The Mabuchi Group Social & Environmental Report 2009

MABUCHI MOTOR

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Period and Scope of the Report

Period:

Fiscal 2008

(January 1, 2008 - December 31, 2008)

Scope:

The Mabuchi Group*1

Activities covered:

Environmental and social contribution activities related to the design, manufacture, and sales of motors and provision of services

*1: "The Mabuchi Group" is ...

a collective term indicating the Mabuchi Motor's Head Office and the following overseas related companies (as of the end of December 2008).

- Mabuchi Industry Co., Ltd. (Hong Kong Mabuchi, Guangdong Mabuchi)
- Mabuchi Taiwan Co., Ltd. (Taiwan Mabuchi)
- Mabuchi Motor Taiwan Ltd. (Kaohsiung Mabuchi)
- Mabuchi Motor Dalian Ltd. (Dalian Mabuchi, Wafangdian Mabuchi)
- Mabuchi Motor (Jiangsu) Co., Ltd. (Jiangsu Mabuchi)
- Mabuchi Motor Vietnam Ltd. (Vietnam Mabuchi)
- Mabuchi Motor Danang Ltd. (Danang Mabuchi)

Editorial Policy

Since the first publication of the Environmental Report in fiscal 2001, we have strived to enhance its contents every year.

Likewise, we have made the following modifications and improvements to the current report:

- Information on Danang Mabuchi, an overseas related company in Vietnam, is included in accordance with its acquisition of ISO 14001 (environmental management system) certification in 2008.
- Information relating to social contribution activities is included since those activities are important obligations of our company.
- The report title has been changed to "The Social & Environmental Report" and the report is now comprised of two sections: the social report and the environmental report.

In consideration of the environment, this report is available from our website in PDF format and is not published in printed format.

We will further enhance our activities to meet your expectations. Your kind understanding is greatly appreciated.

[Cover] The cover photo shows the garden at the Head Office in Matsudo, Chiba Prefecture, pictured from the Head Office's rooftop. This garden was created to ensure coexistence with the community and to harmonize with the local landscape and the environment when the building was constructed in 2004. With a large biotope full of aquatic plants and insects, the garden is now a place of relaxation where you can enjoy songs of wild birds, lush greenery, and seasonal flowers.

Corporate Outline

Trade name:	Mabuchi Motor Co., Ltd.	Sales by application (fiscal 2008)
Established:	January 18, 1954	
Field of Operations:	Manufacture and sales of small electric motors	Optical and precision equipment
Capital:	20,700 million yen (as of December 31, 2008)	17%
Employees:	Head Office: 763 (as of December 31, 2008) Mabuchi Group: 41,328 (as of December 31, 2008)	Audio and visual equipment 17%
President:	Shinji Kamei	
Head Office:	430 Matsuhidai, Matsudo-shi, Chiba-ken, 270-2280 Japan Tel.: +81-47-710-1111	Home appliances, power tools, toys and others
Technology Center:	280 Ryufukuji, Motono-son, Inba-gun, Chiba-ken, 270-2393 Japan Tel.: +81-47-710-1222	Changes in consolidated net sales, consolidated operating income, and operating income ratio
		(Millions of yen) (%) 120,000 90,000 60,000 30,000 00,000

Message from the President



We have now completed making the Mabuchi Group's "Social & Environmental Report 2009," highlighting our social contribution and environmental activities in fiscal 2008. Please take a moment to discover what we achieved during the year.

<u>Recognizing the importance of CSR</u> (Corporate Social Responsibility)

The worldwide economic crisis that started with the bankruptcy of Lehman Brothers last year drove Japan and other developed countries to question the so-called market-first policy. Nevertheless, at the same time it gave us an opportunity to ask a simple question where do we find value in leading our lives on this planet. Looking back, I cannot help but feel that the current worldwide economic recession resulted from the fact that corporate evaluation measures deviated from companies' real role, namely, the pursuit of truly important CSR. This may have been because companies inclined too much toward placing importance on whether or not an investment target is worth investing in. CSR is a term denoting "guiding principles and associated activities enabling companies to make social contributions by utilizing their own strengths." As implied,

the real essence of CSR is to start acting with a determination to contribute to society through the business activities that a company specializes in. Therefore, we believe social contributions and environmental protection activities are an important part of CSR.

These days, as corporate globalization continues, the impacts of business activities are also expanding. On the other hand, inappropriate ways of conducting business are still being practiced. Against this backdrop, companies are now paying ever-greater attention to CSR.

To further strengthen our CSR activities, we in the Mabuchi Group will make sure the importance of those activities permeates to all Group companies once again, and promote their efficient and effective operations while concurrently communicating ongoing efforts to you. Our ultimate objective is to link those activities to the improvement of our corporate values.

Ongoing social contributions

There is an economist named Muhammad Yunus in Bangladesh who was awarded the Nobel Peace Prize in 2006.

With a strong aspiration to change the social structure in order to eliminate poverty from the world, he became the proponent of a completely new business model called "Social Business."

By establishing a bank called Grameen Bank, Yunus expanded his business model to poverty-afflicted rural areas in Bangladesh. Obtaining a loan from this bank, many formerly disadvantaged people were able to become independent business operators, proving that his business model is sustainable as an actual business.

