## The Mabuchi Group Social & Environmental Report 2010













## **Corporate Outline**

Trade name:	Mabuchi Motor Co., Ltd.
Established:	January 18, 1954
Field of Operations:	Manufacture and sales of small electric motors
Capital:	20,704,810,000 yen (as of December 31, 2009)
Employees:	Head Office: 751 (as of December 31, 2009) Mabuchi Group: 38,251 (as of December 31, 2009)
President:	Shinji Kamei
Head Office:	430 Matsuhidai, Matsudo-shi, Chiba-ken, 270-2280 Japan Tel.: +81-47-710-1111
Technology Center:	280 Ryufukuji, Inzai-shi, Chiba-ken, 270-2393 Japan Tel.: +81-47-710-1222

### Sales by application (fiscal 2009)



Consolidated net sales

Consolidated operating income Consolidated operating income ratio

## Changes in consolidated net sales, consolidated operating income, and operating income ratio (fiscal 2009)





## **Editorial Policy**

It has been 10 years since 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 are pleased to present our CSR approach and the results of our activities through these reports. We will continue to improve the content.

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

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

Period Fiscal 2009 (January 1, 2009 - December 31, 2009)

Scope

### The Mabuchi Group

Corporate Hea	adquarters
Japan	Mabuchi Motor Co., Ltd. (Head Office)
Production Ba	ses
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 Mabuch
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

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**Message from the President** 



We have now completed making the Mabuchi Group's "Social & Environmental Report 2010," highlighting our social contribution and environmental activities in fiscal 2009. Please take a moment to discover what we achieved during the year.

## **CSR** Activities

Today, emerging markets particularly in Asia are showing steady growth while consumer spending in developed countries remains sluggish. On the other hand, various environmental problems are becoming worse and we are at a turning point in an era when everything around us swirls at unprecedented speed. To enhance our presence in this tough age, it is obvious that we should improve the quality of our products and services since it is the source of our competitiveness. In addition, I believe that we should conduct our business activities based on our profound creed that values corporate social responsibilities (CSR), environmental protection, and transparent business transactions by embracing the awareness "Corporate value expands continuously only when we conduct sincere corporate activities."

Generally, however, it is difficult to leave the judgment of what constitutes "sincere corporate activities" to individuals as the organization becomes larger and the social structure becomes complicated, and at this point a company's stance is tested. Sad to say, past corporate activities in Japan tended to focus on acting in ways that merely did not contravene laws, which meant that companies' efforts for moral and CSR activities were insufficient. To prevent illegal and dishonest conduct within an organization and advance sound business activities in today's social environment, it is very important to set in place a structure and a system that manage, audit, and control business activities based on clearly defined business standards and procedures. In my view, "corporate social responsibility" means the responsibility for creating 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 pursuing immediate gains greedily even when the global economy is flagging, like it is today. The course we in Mabuchi should take now and in the future is to pursue long-term, consistent growth while bearing our firm ethics in mind and acting sincerely every day.

To realize this, we will continue to strengthen our management system as a Group-wide effort so that we can deserve to be always trusted by our stakeholders.

## Improving the Global Environment

Today, reducing  $CO_2$  emissions is an important issue for companies to continue their corporate activities. To address the issue, the Japanese government also publicly announced its commitment to reduce  $CO_2$ emissions by 25% by 2020 compared with the 1990 level. Japanese companies need to start making concerted efforts toward achieving this target of a 25% reduction. However, we consider it to be a very tough target, sharing the same view as Japan's entire business community.

This reduction target will never be met unless all companies push themselves hard with the spirit of aspiration and challenge that makes the impossible possible, in view of a significant increase in the burden of corporate costs due to the possible adoption of an environmental tax and an obligation to purchase a total amount of power. We in Mabuchi will strive to reduce our energy usage by improving our materials' yield rate, reducing materials by producing small products, and eliminating waste by introducing innovative technologies and a streamlined production management system into the production process.

When adopting energy-consuming equipment, we will examine the amount of energy used in addition to the conventional items we check: quality, price, and delivery. In terms of the environment, it is also important to manage chemical substances. We will continue to strictly manage chemical substances, in cooperation with our business partners, by observing statutory regulations on environmental burden causing substances and by sincerely accepting, understanding, and responding to our customers' demands. We will also push forward with the development of easily reusable and disposable products by reviewing their entire lifecycles, from their production to the end of their lives.

