</tr>
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</table>

### Europe

<table>
<thead>
<tr>
<th>Manufacturing facilities</th>
<th>KUK</th>
<th>KDHAG</th>
<th>KMG</th>
<th>KUE</th>
<th>KFAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birtley, United Kingdom</td>
<td></td>
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<tr>
<td>Hannover, Germany</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Düsseldorf, Germany</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Este (PD), Italy</td>
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<tr>
<td>Umeå, Sweden</td>
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</tr>
<tr>
<td>Number of employees</td>
<td>449</td>
<td>475</td>
<td>391</td>
<td>628</td>
<td>368</td>
</tr>
<tr>
<td>Electricity MWh</td>
<td>10,307</td>
<td>8,373</td>
<td>6,930</td>
<td>5,395</td>
<td>2,820</td>
</tr>
<tr>
<td>Heavy oil, light oil, et al. tLPG</td>
<td>931</td>
<td>6</td>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>Natural gas thousand m³</td>
<td>1,580</td>
<td>937</td>
<td>1,416</td>
<td>808</td>
<td>--</td>
</tr>
<tr>
<td>LPG, et al. t</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total energy consumption GJ</td>
<td>182,189</td>
<td>115,500</td>
<td>117,342</td>
<td>67,187</td>
<td>12,122</td>
</tr>
<tr>
<td>CO₂ t-CO₂</td>
<td>9,179</td>
<td>6,627</td>
<td>6,661</td>
<td>4,538</td>
<td>136</td>
</tr>
<tr>
<td>Water consumption t</td>
<td>16,850</td>
<td>6,359</td>
<td>13,775</td>
<td>14,987</td>
<td>5,447</td>
</tr>
<tr>
<td>Total emissions of waste t</td>
<td>2,441</td>
<td>1,231</td>
<td>4,771</td>
<td>2,072</td>
<td>369</td>
</tr>
</tbody>
</table>

### Asia

<table>
<thead>
<tr>
<th>Manufacturing facilities</th>
<th>KI</th>
<th>BKC</th>
<th>LTK</th>
<th>KSC</th>
<th>KCCM</th>
<th>KCF</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Jakarta, Indonesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chonburi, Thailand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangalore, India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shandong, China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jiangsu, China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>703</td>
<td>252</td>
<td>663</td>
<td>390</td>
<td>207</td>
<td>279</td>
</tr>
<tr>
<td>Electricity MWh</td>
<td>41,535</td>
<td>5,048</td>
<td>8,152</td>
<td>6,838</td>
<td>2,204</td>
<td>22,006</td>
</tr>
<tr>
<td>Heavy oil, light oil, et al. tLPG</td>
<td>2,726</td>
<td>372</td>
<td>322</td>
<td>1,083</td>
<td>430</td>
<td>802</td>
</tr>
<tr>
<td>Natural gas thousand m³</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>LPG, et al. t</td>
<td>LPG</td>
<td>366</td>
<td>LPG</td>
<td>63</td>
<td>LPG</td>
<td>87</td>
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<tr>
<td>Total energy consumption GJ</td>
<td>521,279</td>
<td>71,676</td>
<td>105,505</td>
<td>77,039</td>
<td>36,821</td>
<td>519,781</td>
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<tr>
<td>CO₂ t-CO₂</td>
<td>30,853</td>
<td>4,910</td>
<td>6,575</td>
<td>5,963</td>
<td>2,737</td>
<td>42,602</td>
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<tr>
<td>Water consumption t</td>
<td>112,189</td>
<td>19,007</td>
<td>67,366</td>
<td>119,344</td>
<td>31,247</td>
<td>121,590</td>
</tr>
<tr>
<td>Total emissions of waste t</td>
<td>15,079</td>
<td>373</td>
<td>4,812</td>
<td>1,587</td>
<td>543</td>
<td>17,083</td>
</tr>
</tbody>
</table>

### Notes
1. All data, except the number of employees, were derived from performances of all manufacturing facilities during FY2006.
2. The number of employees was based on the companies’ data as of March 31, 2007.
3. Conversion to CO₂ and total energy consumption were based on statistical data of each region, country, and that of IEA for 2000.
4. Total emissions of waste are expressed as a composite of the amount recycled and the amount disposed.

Regarding the Independent Review

Komatsu views the independent review process as crucial for ensuring the integrity and objectivity of its Environmental & Social Report. For that reason, Komatsu has received an independent review from Tohmatsu Environmental Research Institute Ltd., a member of the Deloitte Touche Tohmatsu Group. The results are as represented below with regard to the information appearing in the Environmental & Social Report 2007.

http://www.teri.tohmatsu.co.jp/

Supplementary Explanation Regarding the Conducting of Independent Review Procedures

As a supplementary explanation, the following provides an overview of the review procedures conducted during an independent review.

1. Business units visited in this review:
   - Komatsu Ltd. Head Office
   - Oyama Plant
   - Mooka Plant

2. Visits to business units take place in a planned rotation. Records for business units not visited during this review were reviewed at the Komatsu Ltd. Head Office

Supplementary explanation regarding site visits to business units

1. Business units visited in this review:
   - Komatsu Ltd. Head Office
   - Oyama Plant
   - Mooka Plant

2. Visits to business units take place in a planned rotation. Records for business units not visited during this review were reviewed at the Komatsu Ltd. Head Office
Further information on Komatsu’s environmental and social activities can be found on the Komatsu website.

http://www.komatsu.com/CompanyInfo/csr/

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FAX: +81-3-3582-8332