Unlike a conventional corporate model aimed at maximizing profits, Social Business seeks to achieve social objectives such as eradicating poverty and conserving the environment, while retrieving invested money through business operations.

Those activities and the underlying concept highlight many important things that we should learn. It is as if they are signifying the *future direction* that companies should take.

Strengthening CSR activities

We in Mabuchi have contributed to the education of children through constructing school buildings and providing scholarships, mainly at our production bases in China and Vietnam. Our contributions over the years have been highly recognized in those countries, and we are proud of such recognition as the embodiment of our determination which is basically the same as that of Dr. Yunus.

However, social contributions of a company do not bear much fruit unless they are ongoing and lasting. Keeping this in mind, we will continue our activities well into the future.

Response to the Energy Conservation Act

With the revision of the Energy Conservation Act (Act on the Rational Use of Energy) last year, our company became a Type 2 designated business operator. We will make efforts to conform with this revision. Nevertheless, energy conservation activities at a company will not be completed by just introducing the latest energy efficient equipment into its factories.

Since the company's continuity is an unwavering prerequisite, we must derive some kind of qualitative improvements even from those activities. We believe the important thing is to continue improving by obtaining accurate data, identifying what is needed and what is wasteful, and verifying what we need to do.

Also, it is important to have the approach of doing so because it is the company's responsibility rather than *doing* so because it is the law. Born from this endeavor is the value for society, in other words, the significance of a company's continuity.

The Energy Conservation Act is effective only in Japan, but we will extend its fundamentals to our overseas factories and push forward with a concerted energy conservation effort in the entire Mabuchi Group.

We sincerely appreciate your greater understanding and continued support.

Basic Approach to Corporate Governance

The Mabuchi Group recognizes that the fulfillment of the mission stated in our Management Principle "Contributing to international society and continuously increasing our contribution" through our small DC motor business forms the very basis of our existence. Therefore, we consider it is essential for us to establish a corporate governance structure consisting of the following elements:

- Ensure that management decision-making and efficient business execution are clearly separated and the scope of responsibility is clear.
- (2) Build and operate a sound internal control system to establish an effective framework for checks and balances and management supervision.
- (3) Foster a corporate culture in which all Group directors and employees recognize that the implementation of compliance and adherence to corporate ethics form the basis of our organization, and are crucial to maintaining stakeholder trust and satisfying stakeholder expectations.
- (4) Disclose corporate management information to stakeholders in a fair, timely, and clear manner.

We will enrich various functions to ensure that these elements are duly implemented.

Establishment of a Structure and a System

The Mabuchi Group employs a system of corporate auditors in which corporate bodies, accounting auditors, and other organizations stipulated by the Companies Act fulfill their respective legal functions. In addition to these organizations, Mabuchi has independently established the Executive Committee, Internal Audit Department (internal audit division) and other organizations related



to business execution and internal control. With the participation of these organizations, we have established and are operating a Group-wide governance structure and system.

At each of our overseas related companies, we also conduct internal control through corporate bodies whose existence is required by the laws of the respective countries and through our internal organizations.

Through the Mabuchi Group Management Vision, we also share our corporate culture and values across the

world and are striving to improve our internal control functions throughout the Group by holding meetings for the management of overseas bases, holding Group-wide meetings, and having the Internal Audit Department conduct operational audits on overseas related companies.

Having established the Basic Policy on Internal Control, we are working to strengthen and enhance our risk management system and compliance system.

Corporate Governance Structure / (Internal Control) System

Compliance

Ethical Standard Pamphlet

To achieve our Management Principle "Contributing to international society and continuously increasing our contribution," we consider it is essential to observe laws, ordinances, and regulations in each country and region and to conduct business activities in accordance with corporate ethics required by society.



Ethical Standard Pamphlet

We have published a pamphlet called "Mabuchi Motor Ethical Standard" detailing the criteria for our conducts and judgments and distributed it to all directors and employees of our company.

We will update the first version of the ethical standard pamphlet, published in 2006, to adapt to the business environment that has changed with the times. We will also enrich the contents by including items for which social demand has increased since its publication. We will distribute the new version of the ethical standard pamphlet to all our employees in early 2009.

We have developed rules and procedures for the particularly important items in the ethical standard, and have been providing education and training to employees at various stages to familiarize them with those items.

In addition, we have established a mechanism allowing the internal audit department of the Head Office to conduct periodical and non-periodical audits on Group companies, including overseas related companies, concerning observance of compliance rules and procedures, unethical conducts, and other matters. This audit department then reports the results to top management. The internal audit department is also established in major overseas related companies and reports the results of compliance audits to the Head Office. Through these systems, we gather accurate and extensive internal information, enabling top management to take appropriate measures in a timely manner.

Ethical Standard Hotline

We have set up the Ethical Standard Hotline in the company to allow all employees to directly inform or consult with the internal audit department about compliance-related information under strict anonymity without using ordinary communication routes (senior managers or existing contact points of each division).

