

The Mabuchi Group Social & Environmental Report 2011



Corporate Outline

■ Trade name:	Mabuchi Motor Co., Ltd.	Employees:	Head Office: 748
Established:	January 18, 1954		Mabuchi Group: 37,466
Field of Operations:	Manufacture and sales of small electric motors	■ Head Office:	430 Matsuhidai, Matsudo-shi, Chiba-ken, 270-2280 Japan
Capital:	20,704,810,000 yen		Tel.: +81-47-710-1111
President:	Shinji Kamei	Technology Center:	280 Ryufukuji, Inzai-shi,
			Chiba-ken, 270-2393 Japan
			Tel.: +81-47-710-1222

<As of December 31, 2010>

Changes in consolidated net sales, consolidated operating income, and operating income ratio





Sales by application

<As of December 31, 2010>



Worldwide Network

<As of December 31, 2010>

CONTENTS

Mabuchi Motor Overview

Corporate Outline 01

Social Report

Corporate Governance	05
Compliance	06
Creating Lively Workplaces	07
Support for Manufacturing Education	09
Educational Support for Pupils (Head Office)	10
Educational Support Activities at Overseas Bases	11
Supporting Local Communities	12

Contents

Environmental Report

02

Environmental Management System	13
Green Procurement	14
Manufacturing Eco-Friendly Products	15
Volunteer Activities for Environmental Conservation	17
Reducing CO ₂ Emissions by Promoting Greening	18
Environmental Communication	19
Risk Management Efforts	21
Other Environmental Reports	22

Message from the President

03

Editorial Policy

Mabuchi began to publish its environmental report in fiscal 2001. In 2008, we changed the report title from the Environmental Report to the Social & Environmental Report, and enriched the documentation of our social contribution activities in addition to the environmental activities we conduct to preserve the global environment.

As a corporate citizen, we will continue to be fully accountable to our stakeholders by explaining our CSR approach and the results of our activities through these reports.

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

Period and Scope

Period

Fiscal 2010 (January 1, 2010 - December 31, 2010)

Scope

The Mabuchi Group

[Corporate Headquarters]

Japan

• Mabuchi Motor Co., Ltd. (Head Office) [Production Bases]

China

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

[Sales Offices]

- Mabuchi Motor (Shanghai) Co., Ltd. (Shanghai Mabuchi)
- Mabuchi Motor Trading (Shenzhen) Co., Ltd.
 - (Shenzhen Mabuchi)
- Mabuchi Taiwan Co., Ltd. (Taiwan Mabuchi)
- Mabuchi Motor America Corp. (America Mabuchi) • Mabuchi Motor (Singapore) Pte. Ltd. (Singapore Mabuchi)
- Mabuchi Motor (Europe) GmbH (Europe Mabuchi)
- Mabuchi Motor Korea Co., Ltd. (Korea Mabuchi)

Activities covered

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

Publication date

June 2011 (next publication: June 2012)

We would like to express our deepest sympathies to all those affected by the Great East Japan Earthquake. We sincerely hope for a swift recovery in the quake-hit areas.



We do what we should, now and in the future.

President and



Shinji Kamei

We have now completed making the Mabuchi Group's "Social & Environmental Report 2011," highlighting our social contribution and environmental activities in fiscal 2010. Please take a moment to discover what we achieved during the year.

The earthquake that hit the Tohoku region in March 2011 has left a big scar. But it also reaffirmed the courage, solidarity, and warmth of the Japanese people-things which had tended to be overlooked. It may take years before the affected areas completely recover, but I am confident that Japan can do it as long as its people have this spirit, even though the first few years will be hard. At the same time, I cannot help but feel that this great ordeal is demanding Japan to not just recover from the disaster but also undergo a more fundamental change. With this in mind, we must figure out what we should do now, then steadily and consistently push forward with it.

CSR Activities

Mabuchi is striving to become a company that offers greater customer satisfaction in order to realize our management principle: "Contributing to international society and continuously increasing our contribution." To this end, we should improve the quality of our products and services which are the source of our competitiveness. In addition, we should conduct our business activities based on our profound creed that values corporate social responsibilities (CSR), environmental protection, and transparent business transactions. We should do this by embracing the awareness that "Corporate value expands continuously when we conduct sincere corporate activities."