We in Mabuchi are determined to make our company one that stakeholders can always trust and value by continuing to take sincere corporate activities and fulfilling CSR responsibilities while strengthening our sound corporate culture that cares for society and the environment.

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

Your warm understanding and continuous support are 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.
- 2. 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 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 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 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 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 (Chart)

## Compliance

## "Mabuchi Motor 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.

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 distributed 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 fiscal 2009, we provided e-learning to all employees of the Head Office (including officers) in April to ensure that the content of the new ethical standard pamphlet really penetrates.

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.



Ethical Standard Pamphlet

The internal audit department is also established in major overseas related companies and it 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**

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.

## Short-term Personnel Exchange System

We are exchanging personnel between the Head Office and overseas bases aimed at strengthening the solidarity and overall ability of the Mabuchi Group. 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.

## 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.

## 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 inperson 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.

## Events Involving Families

Employees and their families are invited to the garden party held in the Head Office grounds every fall with a view to strengthening bonds and solidarity among all Mabuchi people, from top management and employees to their families.



## Study Meeting for Managers

Mabuchi intends to become a company that helps employees lead happy lives, namely, a company where all employees can bloom and actively devote themselves to work. As part of this effort, we launched a study meeting for managers who play the role of leading employees. They learn and have discussions about the roles of managers and the attitude they should take toward the junior staff.

## 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 (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 self-improvement 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.
- 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 selfimprovement 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 related companies of the Mabuchi Group are also striving to create pleasant workplaces while ensuring the fair treatment of employees by respecting their fundamental rights.

### Jiangsu Mabuchi

In May 2009, Jiangsu Mabuchi received the "Good Labor-management Relationship Award" from Jiangsu City as a company having an excellent employer-employee relationship with no labor disputes over the years. Also, General Manager Katayama was awarded the "May 1st Labor Honorary Medal" by the Jiangsu Provincial Federation of Trade Unions in recognition of his active cooperation in promoting the activities of the company's trade union. He was one of only eight award recipients in the whole of Jiangsu Province.

### Danang Mabuchi

In fiscal 2009, the Danang City Department of Labor commended Danang Mabuchi as an excellent company respecting Vietnam's Labor Act. This was in recognition of its activities in compliance with the Act, which stipulates the rights of employees, such as its activities relating to labor contracts, salary systems, medical insurance, social insurance, and trade unions. Danang Mabuchi was the first 100% foreign capital company to receive this kind of award from Danang City.

### Vietnam Mabuchi

Every year, Vietnam Mabuchi presents an award, through its trade union, to employees' children who get good grades at school or receive high recognition in social activities, with a view to creating harmony between the company and its employees.



## **Providing Educational Support**

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.

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### 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.



### National Technical College Robot Contest

A total of 25 technical colleges selected in regional competitions competed with their wonderful robots at the National Technical College Robot Contest 2009, held at the Ryogoku Kokugikan in November 2009. The Hiroshima National College of Maritime Technology team won the grand prize.



#### **College Robot Contest**

The NHK College Robot Contest was held in June 2009 at the National Olympics Memorial Youth Center in Tokyo. The Toyohashi University of Technology team won first prize. The University of Tsukuba team received the Mabuchi Motor Award for its spirit of challenge.



### **ABU Robot Contest**

A total of 20 teams from 19 countries and areas in the Asia-Pacific region participated in the ABU Robocon (ABU Asia-Pacific Robot Contest 2009) held in Tokyo in August 2009. China's Harbin Institute of Technology team won the grand prize. The Mabuchi Motor Award went to the Mongolian team.

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### Educational Support for Pupils

Mabuchi is providing educational support to children who will lead the next generation.



### **Dispatch of Instructors to Schools**

We set up a promotion team to dispatch Head Office employees to schools as part of our social contribution activities, in line with the "education support project utilizing outside instructors" which was launched by the Ministry of Economy, Trade and Industry in fiscal 2008.

Our employees give science lessons on electromagnets at elementary schools in Chiba Prefecture.