We have also delivered a top management message to all directors and employees promising that the company will never allow those who have consulted to be treated disadvantageously because of their consultation, regardless of whether or not they used the hotline, by following the Whistleblower Protection Act.

Our company is always striving to conduct honest and fair business with our customers and to build a relationship of trust with them. To address the current social situation in which social misconducts still occur frequently, we extended the operational range of the Ethical Standard Hotline, originally intended only for Mabuchi employees, to some of our customers beginning in 2008 with a view to preventing problems in advance and strengthening the misconduct prevention system.

Basic Policy of Ethical Standard (Outline)

(1) All the directors and employees of the Mabuchi Group will put more priority on observing laws, ordinances and rules in the countries and regions where our companies are located as well as international rules than on the profits and work of our companies.

(2) We will strictly refrain from conducts against social ethics by fully recognizing our responsibilities to various stakeholders, including shareholders, investors, and local communities.

(3) We will clearly describe particularly important items among laws, regulations and social ethics in such documents as in-house regulations and publicize them widely. All the directors and employees will observe those items sincerely.

Under the human resources development policy "People are the most important managerial resource. Realize human potential through work and teach people to become productive members of society," Mabuchi aims to cultivate socially and internationally minded persons that can contribute to not only our company but also society (including international society). We consider that contributing to the progress and development of international society through corporate activities forms the very basis of our existence.

Human Resources Development Program

Our company has instituted an early specialist-raising system in each division. It has been established to enhance professional education as a concerted effort of all divisions in order to create a learning atmosphere in the company and to improve employees' knowledge and technical levels.

Qualification Incentive System

We are promoting employees' self-development by establishing the Qualification Incentive System with a view to creating a self-learning atmosphere in the company and encouraging employees to acquire a wide range of knowledge useful for business operations.



Mabuchi Motor Education and Training System

Personnel Performance Evaluation System

Mabuchi's personnel performance evaluation system is a management tool aimed at mobilizing employees' abilities toward the overall business performance of the company, but we are also actively using it as the tool for developing human resources.

Our personnel performance evaluation system is designed to ensure the mutual growth of the company and employees by correctly identifying the contributions made by each employee, as they play a wide variety of roles toward maximizing the company's overall performance.

Believing that communication between superiors and subordinates is very important to correctly reflect the contributions of employees in their performance evaluation, we have introduced a system of mid-term and term-end in-person evaluation meetings to ensure close communication, in addition to routine communication through work.

Self-assessment System

Considering that (1) the right person in the right place and (2) the creation of a positive working atmosphere are very important in bringing out the best in each employee and making the best use of them, we have employees periodically carry out self-assessment to grasp their awareness of work and use the results to achieve these two elements.

We are striving to create a work environment that allows employees to maintain a good balance between work and private life.

Balancing Work and Life

A healthy work-life balance is defined as "A good balance between work and private life." We have instituted the following systems so that our employees can maintain a good work-life balance.

Adopting the Family-friendly Measures promoted by the Ministry of Health, Labour and Welfare (right), we have created an environment that allows our employees to balance their work with other aspects of their lives such as child-raising or nursing care. Also, in support of the activity *Declaration: We are Exciting Companies with Positive Employees!* that was started by the Chiba Prefectural Government based on a concept similar to the Family-friendly Measures, we were registered as a declared company in 2008.

Another of our efforts is our reemployment system after retirement, which we introduced in 2001 to create a work environment in which retired employees who so wish can work together with younger employees to pass on their accumulated experience and know-how.

Mabuchi's Family-friendly Measures (Outline)

- To support employees who need to balance their work and childcare, programs related to parental leave are set in place such as parental leave until their children become three years old, partial payment of salary, and support for self-improvement during parental leave.
- As the support for childcare, the following programs are introduced: Low-interest loans for fertility treatment, leave for childbirth by spouse (paid leave of five days), and discount coupons for babysitting services.
- 3. To help employees who do nursing care while working, several programs are introduced: Allowing nursing leave two times for one care-requiring condition, up to 365 days as a combined maximum, support for self-improvement during nursing leave, cutting of working hours and being exempt from overtime work, and discount coupons for nursing care services.

Using this system, many employees who have reached retirement age have come back to work.

In addition, we hold a garden party in the courtyard of the Head Office every fall, inviting not only employees but also their families and aiming to increase bonds and solidarity among all Mabuchi people.

Maintaining Mental and Physical Health

Mabuchi sets out the concept of "People are the most important managerial resource. Realize human potential through work and teach people to become productive members of society" as one of the Management Guidelines of the company. To achieve it, every employee should be healthy both physically and mentally.

In addition to regular health checks, we have been conducting mental health checks (with the cooperation of the Mental Health Research Institute of the Japan Productivity Center) since 1989, ahead of other companies, to keep our employees in a healthy mental condition.



The garden party in fiscal 2008 was held in the courtyard of the Head Office



Mabuchi Motor is actively conducting educational support activities to foster young engineers who will lead the next generation and to contribute to the development of science and technology, by providing an opportunity to experience the importance and amazement of manufacturing to a wide range of people including the youth.