In my view, "corporate social responsibility" is the responsibility to create a company that can produce profits consistently, while respecting ethics and sincerity as the most important value. In that sense, I do not agree with the approach of seeking only immediate gains while the global economy is flagging and the whole of Japan is full of anxiety due to the impact of the earthquake. I believe, in principle, that a company exists to ensure happiness of the people working there. Real CSR is, therefore, to create an environment where that principle can be keenly felt and protect people's employment by maintaining that principle for a long time. This will ultimately contribute to society.

We will further strengthen our business structure and fulfill our CSR responsibilities so that we can live up to our customers' expectations.

Improving the Global Environment

The supply of electricity has been unstable due to accidents at a nuclear power plant in the quake-hit area. This year, companies have been asked to cut their electricity by 15% from the previous year's maximum usage. This is a very tough requirement, because we had already been working hard to reduce our electricity consumption.

Despite these circumstances, we will embark on new themes which have not been taken up because of technical or quality control problems. To be specific, under the directions of the Technology Center we will refine production processes from the very basics, including making improvements to our productivity and yield rate. Also, we will further reduce the burden that our production processes place on the environment, utilizing our rich experience in this field. We at Mabuchi are determined to be a company that stakeholders can always trust and value. We will do this by continuing to conduct sincere corporate activities and fulfilling CSR responsibilities, while strengthening our sound corporate culture to care for society and the environment. All employees will continue to act with an awareness that a company exists to contribute to society, and that making such a contribution can be done by making people happy.

We hope that you will peruse this report describing our social and environmental activities and send us your frank opinions and comments concerning it.

Your understanding and continuous support would be greatly appreciated.

Management Principle

"Contributing to international society and continuously increasing our contribution."

Management Guidelines

- 1. By bringing better and more reasonably priced goods to the market, we contribute to the creation of a more affluent society and more comfortable lives for everyone.
- Contribute to the leveling of international economic disparities and to economic development in other countries through the creation of employment opportunities and technology transfers.
- 3. People are the most important managerial resource. Realize human potential through work and teach people to become productive members of society.
- 4. Conduct corporate activity which preserves the earth's environment and protects human health.

Management Policies

- 1. Develop products that have flexibility in their application and consolidate the most appropriate production conditions.
- 2. Strive to improve product development based on value analysis and seek to originate interchangeable parts and materials.
- 3. Realize cost reduction by using advanced processing technologies and by minimizing waste.
- 4. Uncover new markets and secure fair market share.
- 5. Maximize each employee's potential and conduct employee education through appropriate job placement.
- 6. Promote business activities that have minimal negative impact on the environment and that strictly abide by safety standards.
- 7. To promote management policies and strategies that promise long and stable growth.

Corporate Governance

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.

- To clearly separate management decision-making and efficient business execution, and to clarify the scope of accountability,
- (2) To build and operate a sound internal control system, namely, to effectively work the internal control system and the management supervision system,
- (3) To appoint a suitable number of independent corporate officers whose interests do not conflict with those of general shareholders to ensure the objectivity and neutrality of management supervision functions,
- (4) To foster a corporate culture in which all Group employees recognize and share the understanding that the practices of corporate ethics and compliance support the organization's social impartiality and are fundamental to living up to the trust and expectations of all stakeholders, and
- (5) To disclose corporate information to stakeholders such as shareholders in an appropriate, fair, timely and clear manner and to ensure accountability through the Board of Directors, the Board of Auditors and other bodies.

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 (including independent corporate officers), 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 bases, 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 Corporate Governance Structure / (Internal Control) System Corporate Governance 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 bases.

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



Compliance

"Mabuchi Motor Ethical Standard" Pamphlet

To achieve our Management Principle, "Contributing to international society and continuously increasing our contribution," we consider it 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.

