

[Message from  
Our President](#)[Up Close](#)[Activity Report in  
the Fiscal Year of 2010](#)[Site Data](#)[Related Information on  
CSR Report](#)[Company Overview /  
CSR Management](#)[Yokohama Rubber CSR Web site](#) > Activity Report in the Fiscal Year of 2010

## Activity Report in the Fiscal Year of 2010

### Activity Report in the Fiscal Year of 2010

The Yokohama Rubber Group has prepared this report to show our stakeholders what our ideas are, what we achieved in FY2010, and what issues we face as we strive to build a trusted identity as a contributing member of the global community.

[▶ Corporate Governance and Compliance](#)[▶ Environmental Preservation](#)[▶ Together with our Customers](#)[▶ Together with our Employees](#)[▶ Together with our Business Partners](#)[▶ Together with our Shareholders and Investors](#)[▶ Together with our Society](#)

### Activity Report in the Fiscal Year of 2010

[▶ Corporate Governance and Compliance](#)[▶ Environmental Preservation](#)[▶ Together with our Customers](#)[▶ Together with our Employees](#)[▶ Together with our Business Partners](#)[▶ Together with our Shareholders and Investors](#)[▶ Together with our Society](#)[▲ Go to Page Top](#)



## Corporate Governance and Compliance

Yokohama Rubber Group is striving for further improvement and enhancement of our Corporate Governance Supporting System to realize management with health, safety, transparency, and fairness based on our "Corporate Philosophy". Without this, our management body would not be functioning to continue to improve our various corporate values. We aim to establish our management so that it will continue to gain "steadfast credibility" from all our stakeholders.

### Corporate Governance Support System

Our support system of corporate governance is on top of various organizations stipulated under the Companies Acts (General Shareholder's Meeting, Representative Director, Board of Directors, Board of Auditors, and Accounting Auditors). We have also deployed a Corporate Officer System in order to ensure prompt management decision making and execution of work operations by making clear the supervision of our management and execution of work operations. Also, in order to fortify strategizing functions in our top management, we conduct discussions to understand the current status of various business schemes and business strategies by holding Management Meeting among our Directors as core members. The Chair of the Board Meeting is our Chairman and cannot serve as a Corporate Officer at the same time. Also, we do not appoint any External Directors.

Under our systems, Corporate Officers can get know the status of our business operations by attending various important meetings or committees such as the Management Meeting. We have three pillars in our auditing system; the audits done by our Corporate Officers who supervise work execution by our Directors, accounting audits done by our independent accounting auditors as external audits, finally, the audits done by our Internal Audit Department for work operation by our each corporate division and group companies, plus accounting audits. They function by maintaining each other's independency; by establishing the three pillars of the audit system, our Corporate Auditors can fortify the function of Corporate Auditors by obtaining information from our Accounting Auditors and Internal Audit Department in a timely manner.

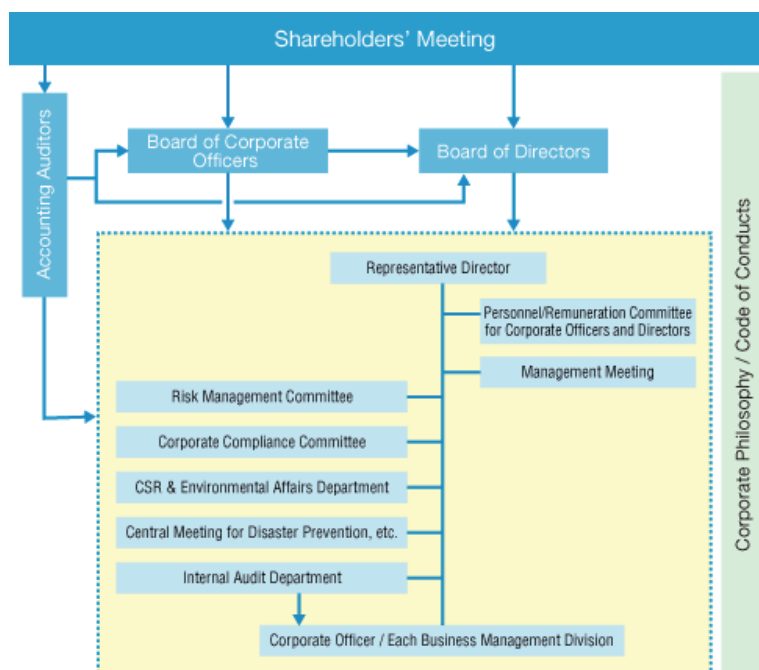
Also, in order to secure transparency and fairness in appointment and various benefits of our Directors, we will determine them at the Board of Directors' Meeting by establishing a Personnel/Remuneration Committee for Corporate Officers and Directors followed by our review. We have deployed the Merit System so that the part of their remuneration is in proportion with our actual business performance. Also, the measurement for critical matters such as conflict of interest will be determined in accordance with the Regulations of our Board of Directors.

### Corporate Governance Supporting System (as of June 29, 2011)

## Activity Report in the Fiscal Year of 2010

### Corporate Governance and Compliance

- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society



▲ [Go to Page Top](#)

## Improvement of our Corporate Governance System

We have made resolutions under the "Basic Guidelines for Corporate Governance in Accordance with Companies Act" during our Board of Directors' Meeting in May 2006. Not only do we follow up with their activity status every year, but also we keep making further enhancements such as our review by aiming for clearer description of the "Guidelines of the Elimination of Anti-Social Behaviour" in April 2009. Also, to comply with the J-SOX Law effective from the fiscal year of 2008 (evaluation of support system for financial account in accordance with Financial Instruments and Exchange Act), it has been confirmed that our corporate governance system is effective both in internal and external evaluation in the fiscal year of 2011. We will continue to make improvements on this aspect as well in order to maintain our sustainable and effective functions.

▲ [Go to Page Top](#)

## Risk Management Support System

We have established a Risk Management Committee to manage risks in a cross-sectional manner and handle properly anything that may impact our company management greatly. Our Risk Management Committee has two functions; to "act promptly in case of any emergency situation occurred" and to "confirm what to do towards potential risks and establish a meticulous risk management supporting system". We have divided potential risks towards the entire Yokohama Rubber Group into Safety, Earthquake/Fire, Compliance, Environment, and so on; followed by our development upon setting up of guidelines and measurements from each Committee and Body for Meeting. Also, each of our business units is addressing not only the preceding descriptions, but also various risks related to quality and business management.

In the wake of the Great Eastern Japan Earthquake that struck the Tohoku region on March 11, 2011, we established a "Central Disaster Handling Division" under our President as the Head, to handle the emergency situation right after the earthquake broke out. The Central Disaster Handling Division gave instructions to our employees on duty remaining in our company premises and office buildings, understanding of damage situation both in human and facilities, any measures to avoid the effect on our customers, and relief goods for our operation sites in the affected area and its surrounding areas. Our Risk Management fulfilled its duties in a sense but it became clear that there are so many areas for further inspection and enforcement needing to be made. We will thereby evaluate the impact of the earthquake in a more holistic way to fortify our risk management support system. In order to achieve this, we should not ignore any of our activities on normal days; we will continue to work more on our PDCA activities which is to sample any possible risks, discuss what to do with them, let the relevant personnel know about them, followed by our verification.  
(For our activities in the wake of the earthquake, please refer to our [Up Close Articles](#).)

▲ [Go to Page Top](#)

## Our Approaches for Corporate Compliance

### ■ Our Basic Notion of Corporate Compliance

Our basic notion of Corporate Compliance is "not just to pursue operational profit, but also to enhance our presence as a corporate citizen by respecting social ethics, high credibility, and fair business, while proactively engaging in the environmental protection".

■ Our Supporting System for Corporate Compliance

We are holding meetings under the "Corporate Compliance Committee" to review and confirm any incidents related to corporate compliance and activities as to its enlightenment four times every year. Our President has been appointed as the Committee Chair and its Secretariat is from our Corporate Compliance Department. Every division in Yokohama Rubber is placed with personnel who belong to the Corporate Compliance Department as well, to continue to share the progress of the activities in internal enlightenment and related information in the workplace. In our domestic Group Companies as well, we have appointed our managers to facilitate each of them to develop the same level of activities. We are aiming to do the same for our overseas offices, too; we have completed the appointment of our managers to facilitate all our overseas offices in the fiscal year of 2010.

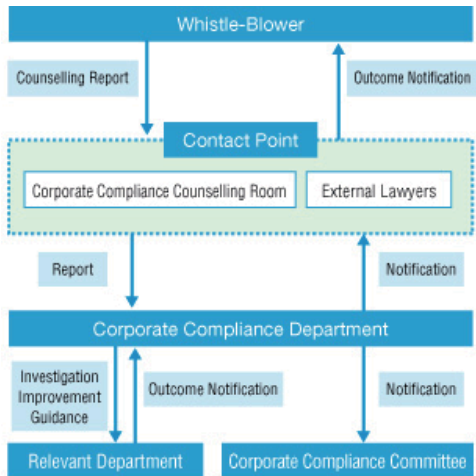
Incidentally, in the fiscal year of 2010, there was no major breach of the Anti-Monopoly Act confirmed; also, no legal sanction has been made against our company.

■ Whistle-Blowing System (Corporate Compliance Hotline / General Counselling Room)

The Corporate Compliance Hotline refers to the system to entertain even anonymous whistle-blowing as our Corporate Compliance Department and our external legal office as contact points, being in place in accordance with Whistle-Blower Protection Act. You can find its telephone number, fax number, and e-mail address on "Corporate Compliance Card" to be distributed to all our domestic Yokohama Rubber Group's employees. There were 13 reports in the fiscal year of 2010.

The General Counselling Room is the contact point where all our internal email users can utilize as to any doubt or anxieties at work related to Corporate Compliance. Each case is handled by personnel from the Legal Department. In the fiscal year of 2010, we received 24 cases of questions and concerns for items to confirm or seeking advice.

Whistle-Blowing System (Corporate Compliance Hotline)



\* We will notify with the outcome for whistle-blowers who had identified themselves.

■ Activities on Seminars and Various Enlightenment

We are trying to be effective in order to have our employees equipped with general knowledge as basic knowledge of Corporate Compliance by combining it with special contents they need to take note of at work. In the fiscal year of 2010, we focused on the education towards our expatriates overseas in order to enhance our Corporate Compliance Support System overseas; also we had conducted the seminar as to Sub-Contracting Acts and Anti-Monopoly Acts towards personnel in charge of procurement.

Seminars Conducted (fiscal year of 2010)

Seminar for Overseas Expatriate	Group	166 people
Subcontracting & Anti-Monopoly Acts	Group	364 people
Incidents of Corporate Compliance	Group	108 people

■ Privacy Policy for Employees

We strictly manage employees' personal information by obtaining prior consent by quoting the purpose of its usage. We understand the importance of employees' personal information and ensure its proper treatment; we also let our employees know through our internal intranet that we continue to take measures to protect their

personal information.

■ **Measurement against any Violations**

- No sanctions against Anti-Monopoly Acts have been imposed on our company.
- No sanctions against fraudulent accounting practice, any discrimination or misconducts at workplace have been imposed on our company.
- No sanctions owing to any violation against environmental regulations have been imposed on our company.
- No complaints have been lodged over the loss of our customers' data.
- There is no case of a breach confirmed against the law with regards to the supply of products, services, and their usages.