Co-sponsoring Robot Contests

Mabuchi is co-sponsoring the National Technical College Robot Contest, the College Robot Contest and the ABU Robot Contest^{*1} every year by providing motors and funds for running the contests.

We are supporting these events to provide students not only in Japan but also around the world with an opportunity



National Technical College Robot Contest 2008 President Kamei presenting the Mabuchi Award

to experience the wonder and importance of manufacturing, hoping that it will produce many future engineers.



College Robot Contest 2008



ABU Robot Contest (Pune, India)

*1: ABU Robot Contest: A college robot contest started in 2002 by the Asia-Pacific Broadcasting Union (ABU) at the proposition of the Japan Broadcasting Corporation (NHK), where robots produced by college students in various countries compete in terms of their performance. **Permanent Exhibition at the Science Museum** Mabuchi has been presenting a permanent exhibition called Motors World at the Science Museum (Chiyodaku, Tokyo) to support scientific education for children. Targeting elementary school students, the basic mechanism of motors and handicrafts using motors are presented.



The Motors World corner at the Science Museum

Motorization Guide

We have published and distributed a pamphlet, called the Motorization Guide, showing how to make original handicrafts using motors. It is gaining popularity as an easy guide for children's handicraft-making activities using motors.

Workplace Experience for Pupils

Elementary school students in the community visited the Head Office to see an actual workplace as part of their career education at school.

We are cooperating in this educational activity as we agree with its purpose, which is to help children cultivate a view of work and career and consider their own life through the experience elements of actual society such as a workplace and coming into contact with working people.



Experiencing the Anechoic Room, a test room for conducting acoustic measurements on motors (Technology Center)



Experiencing the production of motor parts (the Head Office)



Mabuchi Handicraft Class

We have been offering a handicraft class for elementary school students at the Chiba Museum of Science and Industry (Ichikawa City, Chiba Prefecture) every year since 2005.

Knowing the recent trend in which children are moving away from science, we set up a project team to promote social contribution activities in June 2008 with a view to arousing the interest of children who will lead the next generation by showing them the fun of making things and the marvel of science and technology.

As its first activity, we held a Summer Handicraft Class for Parents and Children at the Head Office by inviting children (fourth- to six-graders of elementary school) in the community around the Head Office. Our employees served as instructors and helped the participating families to make various devices using motors and other materials.





Summer handicraft class for parents and children

School Construction and Scholarship by Dalian Mabuchi

Agreeing with the spirit of the Hope Project¹, Dalian Mabuchi has been supporting the construction of hope primary school buildings in the Dalian area since 1996.

1996: Supported the construction of Dalian Zhuanghe City, Duaogiao Mabuchi Hope Primary School.

2001: Supported the construction of Dalian Wafangdian City, Yantun Mabuchi Hope Primary School.

2002: Supported the construction of Dalian Pulandian City, Tongyi Mabuchi Hope Primary School.

2007: Supported the construction of Anshan City, Xiuvan County, Suzigou Town Mabuchi Hope Primary School

Also, since establishing a scholarship system in 1997. Dalian Mabuchi has been extending support to elementary, junior, and senior high school students, disabled students, and college students from disadvantaged families so that they can study hard and grow to become socially active people without worrying about financial burdens on their families.

- 1997: Established the Mabuchi Zhuanghe, Wafangdian, Pulandian, and Jinzhou high school scholarship.
- 2003: Established the Mabuchi Wafangdian, Laohutun Town elementary and junior high school scholarship.
- 2003: Established the Mabuchi Dalian Nationalities University scholarship.
- 2004: Established the Mabuchi Dalian Economic and Technical Development Zone physically disabled student scholarship.
- *1: Hope Project: Public service project in China launched by the China Youth Development Foundation in 1989. It aims to improve educational conditions in rural areas and financially support children not attending school (children who are unable to go to school because of poverty) through a private relief system (the funds are donations from private individuals).



Award ceremony of the Mabuchi scholarship at the Dalian Nationalities University



A commemorative photograph of Mabuchi high school scholarship recipients who are admitted to universities together with managers of Dalian Mabuchi

Scholarship System at Vietnam Mabuchi

Vietnam Mabuchi is providing a scholarship to the students of Dong Nai Secondary Technical School located in the same community.

The photograph shows General Manager of Vietnam Mabuchi awarding a scholarship to high-achieving recipients together with the director of the regional educational bureau and the principal of Dong Nai Secondary Technical School in November 2008





Awarding a scholarship to the recipients at Dong Nai Secondary Technical School (General Manager Kitahashi)

The Head Office and overseas related companies are continuously and positively participating in nature conservation activities in each community as volunteers to help improve the living environment of local people and protect nature.



Cleanup activity in the community around the company (Dalian Mabuchi)

Dalian Mabuchi's Volunteer Activities

Employees of Dalian Mabuchi have been conducting various volunteer activities since 1990, including cleaning up the streets around the company.

In 2006, they set up the Volunteer Association for Environmental Protection within Dalian Mabuchi. On holidays, association members carry out a variety of volunteer activities, ranging from cleaning streets to disseminating information about environmental protection to people living in areas around the company to the city center. Mabuchi Group companies have been participating in tree-planting activities in each community for many years to conserve the natural environment.