For that purpose, we have published a pamphlet called "Mabuchi Motor Ethical Standard" detailing the criteria for our conduct and judgments and distributed it to all directors and employees of our head office. We updated the first version of the ethical standard pamphlet, published in 2006, to adapt to the business environment that had changed with the times. We also enriched the content by including items for which social demand had increased since its publication. We redistributed 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 October 2010, we held a seminar for persons in managerial positions and higher at our bases in China to enhance employees' awareness about compliance. The particular focus was on Mabuchi's management policy of valuing compliance and the renewed "Mabuchi Motor Ethical Standard." Individual topics such as "security and confidentiality" and "commercial and other bribes" were also covered.

In addition, the internal audit department of the Head Office conducts periodical and non-periodical audits on Group companies, including overseas related companies, concerning observance of compliance rules and procedures, unethical conduct, and other matters, and reports the audit results to top management.



Education on compliance (Dalian Mabuchi)

An internal audit department is also established in part of overseas bases and it regularly 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 with us to be treated disadvantageously because of their consultation. This holds true regardless of whether or not they used the hotline, and is in accordance with the Whistleblower Protection Act.

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

[Basic Policy of Ethical Standard (Outline)]

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

Creating Lively Workplaces

One of our management guidelines is "People are the most important managerial resources. Realize human potential through work and teach people to become productive members of society." Under this, Mabuchi aims to cultivate socially and internationally minded persons that can contribute not only to our company but also to 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.

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.

Events Involving Families: Garden Party



Employees and their families are invited to the garden party held in the Head Office grounds every fall. The aim is to strengthen the bonds and solidarity among all Mabuchi people, from top management and employees to their families.

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.

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.

Short-term Personnel Exchange System

We established the Short-term Personnel Exchange System in 2009 to strengthen the solidarity and overall ability of the entire Mabuchi Group. We will do this by promoting exchange between the Head Office and overseas bases.

Specifically, staff members of overseas bases are provided with more opportunities to go on business trips to the Head Office. This working-level exchange encourages the Group employees to share their thoughts on and raises their awareness about cooperative work. We will continue to enhance this system while implementing it on an ongoing basis.



Staff of overseas bases pictured with the President

Keeping a Healthy Body and Mind (Head office)

We believe employees' healthy bodies and minds form the basis from which they contribute to work and social life. Therefore, we started a mental health program more than 20 years ago that includes mental health checks and care given by in-house counselors. Also, the company pays for two-thirds of the expenses when employees who are 35 years or older undergo a complete medical check. We also regularly held the Health Class for Employees to help them avoid lifestyle-related diseases.



Health Class for Employees (Head Office)

Balancing Work and 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 (below), 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.

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 selfimprovement during parental leave.
- 2. 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 carerequiring 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.

Activities at Mabuchi Group Companies

Overseas bases of the Mabuchi Group are also striving to create pleasant workplaces while ensuring the fair treatment of employees by respecting their fundamental rights.

Dalian Mabuchi set up a union, the first company to do so among the foreign capital companies located in the Dalian Development Area. The union has since guaranteed the employees of this base ongoing employment, salaries, and other rights (welfare benefits).



Labor-management Committee (Dalian Mabuchi)

Dongguan Mabuchi holds company sports events regularly to strengthen employees' loyalty to the company and the solidarity among them.



Badminton tournament (Dongguan Mabuchi)



Support for Manufacturing Education

Mabuchi 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. It is doing this by holding various events where a wide range of people including the youth can experience the importance and wonder of manufacturing.

Co-sponsoring Robot Contests

Mabuchi is co-sponsoring the National Technical College Robot Contest, the College Robot Contest and the ABU Robot Contest every year by providing motors and funds for running the contests. We are supporting these events to provide students around the world with an opportunity to experience the wonder and importance of manufacturing, hoping that it will produce many future engineers.



College Robot Contest

The NHK College Robot Contest 2010 was held at the National Olympics Memorial Youth Center in Tokyo in June 2010.Twenty college teams that passed the paper and video examination competed with their machines, and the Kanazawa Institute of Technology team won the first prize for the first time in three years.

The Mabuchi Motor Award went to the Tokyo University of Agriculture and Technology team for their amazing adaptation of an automatic robot.