### **Summer Vacation Handicraft Class**

We have been offering a handicraft class for elementary school students since 2008. Six classes were held in fiscal 2009. Children enjoyed making amazing tops that spin based on Lenz's law and Fleming's left-hand rule.



#### Workplace Experience for Pupils

Elementary school students in the community visit the Head Office to see an actual workplace as part of their career education at school. We are cooperating in this educational activity to support its purpose to help children cultivate a view of work and career and consider their own life through experiencing elements of actual society such as a workplace and coming into contact with working people.



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### Educational Support at Overseas Subsidiaries

Agreeing with the spirit of the Hope Project (educational support program for Chinese children), Dalian Mabuchi has been supporting the construction of Hope primary and middle schools in the Dalian area since 1996.

- 1996: Supported the construction of Duaoqiao Mabuchi Hope Primary School in Dalian's Zhuanghe City.
- 2001: Supported the construction of Yantun Mabuchi Hope Primary School in Dalian's Wafangdian City.
- 2002: Supported the construction of Tongyi Mabuchi Hope Primary School in Dalian's Pulandian City.
- 2007: Supported the construction of Suzigou Town Mabuchi Hope Primary School in Anshan City, Xiuyan County.
- 2009: Supported the construction of Suzigou Town Mabuchi Hope Middle School in Anshan City, Xiuyan County.

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 placing 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.

Vietnam Mabuchi is providing a scholarship to local school students as part of its educational support activities.



Completion Ceremony of Hope Middle School

In 2009, Mabuchi supported the construction of Mabuchi Hope Middle School in Anshan City, Xiuyan County, Suzigou Town and presented sporting goods to the school at the completion ceremony.



Scholarship System at Dalian Mabuchi

Dalian Mabuchi presented a travel bag and a fountain pen to 40 Mabuchi scholarship recipients who were admitted to college in 2009.



Scholarship System at Vietnam Mabuchi

Vice General Manager Baba of Vietnam Mabuchi awarded the 2009 scholarship to the selected pupils at Dong Nai Secondary Technical School.

## **Contribution to Nature Conservation**

The Mabuchi Group is actively participating in volunteer activities to help improve the living environment of local people and protect nature.

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## **Greening Activities**

We are conducting tree-planting and other activities to promote the greening of local communities.



## Greening in front of the Head Office

Hoping to coexist with the local community, Mabuchi gave about 200 m<sup>2</sup> of land to the city free of charge when the Head Office building was completed. Cherry trees planted in the widened sidewalk give a pleasant view as shown in this photo.



Greening Activity at Taiwan Mabuchi

Employees of Taiwan Mabuchi have been greening the area around the company for many years as volunteers.



### Greening Activity at Hong Kong Mabuchi (Guangdong Factory)

Employees of Hong Kong Mabuchi (Guangdong Factory) participate in the tree-planting activity in the community as volunteers.

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### **Cleanup activities**

Employees of each company are regularly cleaning up the areas around the company as volunteers, helping to create a clean environment.



### Cleanup Activity at Hong Kong Mabuchi (Guangdong Factory)

Employees of Hong Kong Mabuchi (Guangdong Factory) remove unauthorized posters and graffiti in the area around the company as volunteers.



Cleanup Activity at Dalian Mabuchi

Members of the Volunteer Association for Environmental Protection, established by Dalian Mabuchi employees, regularly conduct a cleanup activity around the company.



Cleanup Activity at Jiangsu Mabuchi

Employees of Jiangsu Mabuchi including General Manager actively clean up the community around the factory.

## **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

We send donations to areas affected by natural disasters.

### Helping restore the areas affected by China's Great Sichuan Earthquake in 2008 (Continued)



Employees of Hong Kong Mabuchi (Guangdong No. 2 Factory) continued their donation activity in 2009 to help restore the areas affected by the Great Sichuan Earthquake.



Jiangsu Mabuchi also continued its donation activity like Hong Kong Mabuchi.

### Support for Typhoon-affected Areas in Taiwan

Typhoon No. 8 (Morakot) that occurred in early August 2009 caused tremendous damage to Taiwan, the Philippines, and China. In particular, the damage in Taiwan was said to be the worst in the past 50 years. The Mabuchi Group sent a donation to the affected areas in Taiwan.