Employees of Guangdong Mabuchi working for nature conservation in their community as volunteers



General Manager Koide participating in a tree-planting activity (Kaohsiung Mabuchi)



Donated a cherry tree to a local primary school (Taiwan Mabuchi)

Mabuchi is positively cooperating in the restoration of areas affected by earthquakes, tsunamis, typhoons, and other natural disasters both in Japan and abroad.



Employees of an overseas related company donating money for the victims of China's Great Sichuan Earthquake (Guangdong Mabuchi)

Support for the Areas Affected by China's Great Sichuan Earthquake

A strong earthquake that measured 8.0 M occurred in Sichuan Province in China on May 12, 2008, causing tremendous damage to local areas.

To help relieve the affected people and restore the areas, Mabuchi donated 20 million yen in total as relief money. Employees of our Group companies also collected and sent donations and relief goods to the affected areas.

We also sent donations for the people afflicted by the cyclone that hit Myanmar around the same time.

In recognition of this support to disaster-stricken areas, Mabuchi was awarded a certificate of appreciation from the Japanese Red Cross Society in November 2008.



Employees of an overseas related company donating money for the victims of China's Great Sichuan Earthquake (Dalian Mabuchi)



A donation box placed at the Head Office for the victims of China's Great Sichuan Earthquake



A certificate of appreciation awarded from the Japanese Red Cross Society



Employees of an overseas related company sending clothing and bedclothing to the victims of China's Great Sichuan Earthquake (Guangdong Mabuchi)



Some of the relief goods sent by the Japanese Red Cross Society

Home Visit and Nursing Care Volunteer Activities

Mabuchi Group companies are participating in volunteer activities in each community, visiting homes of single elderly persons and assisting in nursing care at nursing homes for children and the elderly.



Periodically visiting a children's nursing home in the community (Guangdong Mabuchi)



Visiting a center for disabled children in the community (Vietnam Mabuchi)

Blood Donation Activities

Mabuchi Group companies are continuously cooperating in blood donation activities in each community as part of their contributions to society.

The Mabuchi Technology Center in Chiba Prefecture received a certificate of appreciation from Chiba Prefecture in fiscal 2008 for its continued cooperation in blood donation activities.



Blood donation by employees (Kaohsiung Mabuchi)



Blood donation by employees (Jiangsu Mabuchi)

Awards from Local Governments

In recognition of its CSR activities in China, Dalian Mabuchi was awarded the Golden Bee Award for Growing Enterprise in the 2007 Golden Bee CSR China Honor Roll which was announced at the 3rd International CSR Forum



hosted by China WTO Tribune in 2008.

Dalian Mabuchi was also recognized as one of the "Foreign-invested enterprises that are making excellent social contributions" by the Dalian municipal government in 2008.



General Manager Kokon receiving an award from the Dalian municipal government

Mabuchi considers environmental management as one of the most important themes of group management and is promoting the entire Group's environmental management activities by establishing an environmental management system with the Executive Managing Director as the Group's Environmental Management Representative.



Basic Environmental Policy

- 1. We shall establish an environmental management system for taking business activities in consideration of the environment of the earth, and continuously try to improve the system.
- 2. We will strictly observe legal regulations relating to environment and other requirements, and positively determine and control self-imposed regulations.
- 3. To make the best use of limited resources, we will positively make efforts in energy restriction, recycling and reduction in the amount of waste.
- 4. We will replace substances that cause a burden on the environment with substitutes.
- 5. We will positively conduct training and publicity activities to enhance the consciousness of the employees of environmental protection.
- 6. The Environment Policy will be penetrated to all employees and, if necessary, disclosed to the external parties concerned.

Environmental Managers Conference

The Environmental Managers Conference consisting of Environmental Managers from the Head Office and overseas related companies has been held annually since 2000.

A total of 29 Environmental Managers from the Head Office and overseas related companies attended the Mabuchi Group's 9th Environmental Managers Conference held at Dalian Mabuchi in September 2008.

At the conference, the Environmental Managers discussed how to completely eliminate use of environmental burden causing substances and strengthen the rigorous management system. They also exchanged opinions on the positive aspects of our business, or how we can create a new environmental value, under the theme of business-centered reforms.



The 9th Environmental Managers Conference (Dalian Mabuchi)

Acquisition of ISO 14001 Certification

The Mabuchi Group Head Office acquired certification of ISO 14001 international environmental management standard, in December 1999. This proved to be just the start, with overseas production bases acquiring this certification one after another thereafter, and all of Mabuchi's overseas production bases that were in existence at that time acquired the certification by 2001.

Since then, we have strived to ensure appropriate operation of the environmental management system and its continuous improvement by conducting periodic and renewal audits by an external certification body and internal audits within the Mabuchi Group.

In 2008, Danang Mabuchi in Vietnam newly acquired ISO 14001 certification.