ABU Robot Contest

A number of student teams from around the world competed at the ABU Asia-Pacific Robot Contest 2010 held at the Cairo International Stadium in Egypt in September 2010. China's University of Science and Technology team won the grand prize.

The Mabuchi Motor Award went to the team from the Electric Engineering Polytechnic Institute of Surabaya, which fought well although it failed to get through the preliminary round.



National Technical College Robot Contest

A total of 25 technical college teams selected in regional competitions competed at the National Technical College Robot Contest 2010, held at the Ryogoku Kokugikan in November 2010. The grand prize went to the Kagoshima National College of Technology team and the robocon prize to the Sendai National College of Technology, Natori Campus team.

The Mabuchi Motor Award went to the Nagano National College of Technology team which presented a robot that can walk carrying 10 students.

Educational Support for Pupils (Head Office)

Dispatch of Science Instructors

We have been dispatching Head Office employees to schools as science instructors by setting up a promotion team as part of our social contribution activities. This is in line with the "Education Support Project Utilizing Outside Instructors" (a project launched by the Ministry of Economy, Trade and Industry in 2008).

In 2010, we also held a science class workshop for elementary school teachers at the request of the science education group of the educational study committee, Chiba Prefecture, which hoped to have guidance on giving science lessons to pupils.





Study Tour to the Mabuchi Museum

We invited parents and children living in Matsudo to the Mabuchi Museum at the head office site as a special event. The aim was to give local people a learning opportunity as part of our educational support activities.

We specifically arranged the displays in the museum so that the pupils could feel the wonder of manufacturing and the importance of having a dream by learning about Mabuchi's history.

Summer Vacation Handicraft Class

We have been offering a summer vacation handicraft class for children since 2008. We held six classes in 2010, inviting 24 pairs of parents and children each time. They learned that motors not only spin but also produce energy as a generator, and enjoyed making a two-wheel toy bike that uses manually generated energy to move.



TOPIX

~ Impressions of the Summer Vacation Handicraft Class ~

We conduct a questionnaire after each handicraft class so that we can enrich the program. The following are some of the answers given by the pupils.

Results of Questionnaire



Impressions

- I was happy when I made the toy.
- I was happy because the toy I made moved well.
- O It was fun to make my toy move.
- I would like to make more difficult toys.
- It was difficult at first, but I could make the toy with advice from an instructor.
- O I would like to come here again next year. It was fun!
- I would like to make more toys. I would like to know more about power generation.
- I found out for the first time that motors are used in many areas.
- O I found out that motors can work without batteries.

Educational Support Activities at Overseas Bases

Overseas bases are also carrying out educational support activities in their areas.



Awarding scholarships to technical school students (Vietnam Mabuchi)



Donating Japanese language books to Danang University's Foreign Language College (Danang Mabuchi)



Providing motors and handicraft books to the bazaar held at Japanese schools (Europe Mabuchi)

Baseball Lesson

Baseball lessons were offered to pupils of the Yantun Mabuchi Hope Primary School* in Dalian's Wafangdian City and the Lijiajie Primary School in Dalian City in June 2010. The lessons were given by former professional baseball players invited from Japan under the sponsorship of Dalian Mabuchi.

We hope this event deepened the friendship between the Chinese and Japanese people and enhanced exchange between our company and the Dalian area.

This event was widely covered by local newspapers and other media.

* This school was constructed with support from Dalian Mabuchi in 2001.

Educational Support

Dalian Mabuchi has been providing educational support to local communities since 1996. This support includes giving scholarships to students from elementary school to university, and paying costs for constructing school buildings.



Supporting Local Communities

Mabuchi is actively helping to restore areas affected by natural disasters and the social welfare in each community.

Support for Disaster-affected Areas and Deprived Areas



Donating clothing to people in deprived areas (Guangdong Factory)



Donating money to people in Zhouqu Xian, Gannan Tibetan Autonomous Prefecture, Gansu Province in China which was hit by a major debris flow in August 2010 (Guangdong Factory)

Blood Donation

Modern medicine has no perfect substitute for blood (artificial blood) yet. Though a substance that can serve as an alternative to blood is already available, it has limitations. Therefore, human blood is still in great need. To help the sick and injured, employees of Mabuchi Group bases are cooperating by donating blood regularly.