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## Contributions to Social Welfare and Local Communities

Employees are participating in volunteer activities in each community, visiting the homes and assisting in nursing care of single elderly persons at homes, homes for orphans and nursing homes.

### Social Welfare Activity at Vietnam Mabuchi



Vietnam Mabuchi brings moon cakes to homes for orphans and disabled children center in the community during the mid-autumn festival every year.

### Social Welfare Activity at Taiwan Mabuchi



Employees visit homes for orphans and institutions for aged on a regular basis and donate the money they collected.

### Provision of Clothing and School Supplies by Hong Kong Mabuchi



Employees donated clothing and school supplies for elementary school students and homes for orphans in Chengduo County, Qinghai Province in China.

### **Blood Donation**



Mabuchi Group companies are actively cooperating in blood donation in each community. The photo shows Taiwan Mabuchi employees donating blood.

## Environmental Management System

Mabuchi considers environmental management as an important theme and deploys an integrated environmental management system at every base under the supervision of the Group's Environmental Management Representative.



### **Environmental Managers Conference**

The Environmental Managers Conference, consisting of Environmental Mangers of the Head Office and overseas related companies, has been held annually since 2000. The 10th Environmental Managers Conference was held in December 2009. The conference style was changed to a video conference in 2009 from the conventional style in which all Environmental Managers of overseas related companies gathered in one place.

The Mabuchi Group's major environmental performances in fiscal 2009 were compiled and fiscal 2010 environmental objectives were established at the conference.

Also, it was reconfirmed that Mabuchi would focus on the key areas of restricting the use of environmental burden causing substances and reducing  $CO_2$  emissions.



Fiscal 2009 Environmental Managers Conference

## **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 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.

## Acquisition Status of ISO 14001 Certification

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 2009, 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.



Periodical audit by an external certification body

### Mabuchi Group ISO 14001 Certification Acquisition Status

### Acquisition of ISO 14001 integrated certification

Integrated certification (date)	September 15, 2009 (Expires on July 1, 2011)
Audit body	BSI (British Standards Institution)
Environmental system standard	ISO14001:2004

### Acquisition of ISO14001 initial certification

Base	Acquisition date			
Mabuchi Head Office, Technology Center (Japan)	December 2, 1999			
Mabuchi Industry Co., Ltd. (Hong Kong Mabuchi, Guangdong Factory)	December 11, 2000			
Mabuchi Motor Dalian Co., Ltd. (Dalian Mabuchi, Wafangdian Mabuchi)	August 17, 2000			
Mabuchi Motor (Jiangsu) Co., Ltd. (Jiangsu Mabuchi)	August 10, 2000			
Mabuchi Motor Vietnam Ltd. (Vietnam Mabuchi)	March 16, 2001			
Mabuchi Motor Danang Ltd. (Danang Mabuchi)	July 21, 2008			
Mabuchi Taiwan Co., Ltd. (Taiwan Mabuchi)	December 6, 2000			
Mabuchi Motor Taiwan Ltd. (Kaohsiung Mabuchi)	March 14, 2000			
Mabuchi Motor (Dongguan) Co., Ltd. (Dongguan Mabuchi)	January 24, 2008			
Mabuchi Precision (Dongguan) Co., Ltd. (Ludong Mabuchi)	April 27, 2009			

## **Development of Small Energy-saving Motors**

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.

Mabuchi began producing small motors for the audio and visual equipment field in the latter half of the 1980s. Building on the knowledge we gained, we recently started to develop small energy-saving motors that are half the volume and weight of conventional motors with the same performance (torque, rotation speed). We began commercial production of one such model (SF-266SH) in 2008.



Small motors make it possible to:

- Reduce the amount of materials used and CO<sub>2</sub> emissions during manufacturing
- Improve fuel efficiency when used in automobiles and other vehicles due to their reduced weight.

Customers can save energy while maintaining the same performance (torque, rotation speed) as conventional motors.

In fiscal 2009, we added two new models (SZ-286, SZ-466WB) to our lineup of energy-saving motors. We produce them as motors that produce little electric noise giving thoughtful attention to the electromagnetic wave environment which has become an issue recently, in addition to our attention for reducing  $CO_2$  emissions.