Assessment for acquisition of ISO 14001 certification (Danang Mabuchi)

Mabuchi Group companies that have acquired ISO 14001 certification

Company name	Time of acquisition
The Head Office	12/2/1999
Hong Kong Mabuchi (including Guangdong Factory)	12/11/2000
Taiwan Mabuchi	12/6/2000
Kaohsiung Mabuchi	3/14/2000
Dalian Mabuchi (including Wafangdian Mabuchi)	8/17/2000
Jiangsu Mabuchi	8/10/2000
Vietnam Mabuchi	3/16/2001
Danang Mabuchi	7/21/2008

Environmental Education

Environmental protection activities at a company will not bear fruit unless each of its employees understands the company's environmental policy and recognizes the importance of protecting the global environment.

The reason why we are enforcing an environmental management system is not just to acquire and maintain a certification.

With a strong awareness that taking environmental responses is a mission of both individuals and companies, the entire Mabuchi Group is continuously conducing environmental education and training to enable actions on our own initiatives.



All our products are designed and manufactured while considering the aims of eliminating environmental burden causing substances, saving resources, and conserving energy.

Development of Environmentally Friendly Motors

In recent years, there have been increasing demands for automobiles and electrical equipment to not only have a high performance and be comfortable, but also to conserve energy and minimize burdens on the natural environment.

Today, with stricter regulations such as the ELV (End-of Life Vehicles) Directive for automobiles and the RoHS (Restriction of Hazardous Substances) Directive for electrical equipment, the use of heavy metals and endocrine-disrupting substances is restricted, and automobiles and electrical equipment need to be disposed of in a way that does not harm the environment. In the automobile field, manufacturers are striving to reduce the weight of automobile bodies to improve fuel efficiency and reduce CO_2 emissions.

It is said the fuel cost of ordinary automobiles powered by a gasoline engine and weighing 1.0 to 1.5 tons will decrease by about 1 km/L if they are made 100 kg lighter.

Small DC motors installed in automobiles and electrical equipment are no exception.

Mabuchi is endeavoring to develop earth-friendly products for our future while strictly observing laws and regulations.

About 50 to 70 motors are built into a single automobile today. Although small motors account for only about 1% of the total weight of an automobile body, we are striving to produce smaller, lighter, and more efficient motors to help reduce fuel costs and cut back on CO_2 emissions.

Our third-generation power window motors, the GA Series, were put on the market in 2007. They were born from our efforts for lighter motors that began from the initial development stage. As a result, we achieved a weight reduction of 10% compared with the second-generation PW Series, and of 20% compared with the first generation 578 Series.

Mabuchi has been offering products in compliance with the ELV Directive and the RoHS Directive since 2006.

As declared in one of our basic environmental policies, "To make the best use of limited resources, we will positively make efforts in energy restriction, recycling and reduction in the amount of waste," we will continue to make efforts to produce more compact, lightweight, and efficient motors by completely eliminating environmental burden causing substances.



Environmental Report

Technology to Eliminate the Need to Clean Parts

Since 2000, we at Mabuchi have been working to completely eliminate the use of chemical substances which are harmful to the global environment and human health, and we are now shifting to the use of an alternative solvent (hydrocarbon-based solvent) with a low environmental burden.

In conjunction with this, we also pushed forward with R&D toward eliminating the parts cleaning process itself and started to introduce this technology into the parts manufacturing process in stages beginning in 2006. At present, about 70% of all parts are manufactured without the cleaning process.

We will further promote R&D to completely eliminate the cleaning process from the manufacturing processes of all parts.





Example of motor parts with no need for cleaning

Reduction in Compressed Air Usage

Mabuchi is endeavoring to optimize the energy efficiency of the production equipment by focusing on LCA (life cycle assessment).

Resources used to power equipment can broadly be divided into electricity and air. It is said that pneumatic equipment, which is driven by compressed air from a compressor, is less efficient than electrical equipment which is driven by energy directly converted from electricity.

As the first step toward reducing the amount of compressed air used, we began trying to change some of the air cylinders, which had been heavily used, to electric cylinders and also trying to reduce the loss of air during pneumatic equipment operation. In 2008, we developed some production equipment including a servo press and an automatic guiding bonder that was of a combined electric and air cylinder type.



An electric servo press

We at the Mabuchi Group have set in place various systems to manage chemical substances contained in our products. The Green Procurement System ensures that we do not include environmental burden causing substances in our products.

Efforts for Green Procurement

By setting our own special evaluation criteria in addition to laws, regulations, and customers' requests, Mabuchi confirms that environmentally prohibited substances designated in those standards are not included in the procured materials. To confirm this, we made it a rule that suppliers must submit the following documents certifying that environmentally prohibited substances are not contained in their parts and materials, while also submitting an environmental activity survey sheet.

When selecting suppliers, we evaluate each supplier's environmental conservation activities by adding the Environment (E) to the conventional evaluation factors of Quality (Q), Cost (C), and Delivery (D).

In 2008, we conducted audits on our suppliers concerning the management of environmental burden causing substances, including conformance to the REACH regulation. Our green procurement system has been enhanced with this kind of environmental assurance system which ensures proper management of chemicals in our supply chain.

We will continue to promote green procurement so that we can manufacture environmentally friendly motors satisfying the world's environmental demands ahead of the times.



Conducting an audit of a supplier in Guangdong Province in China (Guangdong Mabuchi)



Global warming is a worldwide issue and Mabuchi is continuously taking various measures toward resolving this immense issue.