Donating Blood (Taiwan Mabuchi)



Donating Blood (Jiangsu Mabuchi)

Supporting Children's Homes

Employees at Jiangsu Mabuchi, Taiwan Mabuchi, and Vietnam Mabuchi visit children's homes, institutions for the aged, and homes of single elderly persons on a regular basis to extend a helping hand and give donations.



A certificate of appreciation from a children's home (Taiwan Mabuchi)



Children at the children's home Mabuchi is supporting (Jiangsu Mabuchi)

Environmental Management System

The Mabuchi Group deploys an integrated environmental management system at all bases.

The Mabuchi Group Head Office acquired ISO 14001 certification, an international management standard, in December 1999. After that, overseas production bases acquired this certification one after another, and all of Mabuchi's production bases that were in existence at that time acquired the certification by 2001. New bases that were established after this year acquired the certification as they were founded.

In 2008, Mabuchi acquired an integrated certification covering the entire Mabuchi Group represented by the Head Office and has since been deploying an integrated environmental management system at all bases.



We will continue to appropriately operate and improve the environmental management system.



Environmental audit by an external audit body (Dalian Mabuchi)

First acquisition date of ISO 14001 Certification

Base	Acquisition date
Mabuchi Head Office	December 2, 1999
Daojiao Mabuchi	December 11, 2000
Dongguan Mabuchi	December 11, 2000
Dongguan Mabuchi (Guancheng Branch)	December 11, 2000
Taiwan Mabuchi	December 6, 2000
Kaohsiung Mabuchi	March 14, 2000
Dalian Mabuchi (including Wafangdian Mabuchi)	August 17, 2000
Jiangsu Mabuchi	August 10, 2000
Vietnam Mabuchi	March 16, 2001
Danang Mabuchi	July 21, 2008
Ludong Mabuchi	April 27, 2009

* Yingtan Mabuchi, which was established in 2009, is currently preparing to acquire ISO 14001 certification and is not included in the table.

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.
- We will strictly observe legal regulations relating to the 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.

Green Procurement

With Our Business Partners

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 parts and materials we procure for products. To confirm this, we make it a rule that suppliers must submit the following documents certifying that environmentally prohibited substances are not contained in their parts and materials, in addition to an environmental activity survey sheet.

When selecting suppliers, we evaluate each supplier's various environmental conservation activities in addition to the conventional evaluation factors of quality, cost, and delivery.

We also promote communication with our suppliers and actively conduct audits on their use and storage of environmental burden causing substances.

Thanks to these activities, we have received no environmental complaints from our customers since the enforcement of the EU's RoHS Directive in fiscal 2006.

We in the Mabuchi Group will continue to promote green procurement so that we can always produce environmentally friendly motors.



Explaining our green procurement system to suppliers (Taiwan Mabuchi)



As part of our green procurement, we use eco-cars as company cars in addition to providing employees with eco-friendly uniforms and using green office supplies.



Green Procurement Flowchart

Manufacturing Eco-Friendly Products

As a manufacturer specialized in small DC motors, Mabuchi has developed and supplied innovative motors to the market in response to various needs and in pursuit of the new possibilities of motors. Improving the quality and performance of motors is, needless to say, an integral research theme. However, how to reduce the environmental burden that motors place on the earth, from their production to their disposal, is also becoming a vital research theme.

R&D on Energy-saving Motors

Small motors use less materials and less CO₂ is emitted during their manufacture. These motors, small and lightweight, can also improve fuel efficiency if used in automobiles or put to other uses.

Mabuchi's efforts for small motors began in the audio and visual equipment field in the latter half of the 1980s. In fiscal 2010, we began commercially producing an energy-saving motor, SF-266SA. It is mainly used in electrically controlled car mirrors, one application in the automotive products field.