▲ [Go to Page Top](#)

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## Environmental Preservation

### Environmental Management

[Guidelines](#)
[Achievements](#)

#### Guidelines

#### Supporting System of CSR & Environmental Affairs

In order to become a contributing member of the global community with a trusted identity, we have our supporting system in place to propose and discuss CSR issues that Yokohama Rubber Group should address. As for supporting systems of CSR & Environmental Affairs, we are conducting a CSR & Environmental Council semi-annually (June and November) which is chaired by our President\*. At the CSR and Environmental Council, we evaluate Yokohama Rubber Group's various CSR activities that will lead to improvement for the next fiscal year. We have three task forces, six committees, and one meeting as sub-bodies under this Council to promote CSR and Environmental activities within our company.

To pursue our effort on practicing consistent and high-level environmental management in all our operations worldwide, we also hold a "Global Environment Council" every year, which is a gathering by all the managers from our overseas production operations. Twenty-two people, including those from all overseas production operations and core distribution subsidiaries have attended the FY2010 event held on December 21. On that day, all the attendees engaged in a discussion by focusing on the environmental policies and related activities. Furthermore, the Council has re-confirmed to promote CSR activities and put into practice consistent and high-level environmental management.

Effective from June 2011, this conference is chaired by our Chairman and CEO.

[Click here to refer to our Supporting System of CSR and Environmental Promotion Framework](#)

#### Enforcement of Global Environmental Management Based on ISO14001

We aim to keep up with the high-quality environmental management under the same standard both in domestic and overseas group companies; thereby we have placed ISO14001 which is the international standard of Environmental Management System as the basis of our management.

We are trying to get all our operation sites to obtain ISO14001; so far, a total of 15 operation sites in Japan, comprising ten from Yokohama Rubber and five from our group for domestic operations have obtained it, whereas overseas a total of 13 operation sites have been certified, including two facilities who have just obtained it in the fiscal year of 2010.

In the fiscal year of 2010, both Suzhou Yokohama Tire Co., Ltd. which is a tire production and distribution company in China, and Yokohama Tire Vietnam, Inc. (Yokohama Tyre VietInc.=YTVI) obtained this certification in February, 2011.

### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

#### Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society





## Participation in Worldwide Approaches

Yokohama Rubber is working on various approaches such as surveys of various possibilities for tires that might impact the environment and people's health; this is a common issue in the tire industry in accordance with the Tire Industry Project being established under the WBCSD (World Business Council for Sustainable Development: headquartered in Geneva).

[▲ Go to Page Top](#)

## Environmental Accounting

We are promoting efficient environmental preservation activities by understanding quantitative environmental activities through environmental accounting.

### ■ Environmental Preservation Cost

As for the development of low-fuel tires in the fiscal year of 2010, we were working on the development of inner liner materials to control air permeability or rubber material with low in rolling resistance. Also, we have worked on the development of thermo-reversible rubbers (resource circulating type of rubbers). Our research and development cost for those approaches resulted in JPY 128 million for investment and JPY 6,246 million for our cost.

### Environmental Preservation Cost

Unit: JPY one million

Classification of our environmental preservation cost	Primary activities	Investment		Cost amount	
		FY2009	FY2010	FY2009	FY2010
Cost within business areas		373.0	518.7	1,985.6	2,978.8
Pollution prevention cost	Odour elimination equipment, dust prevention equipment, and cost for the environmental measures	198.4	95.9	321.5	251.1
Earth environment preservation cost	Cost for co-generation facility investment, energy saving activities, etc.	145.6	369.1	569.8	609.6
Circulating resource cost	Segregation of waste materials, disposal cost, etc.	29.0	53.6	1,094.3	2,118.1
Up/downstream cost	Provision of environmental products, cost to reduce environmental burden	0.0	0.0	35.3	10.3
Management cost	Cost to maintain and operate environmental management, create environmental and social report, labour fee related to the environment, etc.	8.0	3.3	1081.9	912.9
Research and development cost	Research and development cost to reduce environmental burden	190	127.7	5668.2	6245.9
Cost for social activities	Environmental contribution activities from environmental aspect	0.0	0.0	26.9	23.0
Cost for environmental damages		0.0	0.0	0.0	0.0
		571.0	649.7	8,797.9	10,170.9

Targeted Offices: Yokohama Rubber's domestic operation sites and group companies (Sanyo Retread and SC Kingflex)

Period: from April 2010 to March 2011

\*1 These are complied with the "Environmental Accounting Guidelines in 2005 version" and the "Environmental Accounting" Guidelines (in 2000 version) published by The Japan Rubber Manufacturers Association.

\*2 Research and development cost refers to development to reduce environmental burden and development for environmentally-friendly products.

\*3 Labour costs were entered by calculating man-hours with regards to any activities on environmental preservation.

\*4 Cost for environmental damages has resulted in zero. Also, there is no entry for depreciation cost.

### ■ Economic Effect

As for the economic effect compared with the fiscal year of 2009, it resulted in JPY 159 million which is the profit increase in lieu of the recycling of waste materials, JPY 92 million increase which is the cost reduction derived from the usage of recycled products, JPY 217 million decrease which is cost reduction through energy saving. It amounted to the value of JPY 1,498 million as a total amount for the economic effect in the fiscal year

of 2010, which is an increase by JPY 34 million compared to our previous fiscal year.

## Economic Effect

Classification of the effects	Primary Action Items	FY2009	FY2010
Profit	Profit earned through recycling waste generated from our operation	77	236
Cost reduction	Cost reduction through energy saving	948	731
	Cost reduction through usage of recycled products	439	531
Total		1,464	1,498

## ■ Effect of Environmental Preservation

Emission of greenhouse gas has resulted in 33K ton-CO<sub>2</sub> increase compared to our previous fiscal year as it ended up with 322K ton-CO<sub>2</sub> in lieu of the reduction in production and energy saving effects.

## Effect of Environmental Preservation

Classification of the effects	FY2009	FY2010	Reduction volume compared to the previous fiscal year	Pages to refer
Greenhouse gas emission (Kt-CO <sub>2</sub> )	289	322	-33	Reduction of greenhouse gas emission
Organic solvent emission (t)	699	686	13	Management of chemical substance
Land reclaiming of waste materials (t)	0	0	Continuation of total zero-emission (eight domestic operation sites) Sustainable continuation of 100% recycling of the resources at our eight domestic operation sites	Reduction of waste material
Waste material generated (t)	41	41	0	

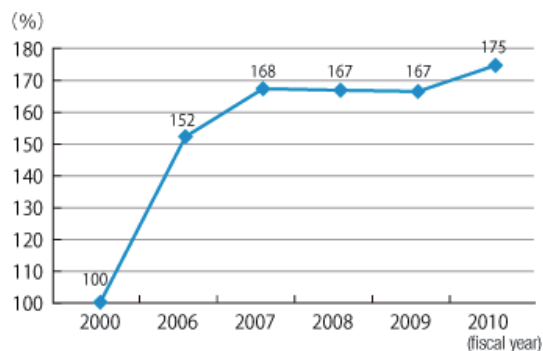
## ■ Environmental Efficiency

Environmental efficiency refers to the index to measure how efficient our business operation is as we cut down various environmental burdens. By quoting the environmental burden as denomination and sales figure as numerator, the larger the number of the index becomes, the more efficiently the improvement is being made. Our company's index for environmental efficiency comprises of three critical issues as described herein.

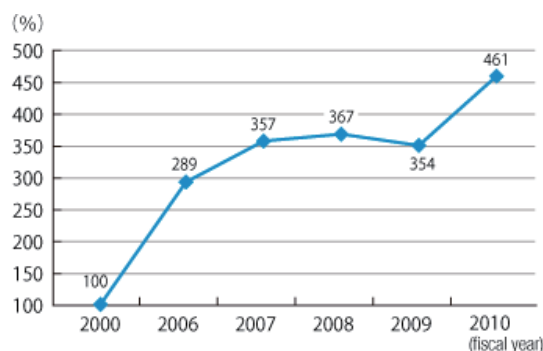
Greenhouse gas has resulted in almost the same with the previous fiscal year.

As for our approach on resource recycling after achieving zero-emission, there has been a significant degree of improvement likewise with the previous fiscal year.

## Index for Greenhouse Gas\*1

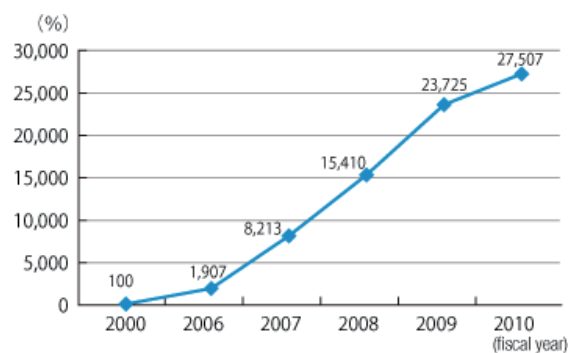


## Index for VOCs\*2



## Index for Resource Recycling\*3





\*1 "Sales Figure/Greenhouse Gas Emission Volume" refers to the index based on the benchmark year (fiscal year of 2000) as 100.

\*2 "Sales Figure/VOCs Emission Volume" refers to the index based on the benchmark year (fiscal year of 2000) as 100.

\*3 "Sales Figure/Final Disposal Amount for Waste Materials" refers to the index based on the benchmark year (fiscal year of 2000) as 100.

▲ [Go to Page Top](#)

## Achievements

### Execution of Comprehensive Environmental Audit

We are conducting audits as to continual progression for improvement on the management system of environmental management, improvement on the environmental performance, and minimizing environmental risks per operation unit by conducting corporate-wide environmental audits, external audits (ISO14001), and internal audits (ISO14001) by scheduling well in advance. Also, our CSR and Environmental Affairs Department is checking and verifying the score of self-evaluation at each site in accordance with the guidelines of the "Environment GD100" for domestic distribution companies within our group. Incidentally, there was no suspected item as to any violation against environmental legislation among all the auditing items in the fiscal year of 2010.

#### ■ Corporate-Wide Environmental Audit

Other than external audit (regular/renewal) and internal audit based on ISO14001 management system, we are conducting corporate-wide environmental audits done by our headquarters upon setting forth important items from a corporate-wide perspective towards each operation site. In the fiscal year of 2010, we thoroughly audited the chemical substance control system mainly for our production sites. Also, we were promoting various activities to contribute to the society and having more communication with local residents nearby which is initiated by each of our operation site. From now on, we will continue to enhance our "blending with local communities, cultural interaction, and social contribution".

#### ■ External Audit (ISO14001)

In the fiscal year of 2010 as well, we were able to confirm that all our existing certifications can be retained and renewed upon regular audit and for renewal at all our operation sites of Yokohama Rubber; these are conducted by ISO's screening and registration agencies without any major implications of our management systems' shortcomings.

#### ■ Internal Audit (ISO14001)

According to our manual of ISO14001, we conducted likewise at all our certified operation sites in the fiscal year of 2010 as well.