Halving the volume and weight of motors is never as easy as it sounds. Mabuchi managed to reduce the size of motors while maintaining the same performance (torque, rotation speed), based on its technologies relating to magnetic circuits, winding, and improvement in parts accuracy that the company has accumulated as a manufacturer specialized in small DC motors. We will continue to promote R&D toward diversifying the product lineup of energy-saving motors.



## **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 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.



In-house education on the management of environmentally prohibited materials at Dalian Mabuchi



## **Green Procurement Flowchart**

## Saving of Water Resources

Water shortage has been a major environmental issue as the earth's water resources are limited.

Mabuchi is making various efforts to save water resources.

## Hong Kong Mabuchi (Guangdong Factory)

In fiscal 2009, Hong Kong Mabuchi (Guangdong Factory) made the following efforts to reduce the amount of water resources it uses:

Guangdong Factory No. 1 treats wastewater from the factory and reuses it as water for flushing toilets. In this way, the factory reduced its water consumption by about 80,000 tons a year. This allowed it to cut its annual water bill and wastewater treatment expenses, in addition to saving water resources.

Guangdong Factory No. 2 constructed a rainwater storage system in 2009. The stored rainwater is sprinkled on the trees in the premises. In fiscal 2009, the factory used about 600 tons of rainwater as a substitute for municipal water.



Treatment tank for domestic wastewater



Sprinkling water from the rainwater storage system

## Dongguan Mabuchi

Axes (shafts) used to transmit power from a motor are chamfered to various shapes to fit each application and required performance. As a chamfering method, we use a processing method called the barreling process, which consumes a large amount of water.

To save water resources, Mabuchi started to develop a water-saving method in this process and Ludong Mabuchi succeeded in developing a method that can recycle discharged water using a settling tank in 2008. Dongguan Mabuchi also adopted this method in 2009, managing to save 1,300 tons of production water a year.



Water-saving method in the barrel process (concept)

## **Preventing Global Warming**

### Mabuchi is making Group-wide efforts to tackle global warming, an issue we all face.

Today, we increasingly need to take resolute actions to prevent global warming, as demonstrated by Japan's commitment to a 25% reduction in GHG emissions by 2020 relative to 1990 levels, which was announced at the opening ceremony of the UN Summit on Climate Change in September 2009. To address the issue, Mabuchi is making Group-wide efforts, including at its overseas production bases, toward reducing GHG emissions. Our company's  $CO_2$  emissions mainly arise from the use of electricity. Therefore, we are taking various measures such as adopting energy-saving equipment and streamlining processes to reduce the amount of electricity we use.

## Reduction of CO<sub>2</sub> Emissions at Vietnam Mabuchi

Based on the policy of "reduce CO<sub>2</sub> emissions and achieve the same economic effect using less energy," Vietnam Mabuchi took the following measures in fiscal 2009:

- Stopping the use of unnecessary equipment
- Reviewing the temperature and illuminance levels
- Streamlining production processes and methods
- Repairing equipment and replacing it with efficient equipment
- Cutting the amount of electricity, gas, and oil products used as much as possible

In fiscal 2009, Vietnam Mabuchi replaced a total of 19,000 fluorescent lamps with power-saving, long service-type lamps. This allowed it to reduce the amount of electricity it used by about 342,000 kWh and cut 164 t- $CO_2$  emissions a year. Also, the 250 W lamps that had been used in the press process were replaced with fluorescent lamps, which reduced the amount of electricity used by about 28,000 kWh a year while maintaining the same illuminance.



Lamps in the press process were replaced with energy-saving lamps

## Solar Water Heater at the Guangdong Factory

Hong Kong Mabuchi (Guangdong Factory) installed a solar water heater (with an area of 210 m<sup>2</sup>) on the roof of the company dormitory in fiscal 2009 to reduce the amount of light oil it uses for its hot water supply.

This solar water heater can produce a large volume of hot water at a temperature of 60°C to 70°C, enough for 700 people to shower on a sunny day even in winter. This parallel use of solar water heater allowed Hong Kong Mabuchi to save about 4,000 liters of light oil than the single use of light oil water heater in a year. This helps reduce the  $CO_2$  emissions generated by burning light oil.