We manufacture it as a motor that produces little noise by giving attention to the electromagnetic wave environment, the kind of attention to detail increasingly being demanded in the automotive products field. At the same time, it maintains the advantage of reduced CO_2 emissions that conventional small motors have. It is also a quieter motor that makes less operating noise than conventional ones.

We will continue to promote R&D activities aiming to diversify our product lineup of energy-saving motors. Such R&D is based on the magnetic circuit, winding, and parts-technologies we have accumulated as a manufacturer specialized in small DC motors.



Energy-saving Motor SF-266SA



Reduced Packing Materials

When shipping motors to customers, we wrap them using a stretch film to maintain quality during transport and to improve transport efficiency.

However, this film is thrown away and becomes waste after our customers safely receive the product. Therefore, it is a kind of environmental burden associated with the production of our motors.

To reduce this, Jiangsu Mabuchi made various attempts and succeeded in reducing the use of stretch film by 6 tons over the previous years, without diminishing its original purpose and function. This has not only reduced waste but also helped save the Earth's resources.



Packed using an optimized amount of film

Energy-saving at the Production Sites

Aiming to preserve the environment and achieve high productivity at the same time, Mabuchi is continuously improving the efficiency of production processes at the factory.

Compressed air is widely used in various production processes at the factory as a safe, simple, and convenient utility. But because of such excellent usability, it had not been targeted as a key item for which to make energysaving efforts.

Mabuchi's production staff, however, have put the focus on the energy lost when compressed air is used, and have strived to improve it. They have tried such means as reducing the air flow and using alternative methods.

By searching for optimal means, they found that CO_2 emissions can be reduced and energy can be saved if the existing air blowing system that is based on compressed air is replaced with an alternative method. Two successful cases are shown below.

Case 1: Using a blower to remove powder

A large volume of compressed air has been used to blow off the powder that clings to the motor rotors before applying an insulation coating to them. If this air blowing system is replaced with a blower that can supply low-pressure air at high velocity, it needs less energy (electricity) to work.

We found the most appropriate shape of the blow nozzle for our workpieces and production equipment, and introduced this blower to the commercial production lines at factories in China. We will install this blower for the insulation coating machine at all production bases in stages.

Environmental effect per unit CO₂ reduction: 23.7 t-CO₂/year



The blower and peripheral components

Case 2: Using an axial fan to cool workpieces

We explored the possibility of using an axial fan to cool workpieces instead of using compressed air. When we measured their temperature, we found that the workpieces were sufficiently cooled with this fan. It is currently being introduced in all production bases. Environmental effect per unit CO₂ reduction: 5.6 t-CO₂/year



These improvements were made possible thanks to the efforts of staff members directly related to the production lines.

They came up with the idea and enhanced it by changing the way they thought about energy-saving issues. This is a small step for improving our work. Nevertheless it is a good example of how changing the way all employees think about work and taking different approaches can speed up both environmental conservation and production efficiency. We are sure that it will lead to further improvements.

莞城协益电子厂义工队

Guangdong Mabuchi employees volunteering for planting activities

Volunteer Activities for Environmental Conservation

The Mabuchi Group considers that "There is only one Earth, and it is the obligation of all people in the community to protect it." Accordingly, all employees are continuously planning and carrying out environmental conservation activities in each community where our bases are located.



Clean-up activity in the community (Guangdong Factory)



Clean-up activity in the community (Dalian Mabuchi)



Planting trees around the factory (Dongguan Mabuchi)



Clean-up activity in the community (Taiwan Mabuchi)

Reducing CO₂ Emissions by Promoting Greening

We have been promoting greening of the Mabuchi Group factories for many years in order to make good use of the CO_2 absorption effect of trees and plants. These activities help conserve areas and protect the global environment by absorbing CO_2 , adjusting the air humidity, and purifying groundwater.

Greening Activity at Dalian Mabuchi

Greening activities at Dalian Mabuchi (including Wafangdian Mabuchi) started as soon as its factory and employee dormitories were established.

Today, over 1,000 trees and over 8,000 m² of turf cover the premises of Dalian Mabuchi.

Dalian Mabuchi received the "Garden Factory" award from the Liaoning provincial government for these efforts.