Through our internal audit, we can make sure of our continual leverage of the function levels from our environmental management system. We conducted our audit not just to operate and maintain the "Environmental Management System", but also by setting our common themes as "whether our system is duly functioning for our purposes, whether each of our group is walking the talk by reviewing and setting up the guidelines, purposes, and target by shifting more focus on the reduction of environmental burden even more proactive manners during their normal business activities."

▲ [Go to Page Top](#)

### Enforcement of Environmental Training and Enlightenment

#### ■ Environmental Training

We have incorporated environmental training as one of the subjects for newly hired employees. Also, we are holding a "Techno College" which is CSR and environmental training by targeting our technicians who have been with our company for two to three years. Incidentally, a total of 42 persons attended this seminar in the fiscal year of 2010.

Meanwhile, in order for our employees under managerial and supervisor level to thoroughly understand ISO14001, we are conducting "training classes for environmental internal auditor". Including 362 personnel who have completed this course to get certified in the fiscal year of 2010, currently total 1,008 personnel have been registered and are already active as our internal auditors.

## ■ Enhancement of our Personnel Enlightenment

As part of our activities for personnel enlightenment for the environment, we are conducting something to aim for improvement by getting involved with our entire personnel by sending our President's message towards all our employees in the Energy Saving Month in February and the Environment Month in June every year. During our Energy Saving Month in February, we are open for any proposals with regards to energy saving from all our employees, followed by awarding the ones among all the entries which have brought about significant improvement effect for energy saving. Also, in addition to our proposals for improvement, we are internally gathering environmental slogans and environmental posters. In the fiscal year of 2010, we were able to receive 3915 entries for slogans and 115 entries for posters.

### Environmental Poster



### Niko-niko (smiley) Newspaper by our Ibaraki Plant to raise their Employees' Awareness and for Enlightenment Purpose



## ■ President's Award for Environmental Contribution

As a part of our strategy to raise awareness and enlighten with regards to the environment through our work operation, we have been giving out a "President's Award for Environmental Contribution" through our system. The fields for the award consists of a "Factory Award" for the production group, a "Products Award" for the groups of development and designing of environmentally-friendly products, and an "Office Award" and "Special Award" for secretarial groups such as sales and administrative teams.

We select these upon screening and reviewing as to their activities for the past one year per case description of their field from all our groups of our entire corporation. The award winning groups from each award will receive

the certificate from our President every year in June.

By implementing this "President's Award for Environmental Contribution", it is evident that all our employees can have even better awareness of "Getting involved with environmental contribution" from their daily operation work.

#### The List of our President's Award for Environmental Contribution in the Fiscal Year of 2010

Fields of Environmental Contribution Award		Award Winning Groups
Factory Award	Award for Excellence	Shinshiro Plant/Shinshiro Minami Plant
	Effort Award	Mishima Plant
	Effort Award	Adhesives and Sealants Plant
	Effort Award	YHHC / YHCC
Products Award	Award for Excellence	Tire Designing Dept. No. 1/Tire Designing Dept. No. 2/PCLT Products Planning Dept. (BlueEarth Product Group)
	Effort Award	Tire Designing Dept. No. 1 (AIRLOCK, flat tire repair kit for passenger car)
	Effort Award	Tire Designing Dept. No. 2 (environment-responsive HPT for OE in Europe)
	Effort Award	Tire Designing Dept. No. 1 (Tire JOB for LT/WAN)
	Effort Award	Sports Business Division (environment-responsiveness for all the products from PRGR golf clubs)
	Effort Award	Adhesive Technology Dept./Electric Material Development Dept. (insulated high-thermal conducting adhesives)
Office Award	Award for Excellence	YTA
	Effort Award	YMJ Kyushu Company
	Effort Award	Kagoshima Yokohama
	Effort Award	CTSY
Special Award	Eco Energy Award	CHZY
	Recycling Technology Award	Tire Materials Development Dept.
	Office Energy Saving Award	Task force of environmental improvement and energy savings at Headquarters Office

▲ [Go to Page Top](#)

## Black Illumination

### Our Operation Sites Participated in Light-Down Campaign

Yokohama Rubber Group participated in the CO<sub>2</sub> Reduction / Light-Down Campaign in the fiscal year of 2010 as a member of Challenge 25. A total 733 of our operation sites conducted light-down, including headquarters, tire distribution companies, directly-owned tire shops, plants, and so on.

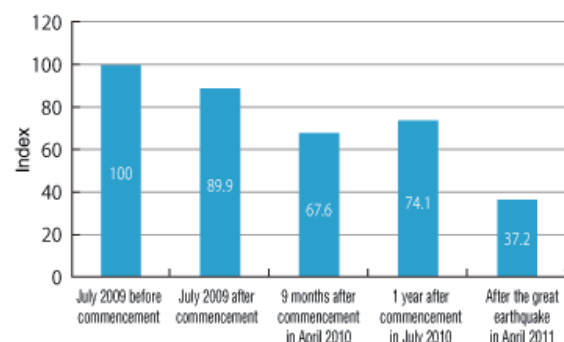
This campaign was started upon proposals by the Ministry of the Environment in 2003 under the theme of "let us consider global warming issues by turning our lights off". It takes place twice a year on June 21 (the summer solstice) and "Tanabata (star festival) light-down" on July 7 from 8:00pm to 10:00pm with numerous companies, facilities, and groups volunteer to turn off their lights altogether.

### Corporate-Wide Black Illumination

As a part of our electric energy saving activities of office buildings and administrative areas of our plants, we have been trying to promote our campaign to have all our personnel leave the office without any overtime work by setting up a Black Illumination Day; three days a week (basically on Monday, Wednesday, and Friday) from the fiscal year of 2009 onwards. During Energy Saving Month in February, we conduct mutual patrol activities at each workplace throughout our offices in order for our employees to have a better awareness. Also, we are encouraging them to acquire a habit to make sure to turn off the lights for their colleagues' who are away, or to switch off any standby electricity such as PCs or office automation equipment when they go home.

#### Reduction of Electricity Consumption through BI (Black Illumination Day) at Hiratsuka Factory Research and Development Integrated Centre No. 1

##### Comparison of Total Electricity Consumption per Day



▲ [Go to Page Top](#)

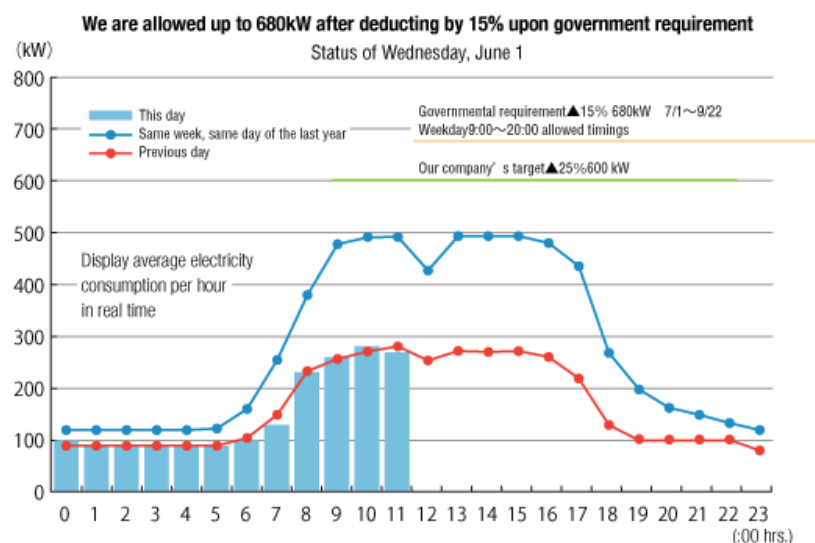
## How to Deal with Electricity Peak in Summer Season

In the wake of Great Eastern Japan Earthquake and the Tokyo Electric Power Company's Fukushima Nuclear Accident, we are trying to come up with "how to deal with electricity crisis in summer". In addition to the 15% reduction which is applicable within the areas of legal restriction compared to the peak hours of last year, where are under Tokyo Electric Power Company and Tohoku Electric Power Company's services, we promoted to reduce by 15% compared to peak hours of last year by applying to our other operation sites as well, i.e. areas under other electric power companies' services.

## ■ Main Approaches in the Area under Tokyo Electric Power Company

1. Period: between July 1 and September 22, 2011
2. Weekend shift at our operation sites located in Hiratsuka-City  
Hiratsuka Factory: off on Saturday and Sunday => change to off on Sunday and Monday  
Adhesives and Sealant Plant: off on Saturday and Sunday => change to off on Sunday and Monday  
Hiratsuka East Plant: off on Saturday and Sunday => change to off on Thursday and Friday
3. Change in working hours  
Indirect groups at Hiratsuka Factory: will change from 9:00am – 6:00pm to 8:30am – 5:30pm  
Indirect groups at Hiratsuka East Plant: will change from 9:00am – 6:00pm to 8:30am – 5:30pm
4. Strict abidance for no overtime-work  
Basically, employees at indirect groups of headquarters, Hiratsuka Factory, Adhesives and Sealants Plant, and Hiratsuka East Plant will not be allowed to work overtime.
5. Adopting super Cool Biz  
No ties, no jackets, and set room temperature in the office from current 28℃ to 30℃.
6. Shifting operating hours of main facilities at our production lines  
We will try to avoid electricity peak hours (9:00am-8:00pm) when operating major production facilities.  
We are conducting this measure at workplaces with shift-work such as Hiratsuka Factory and Mishima Plant.
7. Visualize our electricity consumption at headquarters building  
By setting 25% reduction as a target compared to last year's peak hours, we were trying to make improvements so that all our employees can cooperate with electricity saving by displaying up-to-date consumption chart in real time.

All those improvement efforts have paid off; at the point of June 2011, we were able to achieve energy saving effect by 200kW or more compared to last year.



▲ [Go to Page Top](#)

## Compliance with Various Legal Restrictions

### ■ Zero Environmental Accidents

There was no incident of Environmental Accident in the fiscal year of 2010.

### ■ Strengthening our Compliance with various Regulated Parameters

From fiscal year of 2008 onwards, we are trying to strengthen our control measures by setting up our voluntary control values in order to ensure our compliance of regulated parameters. We are reviewing our voluntary control values on a regular basis based on our measurement value in the past by reflecting onto statistical index. Also, we are fortifying our control system by internally defining terminologies such as "Environmental Trouble, Major Environmental Near-Accident, and Environmental Near-Accident". We will act immediately for corrective measures in the event of any environmental trouble or major environmental near-accident occurring.

## ○ Definition of Terminologies

- Environmental Accident
  - It refers to any incident of significant impact to the surrounding area which was picked up by media such as newspaper.
- Environmental Trouble
  1. Where it resulted in non-compliance with regulated parameters from atmosphere and water quality measurement.
  2. Where contaminated materials mainly carbon, waste oil, and solvent had scattered or flown outside of the plant premises.
  3. Where the plant is not meeting their voluntary parameter (reference value) of noise and vibration.
  4. Where the Environmental Manager of each operation site has concluded as an environmental accident.
- Major Environmental Near-Accident
  1. Where any of their items had exceeded their voluntary set parameters.
  2. Where any of their contaminated materials mainly waste oil or solvent had flown into the drain outlet.
  3. Where the Environmental Manager of each operation site has concluded as a major environmental accident.
- Environmental Near-Accident
  1. Where a minor case of liquid flow or powder scattering observed in their plant premises other than preceding cases of environmental accident or major environmental near-accident.
  2. Where liquid flow or power scattering was about to occur, or was anticipated.