A solar water heater installed on the roof of the company dormitory

## **Rooftop Greening**

Hong Kong Mabuchi (Guangdong Factory) spends a large amount of electricity for air conditioning because it is located in an area that has high temperatures all the year round. To reduce the amount of electricity it uses, the company began an attempt at rooftop greening in fiscal 2009.

Guangdong Factory No. 1 planted honeysuckles on the roof of its production building as a trial. Recycled water from the production process is used as water for their growth. Recycled plastic containers are used as plant pots.

Dongguan Mabuchi is greening the walls of its building. As a result of these efforts, the amount of electricity consumed for air conditioning has been reduced, helping to cut  $CO_2$  emissions.



Honeysuckles planted on the roof of the factory

## Efficient Use of Factory Space

The Mabuchi Group is also striving for more efficient use of its factory space by continuously streamlining production processes and the factory layout. In fiscal 2009, Taiwan Mabuchi reduced the amount of electricity it used for air conditioning and lighting by 2.21 million kWh and cut  $CO_2$ emissions by 1,370 t- $CO_2$  through improving the way it uses its factory space.



Streamlined production area



### CO<sub>2</sub> Emissions of the Mabuchi Group

## **Environmental Communication**

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

## **Slogan and Poster Contest**

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



Display of winning works

### Dalian Mabuchi's Environmental Report Commended

Dalian Mabuchi has published an environmental report, voluntarily describing its environmental conservation results. In recognition of the content of this report, it was commended as the year's best report in December 2009 by the Environmental Protection Bureau of Dalian's Municipal Government.



Ms. Lan of Dalian Mabuchi receives an award (second from the left)

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## Enhancing the Community's Environmental Awareness

Mabuchi Group employees are helping to enhance environmental conservation awareness in each community on various occasions. The photo shows a parade during the Dragon Boat Festival in Dongguan City. Employees of Hong Kong Mabuchi (Guangdong Factory) took part in the parade wearing dresses made from old newspapers to emphasize the importance of protecting the earth's resources.



Employees wearing dresses made from old newspapers

## Won the Indestructibility Award

In June 2009, Danang Mabuchi received Vietnam's Green Trademark "Indestructibility Award" from the Ministry of Natural Resources and Environment and the Science & Technology Association in Vietnam. This was in recognition of its excellence in the area of reducing and recycling waste and the administration, education and training, and public relations functions of its environmental system.



At the award ceremony

## Other Environmental Responses

### **Efforts toward 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.

To more quickly decontaminate the soil, we adopted a water injection method in 2009. In addition, we used a nanotechnology method to confirm the results of decontamination.

We also installed barrier wells and sheet piles to prevent any outflow of contaminants from the premises.

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:

### Fiscal 2008

Туре	Unit	The Head Office	Hong Kong Mabuchi Dongguan Mabuchi Ludong Mabuchi	Taiwan Mabuchi	Kaohsiung Mabuchi	Dalian Mabuchi Wafangdian Mabuchi	Jiangsu Mabuchi	Vietnam Mabuchi	Danang 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	12.041
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	172	29,752	923	633	6,605	2,266	5,150	1,374
Amount of landfill waste	t	3	522	61	29	601	93	207	383

### Fiscal 2009

Туре		The Head Office	Hong Kong Mabuchi Dongguan Mabuchi Ludong Mabuchi	Taiwan Mabuchi	Kaohsiung Mabuchi	Dalian Mabuchi Wafangdian Mabuchi	Jiangsu Mabuchi	Vietnam Mabuchi	Danang Mabuchi
Electricity purchased	10,000 kWh	832	6,497	457	727	2,816	946	2,180	1,113
Petroleum gas	t	4	16	8	5	278	0	52	44
City gas	t	87	0	0	0	0	11	0	0
Coal	t	0	0	0	0	9,836	0	0	0
Gasoline	kl	10	277	11	5	10	37	16	12
Diesel	kl	2	250	17	1	6	3	20	0
Fuel oil A	kl	0	0	0	0	0	0	0	0
Total amount of discharged waste	t	160	20,537	938	477	1,757	3,349	6,943	2,280
Amount of landfill waste	t	3	350	41	30	85	173	612	142

\* Environmental data of overseas sales bases and Yingtan Mabuchi are not included in the above data.

# MABUCHI MOTOR

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