Factory



Mabuchi

Dalian Mabuchi's factory with lush greenery

Greening Activity at Vietnam



Greening Activity at Guangdong

Factory walls covered with ivy

Guangdong Factory began to cover its roof with greenery in fiscal 2009. In 2010, it also planted ivy to cover the walls of the factory. As a result of these measures, strong sunlight in the summer is blocked, use of electricity for air conditioning reduced, and the aesthetics of the factory enhanced.



Greening at the factory

With the slogan "Company with a Campus of Flowers and Greenery," employees of Vietnam Mabuchi are making a concerted effort to green the company and factory. This not only leads to a beautiful landscape but also improves environmental awareness and gives employees' a sense of belonging to the company.

18



Environmental Communication

Slogan and Poster Contest

To enhance the environmental awareness of employees, the Slogan and Poster Contest Promoting Environmental Consideration has been held annually since 2006 as a Group-wide event.

<Winning works in 2010>

First Prize in Slogan Category	"Let's lead a low carbon life with energy-saving motors."
Second Prize in Slogan Category	"Copy less, print less, and stamp environmental protection in our hearts."
	"Green dreams come to life when green motors get spinning!"

First Prize in Poster Category



Second Prize in Poster Category (two works)





Commending Employees Active in Environmental Activities

Dalian Mabuchi (including Wafangdian Mabuchi) commends the divisions and individuals that made excellent environmental improvements by awarding them the "Special General Manager's Award for Environmental Improvements" at the year-end award ceremony.

This award was established by Dalian Mabuchi's General Manager who considers environmental conservation activities very important and strives to promote them actively.



Dalian Mabuchi's General Manager presenting an award



Employees signing the banner

Environmental Activities with Local People

Agreeing with the spirit of "Earth Hour," employees of Guangdong Factory took part in this international event in which all lights are turned off simultaneously, calling for people to prevent global warming. It held a promotion and signing campaign at the nearby Huying Park in March 2010 to invite more people. Thanks to the campaign, many local people joined the event together with our employees.

Social & Environmental Reports published at Overseas Base

Dalian Mabuchi's "Sustainable Development Report" describes the results of its environmental activities, and its "Social Responsibility Report" outlines the results of its CSR activities. Both reports are released every year.



Social Responsibility Report (left) and Sustainable Development Report (right)

Risk Management Efforts

We regularly conduct education and training on emergency responses as part of our risk management efforts for emergency situations including environmental emergencies. These programs of education and training will help ensure the safety of employees, prevent environmental contamination, and preserve company property.



Fire extinguishing training (Head Office)



Fire extinguishing training (Guangdong Factory)



Lifesaving training (Head Office)



Education on environmental emergencies (Guangdong Factory)



Training for environmental emergencies (Head Office)



Training on how to deal with leaked chemicals (Guangdong Factory)

Other Environmental Reports

Soil Decontamination

In the independent soil contamination research conducted in 2002, contaminated soil was found in a part of the Head Office site. 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.

Decontamination of areas having a high level of contamination at the above two locations has already been completed, but decontamination of areas with a low level of contamination is still continuing. We are trying various measures to complete decontamination at an early date.

In 2010, all measured values showed an improvement as a result of decontamination work. Therefore, we judged the current decontamination method to be effective and decided to use it continuously. The decontamination results in 2010 and the future policy were reported to the Matsudo municipal and Gunma prefectural governments and their approvals were obtained. We will continue our decontamination work steadily.



Soil decontamination equipment installed in the premises of the Head Office

Report of Environmental Data

The following tables show the environmental data of the Mabuchi Group: (Data of the Head Office and principal overseas bases are covered.)



Purchased electricity and usage





Coal usage



Waste generated



MABUCHI MOTOR

Contact:

Mabuchi Motor Co., Ltd. Administration Headquarters,

General Affairs Dept. 430 Matsuhidai, Matsudo-shi,

Chiba-ken, 270-2280 Japan Tel.: +81-47-710-1224 Fax: +81-47-710-1141 E-Mail:<u>kankyo@mabuchi-motor.co.jp</u> http://www.mabuchi-motor.co.jp