## ■ Our Response to Environmental Troubles

There were seven cases of environmental troubles (four cases in Onomichi Plant, two cases in Mie Plant, and one case in Mishima Plant) in the fiscal year of 2010; we had thereby taken corrective measures accordingly. For any environmental troubles unable to comply with regulated values, we reported to the governmental body immediately after such occurrence.

## ■ Our Response to Major Environmental Near-Accident

There were 26 cases of major environmental near-accident in the fiscal year of 2010; 20 cases for water quality (including non-conformity of voluntary control value of water discharge) and six cases for atmosphere (including scattering of carbon); we thereby took corrective measures accordingly.

For major environmental near-accidents which exceeded their voluntary control values, we reviewed each case based on our measurement value in the past by reflecting onto a statistical index.

▲ [Go to Page Top](#)

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[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Environmental Preservation](#) > Environmentally-Friendly Products



## Environmental Preservation

### Environmentally-Friendly Products

[Guidelines](#)
[Achievements](#)
[Case Introduction \(Tires\)](#)
[Case Introduction \(MBs\)](#)

#### Guidelines

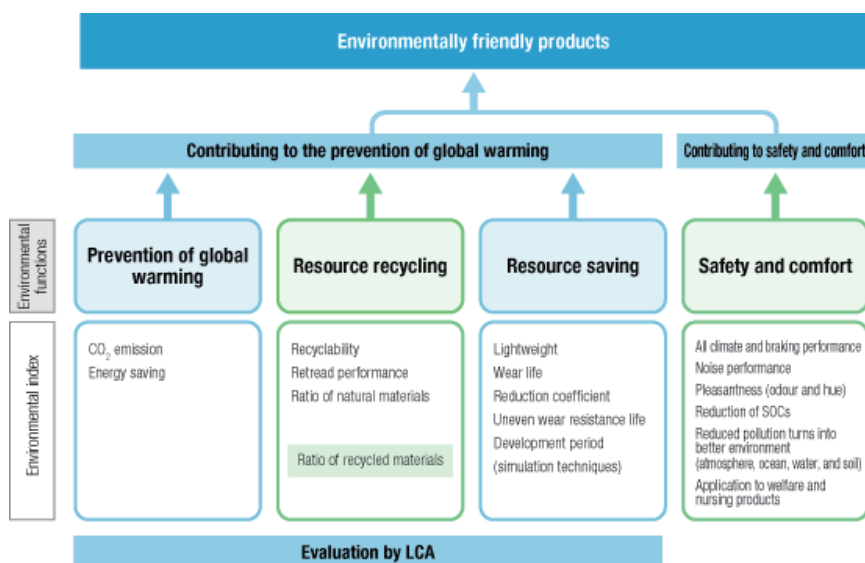
### Our Notion for Environmentally-Friendly Products

It is our desire to continue to support co-existence and growth for both people and automobiles through providing tires as our main products. In order to achieve this, we wish to contribute to our customers' happiness and wellbeing by continually providing products that can meet diversified requirements such as not just products to pursue environmental design, but also products mainly for sport purposes that can incorporate environmental design whilst aiming to balance environmental design and the drivers' sense of joy for racing.

Furthermore, it is a vital mandate of manufacturers to contribute to society through providing "quality products (goods)". Yokohama Rubber's Basic Policy from the latest Mid-Term Management Plan (GD100), which started from the fiscal year of 2006, reads that "we will deliver the best products at competitive prices and on time"; we target to switch all the products from Tire and MB Groups into environmentally products by the fiscal year of 2017.

Incidentally, our definition of "Environmentally-Friendly Products" is products that exceed 5% or more on the average under four categories; "prevention of global warming", "resource recycling", "resource saving", and "safety and comfort" whilst no deterioration is observed from all categories.

#### Four Pillars of Environmental Function and its Index



### System Creation so that only Environmentally Products can turn into Commodities

By using "Product Assessment Check Sheet", Yokohama Rubber is screening our new products' design adaptability to the environment. The Product Assessment Check Sheet refers to the scores in 17 items in total

### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

**Environmentally-Friendly Products**

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

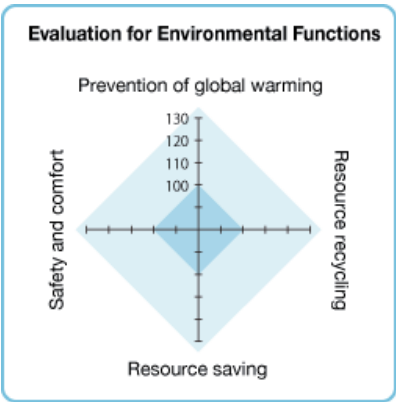


from planning to production stage of the products, CO<sub>2</sub> emissions during usage, ELV compliance in Europe, and so on. Upon conducting judgement of the total score both in initial development stage and prior to mass production, we only go ahead with mass production for products that can meet those standards.

Also, we are deploying our evaluation method called the Environmental Design Radar Chart in order to improve our company's comparison method of our products. This is our method to digitize by comparing with our benchmark (products in 1998) by roughly classifying environmental design into four categories (prevention of global warming, resource recycling, resource saving, and safety and comfort). Our evaluation is made more objective by digitizing the degree of improvement by comparing with our existing products.

Currently, we define our Environmentally-Friendly Products as ones that exceed 5% or more of each index on the average under four categories whilst no deterioration is observed from all categories; we strictly set the rules that any products other than environmentally products will not be approved as new products. By applying this, now, it is no longer easy to develop new products anymore as it has become compulsory even for special sport tires that used to require travelling performance only to clear the preceding criteria as well. We will continue to fulfil our responsibility as a contributing member of the global community as we have our systems in place so that "we will not produce other than environmentally-friendly products". From now on as well, we will contribute to society through our manufacturing by utilizing our various performance simulation technologies and material technologies, not just to reduce rolling resistance only, but by thoroughly discussing from the developing concept stage as to which items can meet the standards of environmentally-friendly products in the light of comprehensive aspects.

Radar Chart of our Evaluation for Environmental Function



▲ [Go to Page Top](#)

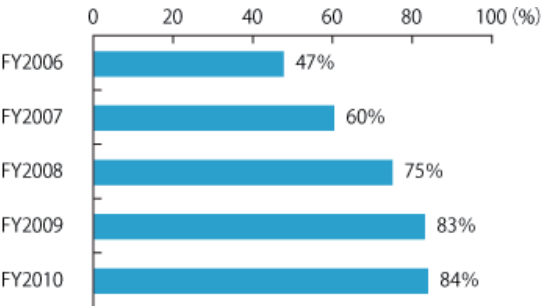
Achievements

Ratio of our Environmentally-Friendly Products in the Fiscal Year of 2010

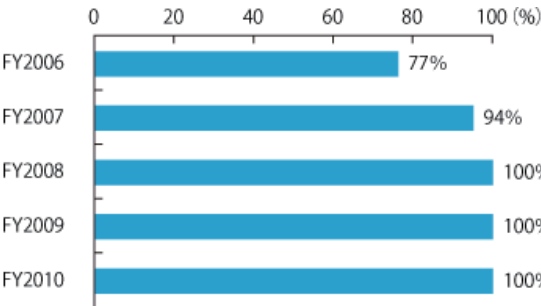
From the fiscal year of 2006 onwards, we started to aggregate the ratio of our environmentally-friendly products versus our entire product line-ups. We are calculating the share ratio versus both in our entire product line-ups and our new products; in the fiscal year of 2010, the share ratio in our entire product line-ups has resulted in 84% which is a 1 point increase compared to the fiscal year of 2009, whereas the share ratio in our new products has achieved 100% from the fiscal year of 2008 onwards.

From now on, we will continue to make various efforts to aim for 85% by the end of the fiscal year of 2011, and 100% by the end of the fiscal year of 2017 as to share ratio in our entire product line-ups.

Share Ratio of our Environmentally-Friendly Products versus our Entire Product Line-Ups



Share Ratio of our Environmentally-Friendly Products versus our New Products

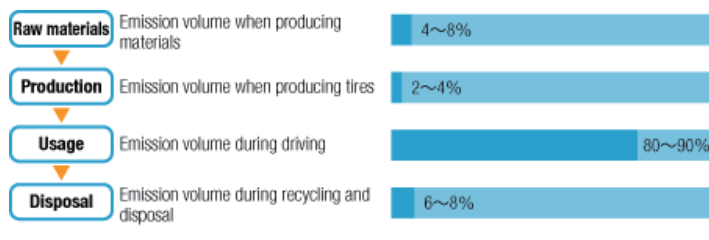


▲ [Go to Page Top](#)

Case Introduction (Tires)

## LCA Evaluation for Tires

LCA (Life Cycle Assessment) refers to the method to understand the environmental load (CO<sub>2</sub> emission) in numeric data of each stage of the products from production to disposal. For the case of tires, since 80 – 90% of CO<sub>2</sub> emission would take place during usage period of their entire life cycle. Yokohama Rubber is focusing on "coming up with environmentally-friendly products to realize low fuel consumption".



\* The graph above shows approximate values as to products from Yokohama Rubber

## Yokohama Rubber's Manufacturing Philosophy Imputed in "BlueEarth"

Yokohama Rubber has been pursuing technology and product development by focusing on the improvement of fuel consumption by reducing rolling resistance, along with our major launch of "eco tire DNA" since 1998 well ahead of our competitors. However, pursuing fuel efficiency and environmental friendliness would not suffice to fulfil our responsibility as a tire manufacturer. In order to win even better customer satisfaction, not just "fun" and "joy" that can contribute to motorization per se, we need to realize product development of the next stage under a new concept of being "gentle to people and society". Yokohama Rubber has been working on product development for a number of years to aim for the realization of those performances.

- Technology to maintain fuel efficiency and less hassle for maintenance work called "AIRTEX" – our endeavour to achieve "zero" air leak
- Natural material and material technology to reduce WET stress called "Orange Oil"
- Evaluation technology to digitize the relativity between human muscle force and stress called "Biological Monitoring"
- Technology for relativity detection between aerodynamics of the tires and travel resistance

"BluEarth", the new concept by YOKOHAMA has become three line-ups as new products have been added in the spring of 2011.

July 2010: BluEarth AE-01 under the theme of "starting from low fuel cost of AA to be more familiar with everybody"

February 2011: BluEarth RV-01 for "Premium dedicated to mini vans with low fuel cost and sense of safety"

March 2011: BluEarth-1 with low fuel cost under the highest grade of AAA being imputed of generous technological investment from YOKOHAMA which is gentle to the environment and people

We are going to meet various needs for our users, earth, and the society through our wide range of line-ups.

Furthermore, we are promoting global development by announcing the concept of BluEarth in Europe, North America, and China as well in 2011.