Activities to Reduce CO₂ Emissions

Global warming is an issue to be tackled on a global scale. As an organization with production bases around the world, the Mabuchi Group considers it a serious issue and is now striving to reduce CO_2 emissions as a concerted effort of the entire Group.

The Head Office achieved a 1.1% year-on-year reduction in CO_2 emissions in fiscal 2007, and it continued to make efforts for CO_2 reductions in fiscal 2008 by taking the following measures:

- O Participating in the Cool Biz campaign in June through September 2008
- Changing air cooling sources from gas, which emits a large amount of CO₂, to electricity
- O Making detailed adjustments to air conditioning sources and their operation
- O Switching off lighting when even away from the workplace

As a result of these efforts, the Head Office reduced CO_2 emissions (electricity and gas) by more than 88 tons (-2.4%) in 2008 compared with the amounts in 2007.

We also carried out the following activities for enlightenment:

- O Participation in the Team Minus 6% CO₂ reduction campaign
- O Posting monthly CO₂ emissions data in the office
- Publishing articles on how to reduce CO₂ at home and Eco-drive in the company newsletter
- O Promoting the Light Down campaign, scheduled to run at the same time as the G8 Toya-ko Summit

These activities, conducted in a Visible to Everyone manner, helped increase the environmental awareness of Mabuchi employees.

We also carried out a special campaign at the garden party for employees and their families held in October 2008 under the slogan of "Let's reduce 1 kg CO_2 per person per day!" This was intended to reduce CO_2 emissions in cooperation with households (Photo).



To reduce CO_2 emissions, Dalian Mabuchi replaced 2,905 sets of conventional fluorescent lamps with energy-saving type LTD slim lamps. As a result, the electrical usage decreased from 40 W to 28 W per set, achieving a total reduction of 166,000 kWh in electrical usage in 2008. This is equivalent to an annual reduction of about 103 t-CO₂.



The campaign called "Let's reduce 1 kg CO₂ per person per day!"

Energy-saving type fluorescent lamp (Dalian Mabuchi)



Mabuchi Motor Co., Ltd. Social & Environmental Report 2009

Reduction in Resources Usage

We are actively striving to reduce the usage of natural resources.

Efforts to reduce the usage of water resources

Shafts used for the transmission of motor power are chamfered to various shapes to fit each application and required performance. As a chamfering method, we are using a processing method called the barreling method, which consumes a large amount of water.

To save water resources, Mabuchi started to develop a water-saving method in this process and succeeded in developing one that can recycle wastewater using a settling tank in 2008.

Adopting this, the Guangdong Factory in China reduced its water usage from 84 tons a month to 28 tons as an actually measured value, achieving a 66.7% reduction in the usage of tap water.

We will further endeavor to effectively use energy and natural resources in accordance with the basic environmental policy of the Mabuchi Group.



Settling tank for recycling wastewater



Sustainable Architecture Prize Awarded

Mabuchi's Head Office building was awarded the Minister of Land, Infrastructure, Transport and Tourism Prize at the 2nd Sustainable Architecture Prize^{*1} presentation sponsored by the Institute for Building Environment and Energy Conservation (IBEC). Our Head Office building was awarded the prize as an architecturally excellent structure and as a building that achieved a significant environmental burden reduction and energy conservation effect with the potential of a ripple effect through the joint efforts of the owner, designer, and contractor.

*1: Sustainable Architecture Prize: A prize established to recognize building structures that seek to realize a sustainable society by acknowledging the value of the environment and by reducing environmental loads and consumption of resources while maintaining a comfort-able living environment.



Awarded the Minister of Land, Infrastructure, Transport and Tourism Prize at the 2nd Sustainable Architecture Prize* presentation (Tokyo, Feb. 19, 2008)



Mabuchi Motor's Matsudo Head Office building which was awarded the Sustainable Architecture Prize

We are striving to reduce landfill waste (zero emissions) by recovering and reusing (recycling) waste as resources.

Reducing and Recycling Waste

Mabuchi is promoting an activity to minimize waste shipped for incineration and landfill by recovering and recycling waste as resources in order to achieve zero emissions.

As part of this effort, each Group company is surveying and analyzing the cause, frequency, and amount of waste generation and establishing a flow of waste treatment with the help of waste recyclers so as to reduce the amount of waste passed on for incineration and landfill. Kaohsiung Mabuchi received the Excellent Resources Recovery Award from the Export Processing Zone Administration, the Ministry of Economic Affairs (MOEA) of Taiwan in 2008 in recognition of its continuous efforts and achievements in waste recycling.

Furthermore, at the Head Office, environmental activity promoters appointed in each department and cleaning and maintenance staff are jointly conducting waste inspections to monitor whether separable waste is being put into each proper container or waste is being inappropriately dumped. If waste-related problems are found, quick remedies or exhaustive instructions are provided to prevent their recurrence.



Awarded the Excellent Resources Recovery Award from the Ministry of Economic Affairs (MOEA) of Taiwan (Kaohsiung Mabuchi)





Excellent Resources Recovery Award

We are actively promoting environmental communication activities both inside and outside the company.

Environmental Education via Intranet

We conducted the confirmation test of environmental education on all employees at the Head Office utilizing the e-learning system, provided through the company's computer network.

Conventional environmental education, mostly given by assembling employees in one place, had a number of problems, such as interruptions to work, the need to adjust the attendants' schedules, and time constraints. With the use of this e-learning system, various problems associated with the confirmation test of environmental education were eliminated as shown below, and additionally the person-hours spent on the activity were greatly reduced.

- O No need to adjust schedules of learners.
- O No need to reserve lecture rooms or prepare lecture materials.
- O Learnable in one's free time.



- No need to move as learning is via PC at one's own desk.
- O It is easy to make all employees learn.
- O Paperless education is possible.
- O Self-checking is easy using an automatic-marking function.
- O Summing the educational results is easy.

Furthermore, by summing the results and analyzing them, it became possible to find out overall trends and use that knowledge to provide individual guidance or feed it back into future educational curriculums.

We will continue to use this system to further enhance the level of environmental education at our company.







An employee taking a confirmation test of environmental education

Supporting the Environmental Hygiene Cup Contest

To promote environmental communication with people in the community, Guangdong Mabuchi extended support for the participants of the Environmental Hygiene Cup speech contest held in the community where Mabuchi employees reside.

Contest to Promote Environmental Consideration

To enhance environmental awareness of all employees, a Group-wide Catch Phrase and Poster Contest Prompting Environmental Consideration is held annually under the sponsorship of the Head Office.



Winning works displayed in the restaurant of the Head Office

Efforts toward Soil Decontamination

In the independent soil contamination research conducted in 2002, contaminated soil was found in the Head Office site (around the former cleaning room). We reported this situation to the relevant authority (Matsudo municipal government) and started decontamination work.

In 2004, we investigated whether there was any soil contamination at the site of our subsidiary, Mabuchi Precision Industries, Ltd., upon the closure of the factory and detected soil contamination. We immediately reported this situation to the Gunma prefectural government and started decontamination work.

Soil decontamination work at those two locations is still ongoing and the mean concentration of contaminants in groundwater is decreasing year by year. In the measurement in fiscal 2008, the mean concentration of contaminants in groundwater at the Head Office site decreased by 30% over the previous year.

We will try various other measures to achieve early decontamination while continuing with the current decontamination work.



Groundwater decontamination equipment installed at the site (the Head Office)

Report of Environmental Data

The following tables show the environmental data of the Mabuchi Group.

Data of Danang Mabuchi in Vietnam, which acquired ISO 14001 certification in fiscal 2008, is included in the Mabuchi Group Data beginning in this year.

The Mabuchi Group's Environmental Data

Fiscal 2006

Туре	Unit	The Head	Hong Kong	Taiwan	Kaohsiung	Dalian	Jiangsu	Vietnam
туре		Office	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi
Electricity purchased	10,000 kWh	913	9,906	483	926	2,975	1,101	2,567
Petroleum gas	t	5	17	9	10	470	19	53
City gas	t	129	0	0	0	0	0	0
Coal	t	0	0	0	0	10,861	0	0
Gasoline	kl	13	242	12	10	127	39	16
Diesel	kl	5	1,342	13	1	23	4	81
Fuel oil A	kl	0	0	0	0	2	0	0
Total amount of discharged waste	t	192	25,108	656	231	5,903	900	5,398
Amount of landfill waste	t	18	683	47	26	66	30	419

Fiscal 2007

Turno	Unit	The Head	Hong Kong	Taiwan	Kaohsiung	Dalian	Jiangsu	Vietnam
Туре		Office	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi
Electricity purchased	10,000 kWh	918	9,350	543	989	3,176	1,472	2,378
Petroleum gas	t	5	18	9	8	477	13	68
City gas	t	98	0	0	0	0	0	0
Coal	t	0	0	0	0	9,841	0	0
Gasoline	kl	12	248	10	7	15	38	16
Diesel	kl	5	1,897	15	1	0	4	31
Fuel oil A	kl	0	0	0	0	0	0	0
Total amount of discharged waste	t	199	31,204	795	725	6,675	3,096	5,173
Amount of landfill waste	t	4	725	54	26	576	147	208

Fiscal 2008

Turpe	Unit	The Head	Hong Kong	Taiwan	Kaohsiung	Dalian	Jiangsu	Vietnam	Danang
Туре		Office	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi	Mabuchi
Electricity purchased	10,000 kWh	895	8,673	514	924	3,360	1,456	2,774	867
Petroleum gas	t	4	17	9	7	415	0	88	30
City gas	t	97	0	0	0	0	246	0	0
Coal	t	0	0	0	0	10,135	0	0	0
Gasoline	kl	11	278	7	7	11	45	18	12
Diesel	kl	4	1,561	18	2	6	4	212	0
Fuel oil A	kl	0	0	0	0	0	0	0	0
Total amount of discharged waste	t	217	29,752	923	633	6,605	2,266	5,150	1,374
Amount of landfill waste	t	4	522	61	29	601	93	207	383

MABUCHI MOTOR

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