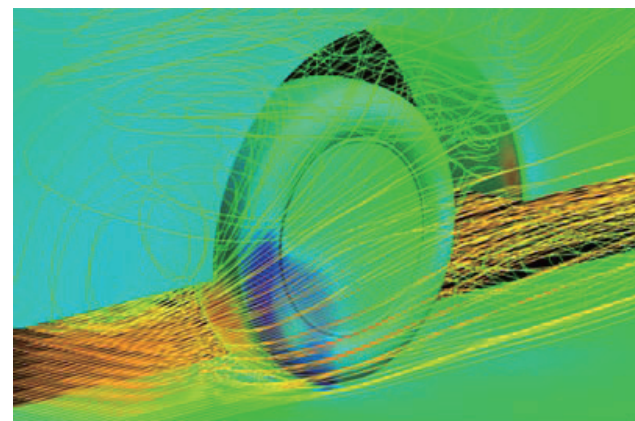
## Diversified Technologies to Realize Environmental Design

### ■ Technology to Reduce Air Resistance of the Vehicles through Tire Design

One of the designs allowing tires to contribute to low fuel consumption is "Rolling Resistance". At the same time, one of the major factors that would deter vehicles' fuel efficiency is "air resistance" (it is considered that overall resistance of the vehicles consists of 65% for air resistance and about 20% for rolling resistance). Until recently, there has been a notion that air resistance of the tire itself should be reduced, but Yokohama Rubber considers tires as air dynamic devices; we are working on our research and development through new perspectives to reduce vehicles' air resistance by changing the surrounding air flow of the vehicles. Our continuous approaches aiming for lower fuel consumption through reduction of air resistance have successfully paid off as the dimple design of our new product called BluEarth-1 (figure 2) by utilizing air dynamic simulation (figure 1) and wind tunnel testing.

Also, in order to accelerate research and development of this field, we are engaging in some projects under collaboration between business and universities. We are about to realize new technological developments that can reduce vehicles' air resistance whilst aiming for the installation of the next generation of BluEarth by making full use of air dynamic simulations, optimization technology, and wind tunnel testing under the cooperation of Professor Makoto Yamamoto (Faculty of Engineering, Tokyo University of Science), Professor Shigeru Obayashi (Institute of Fluid Science, Tohoku University), and Mr. Takuya Yura (Mooncraft Co., Ltd.).

**Figure 1: The Result of CFD Simulation around the Tire with Dimples**



**Figure 2: BluEarth-1**



#### ■ Technology to Visualize Design Space to assist our Engineers with "Inspiration"

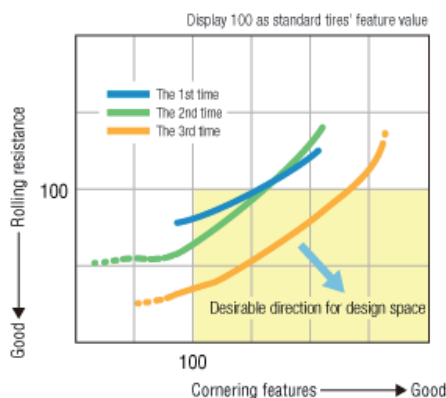
When developing low fuel cost tires, it is necessary to satisfy other performances to be in trade-off relation at the same time, not just to reduce rolling resistance related to fuel efficiency. In order to do so, it would be a great help if our engineers can visualize possible designs (design space) at the pre-stage of trial production such as "how much can we expect in terms of performance improvement?", or "what about tire configuration if that's the case?"

This method is called Design Exploration and has enabled visualization of such design space. We are conducting design exploration (visualizing design space) under the cooperation of Professor Shigeru Obayashi (Institute of Fluid Science, Tohoku University) who is the actual inventor of this design exploration.

After conducting exploration activities whilst evolving design parameters and ranges that define tire configurations (figure 1), we were able to find out the tire configuration and its mechanism that can balance rolling resistance and cornering features in higher dimensions. We are hoping to implement this technology for the next generation of BluEarth. Tire compounds of low fuel cost usually become tender; as a result, their cornering features may deteriorate accordingly. To complement this, the example below shows our endeavour to find out a tire configuration that can cover cornering features with tire configuration, whilst reducing rolling resistance at the same time.

Design exploration is not something to completed at one go; we can discover design space with even better performance by going through number of evolving processes. In addition to the final result of such exploration, we came to know what the design exploration is all about; which assists our engineers who are very present in the midst of those processes with inspiration.

**Figure 1: Design Space of Rolling Resistance and Cornering features**

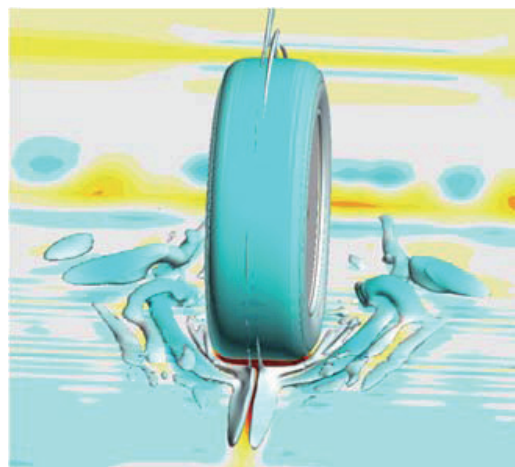


## ■ Simulation Technology to Visualize Invisible Pass-By Noise (Vehicle Exterior Noise)

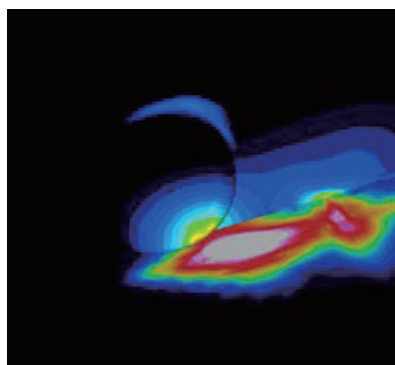
We are also working on improving passing-by noise as an environmental design aspect. Tire sounds can be classified as interior noise that can be heard in the car, and exterior noise that can be heard outside of the car. Here, we are introducing our technological development as to how to predict passing-by noise that can be heard when a vehicle passes by.

Currently among passing-by noise, we are working on two types of sound; one is the sound generated through interaction by the tread pattern of the tire and the road surface, the other is the sound under the influence of air flow around the tire. Especially for the latter, in order to realize direct simulation of the sound being generated around rolling tires, we are proceeding with this under the cooperation of Professor Kozo Fujii (Institute of Space and Astronautical Science under Japan Aerospace Exploration Agency) who is the trailblazer of this field, along with his fellow researchers' group. At this moment, whirls can be generated around the tire (figure 1) enabling us to capture pressure fluctuations (figure 2) which are the source of the sound. We will continue to strive for technological development that can be utilized for tire development (site for manufacturing) by advancing both simulation and experimental aspects. We aim to apply those technologies into the next generation of BluEarth that should excel more in noise performance.

**Figure 1: Whirls being Generated around the Tire**



**Figure 2: Pressure Fluctuation that can be the Sound Source of the Tire Sidewall**



## Environmentally-Friendly Products related to Tires

### ■ Tire Inflation Monitoring System "Product Name: HiTES"

In 2009 we launched an improved version of "HiTES", the monitoring system to check tire inflation and air temperature inside of the tire for all positions; these can be all done even when the driver may be behind the wheel. This sends information wirelessly from air pressure and temperature sensors that were installed inside of each tire, followed by receiving pressure and temperature data information for display at the driver's seat.

Since it immediately alerts to the driver with sound and colour when it becomes under-inflated, or of a temperature rise to the extent of the threshold of set parameters, it can prevent any possible accident as flat tire can be detected early, not just preventing deterioration of fuel efficiency owing to the increase of rolling resistance. Since it is essential to implement this inflation monitoring system for super single tires (super flat tires with single bundle which we used to deploy dual tires with double bundle in the past), which are rapidly catching on recently, now its installation work is high in demand. Also, temperature measurement system of HiTES is playing a role for the prevention of vehicle fire arising from excessive rubbing of braking (overheating) and so on.

Because these functions have been highly acclaimed, "HiTES" has won Chairman's Award from Eco-Products Award Steering Committee (Award for Excellence) at The 6th Eco-Products Award (under Products Category).

HiTES Display Monitor



Super Single Tire



■ Sound Absorbing Materials to Reduce Tire Noise called "Silent Ring"

The "Silent Ring" refers to a module in ring form dedicated to developed sound absorbency which is excellent in acoustic absorption and durability. It reduces tire noise by absorbing air noise vibration in the tire (air hole resonance) arises from shocks from road surface as it is installed inside of the tire. It makes the operation work easy during flat tire repair for being a separate module of the tire; it has also enabled the use of flat tire repair kits such as "AIR LOCK".

A "Silent Ring" is a product that enhances the level of comfort as we were successfully able to improve the noise performance of well-reputed "DNA dB super E-spec" even further. This tire is ideal especially for hybrid cars that require fuel saving and noise performance.

Image of the Installation of Silent Ring



AIR LOCK





## ■ The Latest Material to Realize Lighter Weights called "Air Transmission Control Film"

Air pressure in the tire would greatly impacts the fuel efficiency of the car. We are working on the development of inner liners that can retain excellent air transmission control functions; under-inflated tires would not be able to fulfil their tire performance to the fullest, they also might jeopardize safety during driving.

"Air Transmission Control Film", which is already applied to our numerous commodities, refers to the film that controls air seeping by pasting inside the tire; it is a new material of our own technology that has blended the special resin with conventional rubber for the inner liner. It contains smoothness whilst being high in density; henceforth we were able to significantly reduce the natural air seeping from the tire. Also, we have achieved approximately 1 out of 5 with its thickness to fulfil a comprehensive fuel saving effect such as contribution to making a lighter weight tire.

This technology has won "the 22nd Award by Society of Rubber Industry, Japan" which is the awarding system organized by the Society of Rubber Industry, Japan. For "Award by the Minister of Education, Culture, Sports, Science and Technology under the Science and Technology Fields in the fiscal year of 2011" organized by Ministry of Education, Culture, Sports, Science and Technology, we were able to win the Science and Technology Award (Development Sector) under our project title of "Development of inner-liner by deploying rubber and polymer alloy of the resin".



▲ [Go to Page Top](#)

## Case Introduction (MB)

### Environmentally Products by our MB Group Applicable to Wide Range of Industrial Fields such as Land, Ocean, and Air

MB stands for Multiple Business; this term implies the ever diversifying and expanding businesses of nowadays. Mainly it consists of four fields such as Hose and Couplings (high-pressure hoses, steel joints, etc.), Adhesives and Sealants (for construction, automobiles, etc.), Industrial Products (conveyor belts, seismic isolation rubbers, etc.), and Aerospace Division to develop diversified line-ups of products catering to a wide range of industry.

## ■ Prevention of Global Warming

### ○ Sealants and Adhesives for Solar Panels

For solar panels which are drawing attention as the energy source for next generation, we are trying to develop products such as rapid hardening adhesives for edge seal materials and current-collection box. The edge seal materials "M-155" and "M-155P" are used to seal the solar panel itself and the outer frame. It



helps to keep the panel performance for long period of time not just by preventing water immersion into the panels, but also by retaining insulation qualities. Meanwhile, adhesives for the current-collection box called "FLASH ONE" fix the current-collection box in the backside of the panel. This helps to retain water-tightness at the same time. "FLASH ONE", like the edge seal, has obtained UL Certification,\* an internationally authorized safety standard of the products.

\* UL Certification: It refers to safety standard to be authorized by Underwriters Laboratories Inc. in the United States, a safety standard development agency with the longest history, being established in 1894. On top of the products for various fields such as electrical products, they also screen their parts, materials, and more.

### Windmill Hose for Wind Electricity

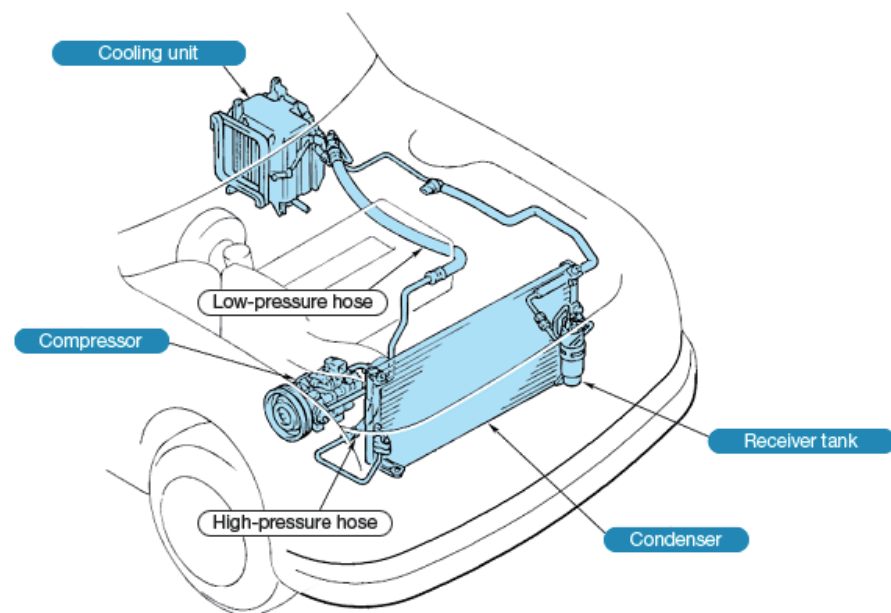
These days, wind-powered electricity is gaining more attention than ever. Windmills have the function to change their angles of their blades depending on the wind speed in order to convert the wind power more efficiently; a hydraulic pressure hose is used as their driving systems.

Our hoses in the LEVEX (NWP) series have been selected as hydraulic pressure coupling hose for windmills. We were able to realize compact couplings by developing ORS type metals in order to improve the sealing part of the mouth ring of large calibre hoses.



### Hoses for Car Air Conditioners Complied with New Cooling Medium

Until recently, the HFC-134a has been deployed as a cooling medium for car air conditioners; however, owing to its higher coefficient in terms of global warming, currently it is under review and we are inclined to switch to HFO-1234yf, the latest type of cooling medium with a lesser coefficient for global warming. To cope with this issue, we have developed a hose for car air conditioners complying with the latest cooling medium which excels as durable cooling medium, transparency, and durable hose.



## Resource Recycling

### Container for the Sealing Materials for Construction (e-can)

"e-can" refers to the container of sealant materials to be applied as a construction joint mainly for buildings and apartment complexes. Despite its sturdiness, it can be dismantled rather easily after use; we started its actual launching from 2002 onwards as a container that can substantially reduce the volume of waste cans compared to conventional tin cans. In 2005, we collected the "e-can" free of charge to develop nationwide (excluding Okinawa prefecture) material recycling to re-use as raw materials of our products. Every year its collection ratio is increasing; in the fiscal year of 2010, we were able to collect about 65% among our entire products that we delivered. We will turn collected "e-cans" into regenerated pellets upon pulverizing and powdering to be recycled

as raw materials of plastic pallets or artificial wood.

Furthermore, "e-can" has been awarded with the "Chairman Award of Clean Japan Centre" in the fiscal year of 2010, following our winning of the "Encouragement Award" in the fiscal year of 2008 under their awarding system called the "Circular Resource Techniques and Systems Award" which holds the longest history in the field of 3R<sup>\*2</sup>, supported by the Clean Japan Center (CJC)<sup>\*1</sup>.

<sup>\*1</sup>: CJC is a public-service corporation established in 1975 to serve as the national center to promote recycling, jointly supported by the public and private sectors, including the Ministry of Economy, Trade and Industry (METI), the Japan Chamber of Commerce and Industry (JCCI), Nippon Keidanren, etc. It plays a leading role in promoting creation of a sustainable resource-saving society, including solutions for waste and resource issues through the 3R's.

<sup>\*2</sup>: 3R refers to reducing waste generation ("Reduce"), reusing goods ("Reuse"), and effective usage of recycled materials ("Recycle").

**ECO FINLEX**

ECO FINLEX refers to environmentally friendly hydraulic hoses used in forklifts, power shovels, and other construction equipment. Since they are made of chlorine-free materials, there is no danger of dioxin emissions or suchlike after incineration disposal; these are the products being developed whilst aiming for the facilitation of thermal recycling after use.



**Resource Saving**

**STAIRCASE MODULE for Boeing 747-8**

We are providing aircraft staircases for the Boeing 747-8 Intercontinental Airliner. The Boeing 747-8 Airliner refers to the latest model affectionately known as the Jumbo,, whereas the Intercontinental Airliner refers to a jumbo passenger craft with two stories.

The biggest feature of the aircraft staircase we have developed this time is the highest standard of design; it provides sophisticated and comfortable space for passengers with its elegant and characteristic appearance by drawing gentle curves through numerous curved lines and curved surfaces. In addition, the rich deployment of metal parts for the outer surface, such as stainless steel and aluminium, gives it a high quality appearance.

Also, in addition to implementing lightweight and long lasting LEDs for all the lighting, we have optimized forms and materials for each part during design. We are contributing to a craft that is proud of its high fuel efficiency and noise performance by our meeting strict requirements from Boeing as to durability and weight by realizing a high level of its design.

**STAIRCASE MODULE**



**Transmission Coupling for Highly-Efficient Sport Cars**

We have developed transmission coupling for highly-efficient sport cars by realizing non-spill configuration, low pressure drop, high in durability, lightweight, and compactness. As for low pressure drop, we were able to achieve energy saving, i.e. a 60% reduction compared to conventional products by optimizing the performance of flow-volume through computer analysis.



#### ○ **Wear-Resistant Belt with Flame-Resistance and Anti-Cut under JIS**

Since blast furnace conveyor belts mainly transmit sinter or coke, they require excellent anti-cut functions and flame-resistance at the same time, in addition to wear-resistance when transmitted materials are being shot onto the conveyor belt. Through the wear-resistant belt with flame-resistance and anti-cutting under JIS we have developed this time, we were able to achieve reduction of waste materials by enhancing its cutting function compared to the existing products by our competitors, plus prolonging its life expectancy due to wear by 28% to surely reduce the frequency of belt replacement whilst maintaining existing flame-resistance performance at the same time.

#### ○ **Simplified Steel Joint**

As a part of the project to prolong the life span of bridges, we came to know that demand for minor extension joints made of steel for maintenance work is growing. We have launched some joints with 20mm type of extension made of steel called "YHT-20" and "YFS-20", plus 30mm type of extension called "YHT-30Ⅲ" and "YFS-30Ⅲ". They are low in height compared to conventional products as we have made some modification with their configurations; they have led to environmental contributions by reducing the volume of materials and CO<sub>2</sub> emission during transportation as we have achieved significantly lighter weights.

#### ○ **Adhesives with Insulated and Super Heat Conductive Type**

As a part of our effort to reduce environmental burden, Yokohama Rubber is trying to expand our products from "Electric Material Division".

For electronic devices to be used for various electronics, it is inevitable that most of the input electricity ends up with generating heat; the approach to radiation has become the most important technological item in the light of reliability of electronic device and durability. Also, heat conductivity is greatly related to power saving effect by reducing the time elapsed from switching on the power until it starts running. Our "Adhesive with Insulated and Super Heat Conductive Type YB Series" is equipped with insulation with excellent in heat conductivity; also it has cleared various regulated values for the environment being required for electronic devices such as RoHS, REACH, halogen free, and so forth.

We have maintained a good reputation as it is deployed for wide range of electric appliance manufacturers' DVDs, or TV sets, decks, and personal computers equipped with Blue-Ray, and more.

We will continue to apply this for wide range of electronics parts from now on.

### ■ **Safety and Comfort**

#### ○ **Hard Coat for Plastic Display**

"Y-coat" VH series refers to coating onto polycarbonate, PMMA resin, etc.; it provides outstanding anti-scratch function whilst being excellent in transparency; this product is suitable as a hard coat for displays.

Also, it is equipped with the grade where stains or thumb prints can be easily wiped out by compounding fluorine, plus another grade with improved functionality of touch panels, etc. by providing slip characteristics; this gives another level of comfort for smartphones.

#### ○ **Marine Fenders Monitoring System**

We have developed a product called the "Fender Monitoring System" to monitor the condition of marine fenders in a comprehensive manner by collecting various information such as air pressure inside of marine fender, deformation volume, reaction force, absorption energy and so on towards pneumatic marine fenders to be used as shock absorbers typically when a large vessel approaches to the berth. By using this system, on top of supporting ship handling when two vessels approaching near to each other, it can assist with vessel movement all the time during cargo loading and unloading or during anchorage; it can prevent an accident such as vessel collision or vessel hull crashes at the berth which will surely be led to the contribution for enhanced safety, also, it can contribute to the prevention of secondary accidents such as oil leak.

### ■ **People Friendly Products**

Our BluEarth's concept that reads "gentle to the people and society" is applied to our MB products as well through manufacturing.

#### ○ **"Medi-Air1" Air Cell Cushions for Preventing Wheelchair Pressure Sore**

Air-cell cushion "Medi-Air" for wheelchairs is effective to stimulate blood circulation always maintains the condition to optimally disperse body pressure catering to each user's body contour or body weight by

automatically regulating the air pressure through its sensory-and-control function at the base. Also, since its air-cells keep repeating a pinch-and-swell motion in an alternate way to prevent pressure sores, it stimulates blood circulation around humans' hip bones. The body pressure sensing, preventing hip bones from pressing directly on the wheelchair seat, also pressure sores are all operated automatically; users can customize air pressure setting by using remote controllers according to their preference.

This product has received a certification on October 1, 2010 from the Ministry of Health, Labour and Welfare in Japan under the category of completed parts of the seat position retention equipment; this is subject to the subsidiary for assistive device in accordance with Services and Supports for Persons with Disabilities Act in Japan. Currently, disabled persons are able to receive subsidies according to their purchased amount once they are approved by their Rehabilitation Counselling Office of their municipal government.

#### **Medi-Air1**



▲ [Go to Page Top](#)

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## ○ Reduction of Greenhouse Gas Emission

[Guidelines](#)
[Achievements](#)
[Case Introduction](#)

### Guidelines

#### Targets

By positioning ourselves for various countermeasures for global warming, one of our most important issues to tackle, we are trying to develop our activities to realize a low-carbon society by developing approaches on carbon management such as deployment of co-generation systems (CGS), changing into clean fuel, and thorough energy-saving activities by establishing our Expert Committee.

#### ■ Our Target for Environmental Activities

- Short-term reduction target value  
"Reduce GHG emission within our domestic group by 12% on the average compared to the benchmark year over the five years from fiscal year 2008 to fiscal year 2012."
- Mid-term target in 2020  
"By the fiscal year of 2020, try to reduce GHG emissions within our domestic group by 25% compared to our benchmark year."

▲ [Go to Page Top](#)

#### Financial Risks of our Businesses where Climate Change may Impact

##### 1. Critical Risks due to Regulations

At this moment, we should be able to achieve a reduction target which is 12% or more compared to our benchmark year in accordance with the Target Value of Japan (6% reduction) under the category of the Reduction of Greenhouse Gases as per Kyoto Protocol; in the event of any stricter target value being set by Post Kyoto Protocol (for example -25%), our critical issue would shift accordingly to achieve the revised rate.

##### 2. Critical Risks due to Physical Influence

Our company is producing and distributing seasonable commodities such as snow tires; amount of snowfalls or fluctuation of outside temperature owing to climate change might make our business performance rather unstable. Also, any climate change in the production areas of natural rubber may affect the steady procurement of raw materials.

##### 3. Other Critical Risks

There should be some cost involved to meet "the requirements from society" which is to reduce the burden of biodiversity arise from greenhouse gases. Also, there is another risk that the number of vehicles may be reduced due to any change in their ownership structure.

▲ [Go to Page Top](#)

## ○ Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

### Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

## Financial Opportunities through Climate Change

### 1. Major Opportunities through Regulations

As the need for development and launching for "the commodities to meet environmental regulations" may grow rapidly, it might lead to great business opportunities as we go about the development of products to meet those requirements.

Example 1: Product development of regenerative energy such as solar energy generation, or product development and launching that can meet stricter regulations on low fuel consumption tires.

Example 2: Product development and launching of tires along with the ratio increase in electrical cars.

Example 3: Product development along with the ratio increase in electrical cars (fuel batteries, high-pressure hydrogen hose, etc.)

Example 4: Mandatory installation of tire pressure monitoring system along with the legal regulations of air pressure control of tires.

Example 5: Inner tire materials with lesser tire pressure leaks according to the legal regulations as to tire pressure control.

### 2. Major Opportunities through Physical Influence

Actualize the needs of marine related products due to water surface elevation and their product development.

Product development of sealing materials to alleviate temperature rises in the house, thermal insulation materials on the rooftop, etc.

Providing heavy equipment related to the construction to brace for flood (example: high-pressure hoses, conveyor belts or that kind, or tires for heavy construction vehicles).

### 3. Other Major Opportunities

Boost the sales of environmentally-friendly products (our commodities to alleviate climate change).

We can expect sales growth on a consolidated basis; alleviation and adaption to climate change is a worldwide issue and such business management should become global as well.

▲ [Go to Page Top](#)

## Participation in "National Campaign" to Prevent Global Warming

We are participating in a "National Campaign" (Challenge 25) to prevent global warming as a nation. As a member of Challenge 25, we post our President's message for both the Environment Month in June and Energy Saving Month in February; also, we are trying to promote corporate-wide Cool Biz and Warm Biz for our personnel to adopt. Also in the fiscal year of 2010 as well, we participated in the CO<sub>2</sub> Reduction / Light-Down Campaign; our 733 offices including our headquarters, tire distribution companies, our directly-owned tire shops, and our plants got involved with this light-down campaign.

▲ [Go to Page Top](#)

## Achievements

### Emission Volume of Greenhouse Gases within Domestic and Overseas Group Companies

Emission volume of greenhouse gases within the domestic Yokohama Rubber Group had exceeded our national reduction target as per Kyoto Protocol; 16.3% reduction which is the average of three years from the fiscal year of 2008 to fiscal year of 2010 in terms of actual emission coefficient<sup>\*2</sup>, whereas a reduction of 19.0% for adjusted emission coefficient<sup>\*3</sup> by comparison with our benchmark year<sup>\*1</sup>.

<sup>\*1</sup> benchmark year: basically it is the year 1990 except HFC, PFC, and SF<sub>6</sub> that are set as year 1995 in accordance with Kyoto Protocol.

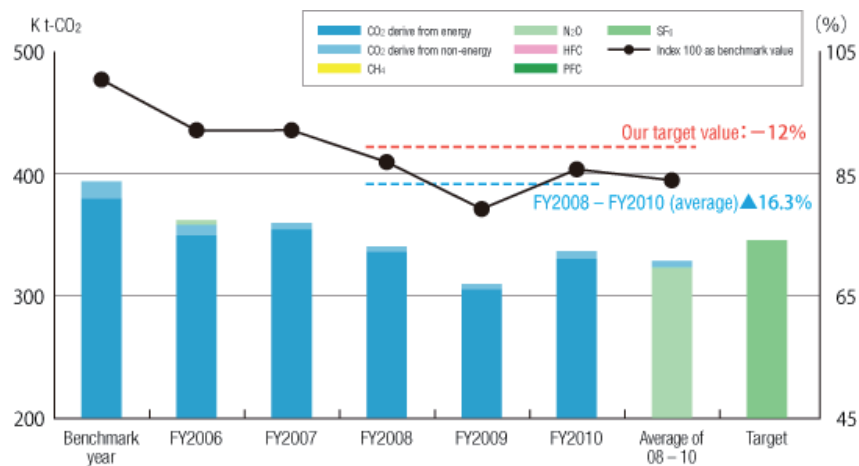
<sup>\*2</sup> actual emission coefficient: the amount of CO<sub>2</sub> emissions in order for the electricity company to generate 1kWh of electrical power

<sup>\*3</sup> adjusted emission coefficient: coefficient by reflecting Kyoto mechanism credits onto actual emission coefficient

\* Calculation method of greenhouse gas (GHG): we are complying with the "Manual for Greenhouse Gas Emission Volume Calculation and its Reporting" issued by Ministry of the Environment and Ministry of Economy, Trade and Industry. Incidentally, as for the calculation method of GHG through purchased electrical power in the fiscal year of 2010, we are deploying emission coefficients and adjusted emission coefficients per appointed electricity company as announced by the Minister of the Environment.

### Domestic Yokohama Rubber Group's Total Greenhouse Gas Emission and Comparison with Benchmark Year (actual emission coefficient)



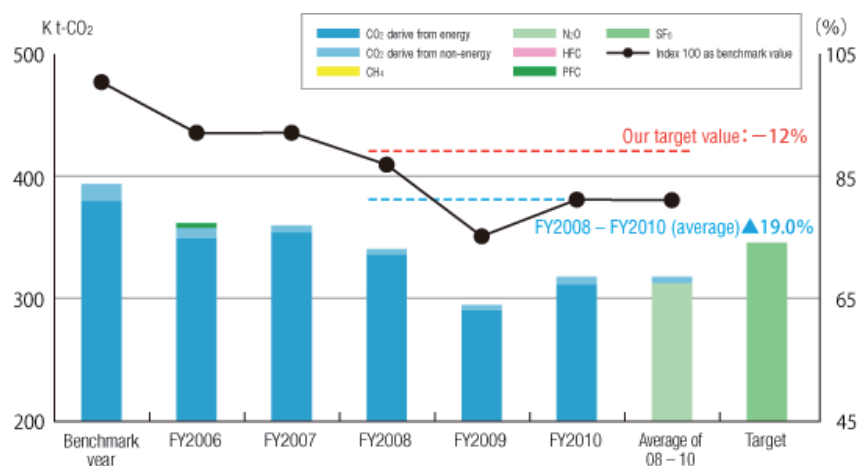


\* Targeted fiscal year is the average from FY08 to FY12 which is the same with Kyoto Protocol.

#### Breakdown per Substance of Greenhouse Gas Emission Volume in FY2010

	%
	FY2010
CO <sub>2</sub> derived from energy	98.35
CO <sub>2</sub> derived from non-energy	1.56
CH <sub>4</sub>	0.02
N <sub>2</sub> O	0.08
HFC	0
PFC	0.001
SF <sub>6</sub>	0
Total Greenhouse Gas	100

#### Domestic Yokohama Rubber Group's Total Greenhouse Gas Emission and Comparison with Benchmark Year (adjusted emission coefficient)



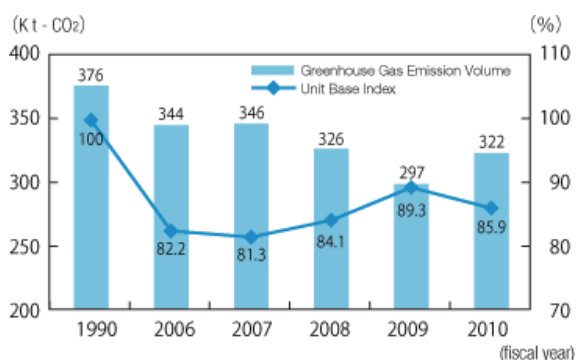
\* Targeted fiscal year is the average from FY08 to FY12 which is the same with Kyoto Protocol.

	%
	FY2010
CO <sub>2</sub> derived from energy	98.25
CO <sub>2</sub> derived from non-energy	1.65
CH <sub>4</sub>	0.02

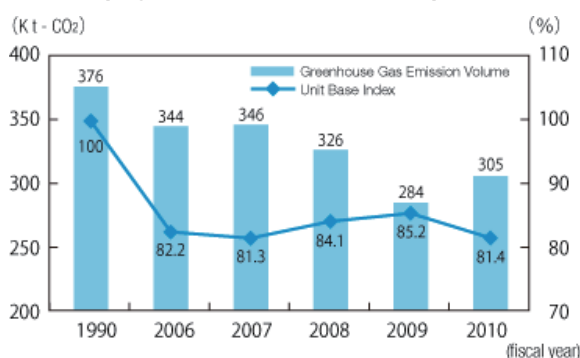
N <sub>2</sub> O	0.08
HFC	0
PFC	0.001
SF <sub>6</sub>	0
Total Greenhouse Gas	100

The unit base per production amount in our domestic operation sites has improved by 3.8% compared to the fiscal year of 2009 as it resulted in 85.9% reduction compared to the benchmark year of actual emission coefficient. Meanwhile the adjusted emission coefficient has resulted in 81.4% reduction which is 4.4% of improvement compared to fiscal year of 2009.

#### Our Domestic Production Sites' Greenhouse Gas Emission Volume and Unit Base Index of Production Amount (Actual Emission Coefficient)



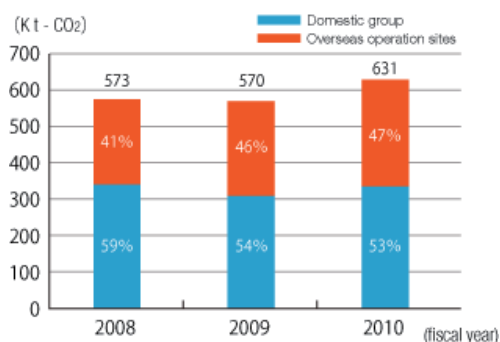
#### Our Domestic Production Sites' Greenhouse Gas Emission Volume and Unit Base Index of Production Amount (Adjusted Emission Coefficient)



Our greenhouse gas emission volume in our entire group company both in domestic and overseas in the fiscal year 2010 resulted in 631,000 ton-CO<sub>2</sub>; the breakdown is 53% for Japan and 47% for overseas.

As for our overseas production sites in the fiscal year of 2010, we have expanded one of our operation sites which is natural rubber processing plant.

#### Emission Volume of Greenhouse Gas both by Domestic and Overseas Group Companies



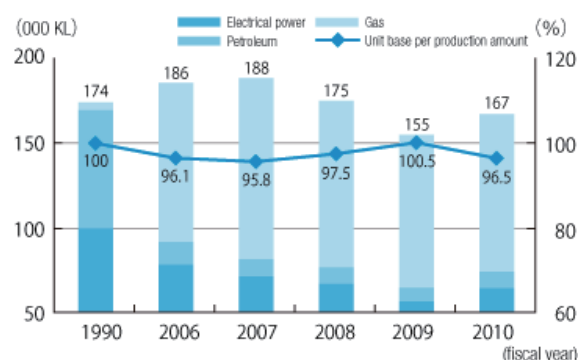
▲ [Go to Page Top](#)

#### Addressing on Energy Saving by our Domestic Operation Sites

In fiscal year of 2010, in order for our Global Warming Countermeasures Committee to go about fundamental technical innovation, we have practically started considering energy saving activities from the specification stage by newly forming two subcommittees from Technical Groups both from Tire and MB Groups.

As for the energy base unit from our domestic operation sites, we were able to improve by 3.9% compared to the fiscal year of 2009 because of the recovery of production amount and the effect of our energy saving activities.

### Our Domestic Operation Sites' Energy Consumption Volume and Base Unit Index of Production amount



▲ [Go to Page Top](#)

### Addressing on CO<sub>2</sub> Emission Volume and Logistics during Transportation

Since Yokohama Rubber is classified as Known Shipper, we are conducting our reduction measures by establishing an aggregation system to manage CO<sub>2</sub> emission volume, energy consumption, and so on within the limit of property rights set forth by the law such as products, half-finished products, industrial waste, and so forth.

In order to address these, we are developing various reduction activities by targeting 1% improvement of the unit base per energy consumption every year; as for CO<sub>2</sub> emission volume, we are targeting a 25% reduction (compared to the fiscal year of 2006) by the fiscal year of 2020 as a long-term goal.

▲ [Go to Page Top](#)

### Streamlining of Transport Energy

As Yokohama Rubber Group's effort to reduce CO<sub>2</sub> emission volume and unit base of the energy in the fiscal year of 2010, we endeavoured to promote expansion of modal shift, utilization of domestic vessel, and reduction of the transportation amount of industrial waste.

As for the expansion of modal shift, our Tire Group has increased by 3% for using freight ferries for product transportation to certain areas within the country (Sapporo, Fukuoka, and Sendai); meanwhile our MB Group has increased by 2% for freight with JR (Japan Railway) and freight ferries.

As for utilization of domestic vessels for the transportation of tire products, we made use of domestic vessels to transport snow tires from the Chubu region to Sendai; as for reduction of the transportation amount of industrial waste, we were able to reduce the transportation amount by 8% compared to the fiscal year of 2009 by working together with the Tire and MB Production Environmental Task Force.

▲ [Go to Page Top](#)

### Case Introduction

#### Approach Cases in the Fiscal Year of 2010

We conducted various energy saving activities as we describe herein.

As a result of those activities, we were able to reduce energy volume by about 4,700kl annually.

#### ■ Implementation of Regenerative Energy

We implemented some regenerative energy; we adopted a solar energy system of 10kW class for Hiratsuka Factory and 70kW class for our overseas plant in China in the fiscal year of 2010.

We are planning more implementation of regenerative energy system from now on.

#### Solar Energy System Installed at our Hiratsuka Factory in Japan



#### Solar Energy System Installed at our overseas Plant in China



#### ■ Improvement on Energy Saving Sites through Lagging Material by Deploying Silicon Series Heat-Resistant Materials

Since 2007 at our Mie Plant, we have started to install some lagging materials to cover steam pipework called "Improvement at the sites – humble energy saving activities with minimal cost involved".

At our Shinshiro Plant, their plant-wide improvement effort on energy saving is going on by incorporating their own ideas by each workplace.

The total number of installation at our entire production sites has resulted in more than 50,000 sheets.



▲ [Go to Page Top](#)

#### ■ Lagging Materials Made by our "Heat Tech Ladies"

We hardly encounter the size available from general lagging materials in the market which is catered to the size of each pipework of our facilities. The steps for production and installation of lagging materials will start from (1) measurement at the sites and actual materials → (2) cut thermal-insulation materials → (3) cut covering materials → (4) sewing operation by using sewing machines → and finally move on to (5) the installation of lagging materials at the sites. Compared to lagging materials available in the market, internal sewing operations reduce costs to a fifth, which is a great way of saving our costs.

Those operation works from (1) to (4) are done by a group of 4 ladies who primarily possess advanced technique of sewing machine operation called "Heat Tech Ladies" who are making various lagging materials with optimum sizes. The picture below is one of the ladies from "Heat Tech Ladies" who is skilfully operating sewing machine to make lagging material.

#### Operation Scene by Using Industrial Sewing Machine



## ■ Installation of Lagging Materials

It is essential for lagging materials to be easily dismantled for facility inspection and maintenance. In the past, thermal covers, etc. would crack when being dismantled during facility inspection and maintenance, and are quite cumbersome to re-install; this is why we used to leave some of them as they are without installing any lagging materials. We have therefore made installation and dismantling work easy during facility inspection and dismantling by making use of Velcro tape.

### Appearance of Lagging Materials and Installation Work

#### Temperature Control

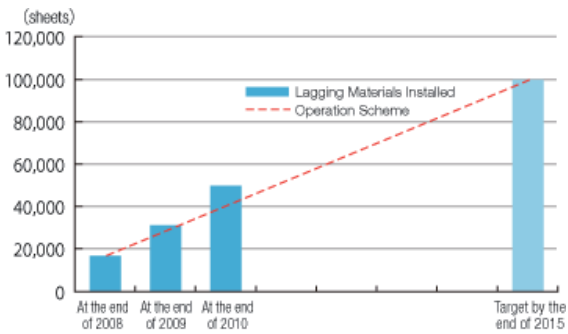


#### Pipework



## ■ Achievements of the Number of Lagging Materials and Target

### Installation Work



By the end of March 2011, we had installed about 50,000 sheets of thermal mat in our entire corporation.

▲ [Go to Page Top](#)

## ■ Effect Estimation through Installation of Lagging Material

Setting flange size of 15A\* as our primary size for effect calculation, our standard effect calculation is where the surface temperature under 180℃ will isolate the heat to 60℃ on the surface of lagging materials. The thermal effect of the entire corporation is estimated to be the reduction of approximately 2000t-CO<sub>2</sub> with 50,000 sheets of lagging materials being installed based on 15A which is our primary size for conversion.





\*15A refers to the pipework length under JIS standard. The primary size will be 21.7mm as outer diameter with 68.1mm<sup>2</sup> as cross-sectional area.

▲ [Go to Page Top](#)

#### ■ Hardware Sides for Improvement on Energy Saving

1. Upgrading to high-efficient lighting equipment
2. Expansion of inverter installation for fan pumps
3. Upgrading to the air-conditioners with high-efficient heat pumps
4. Reduction of air pressure compressed by the plant
5. More deployment of LED lightening

#### ■ Software Sides for Improvement on Energy Saving

1. Continuation and expansion of the usage of black illumination in the offices
2. Promote adopting Cool Biz (from June 1 to September 30) and Warm Biz (from December 1 to March 31)
3. Open for any proposals for improvement from all our Groups in February which is our Energy Saving month
4. Expansion of energy monitoring and analysis system along with the enforcement of energy management in the offices
5. Promotion of "Energy Saving Blue-sheet" which is the database compiling of various cases for improvement
6. Energy saving activities through specification changes by our Technology Groups (reduction of blending times, reduction of vulcanization times, etc.)

#### ■ Energy Saving Efforts at our Headquarters

Yokohama Rubber considers it is important to act for GHG reduction applied not just for our operation sites but to the entire group's buildings and offices to fortify our activities. Also, we endorsed the EEB Manifest (energy savings at buildings/offices) required by World Business Council for Sustainable Development (WBCSD) which we participate in to realize sustainable development; as a starter, we are proceeding with our activities by setting up the below-mentioned targeted values for our headquarters buildings being set forth by our Global Warming Countermeasures Committee in February, 2011.

1. Setting fiscal year of 2009 as benchmark year, we will reduce GHG emissions by 25% in 2020.
2. In order to achieve this, we will facilitate various hardware aspects such as energy saving activities and measures by getting everybody involved, installing high-efficient lightening such as LED lighting, improvement on air-conditioning facilities, heat insulation construction of the premises, energy savings for OA machines, upgrading power machines into top-runner products and more.
3. Manage the progress of various activities on a regular basis by managerial levels

We have achieved 8.6% reduction with the GHG emission volume at our headquarters building in the fiscal year of 2010, compared to the benchmark year which is the fiscal year of 2009.

▲ [Go to Page Top](#)

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[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Environmental Preservation](#) > Utilization of Natural Resources / Reduction of Industrial Waste



## Environmental Preservation

### Utilization of Natural Resources / Reduction of Industrial Waste

[Guidelines](#)
[Achievements](#)

#### Guidelines

#### Reduction Target of Industrial Waste

In our domestic operation sites, we have worked to achieve our target of Phase II (35% reduction compared to fiscal year of 1996) as our first priority.

#### Our Target for Zero-Emission

We have been working so that more of our operation sites can achieve total zero-emissions within our group both in our domestic and overseas operation sites.

#### Achievements

#### Our Addressing the Reduction of Industrial Waste

#### Generated Amount of Waste Materials and its Unit Base

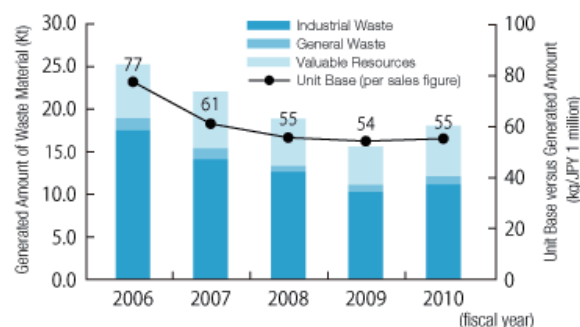
The generated amount of waste materials\*1 in the fiscal year of 2010 resulted in 18,054 tons, a 16% increase compared to the fiscal year of 2009; we were unable to achieve the target (35% reduction compared to fiscal year of 1996) of the period of Phase II (from fiscal year of 2009 to fiscal year of 2011).

This is because our production quantity has increased compared to the fiscal year of 2009. Also, the unit base versus generated amount (per sales figure) has deteriorated by 1.8% compared to the fiscal year of 2010.

In the fiscal year of 2011, we will try one more time by aiming to achieve the target of the period of Phase II, which we were unable to fulfil in the fiscal year of 2010. In the fiscal year of 2011 as well, we will continue to work on to minimize our product scraps.

\*1 Refers to any waste materials as a result of normal production activities including everything such as industrial waste, general waste, and valuable resources. Incidentally other than that, there were 1,322 tons of waste generated with regards to the incineration of some of our facilities that are excluded from our target management in the fiscal year of 2010.

#### Changes in Generated Amount of Waste Material and its Unit Base



### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

**Utilization of Natural Resources / Reduction of Industrial Waste**

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

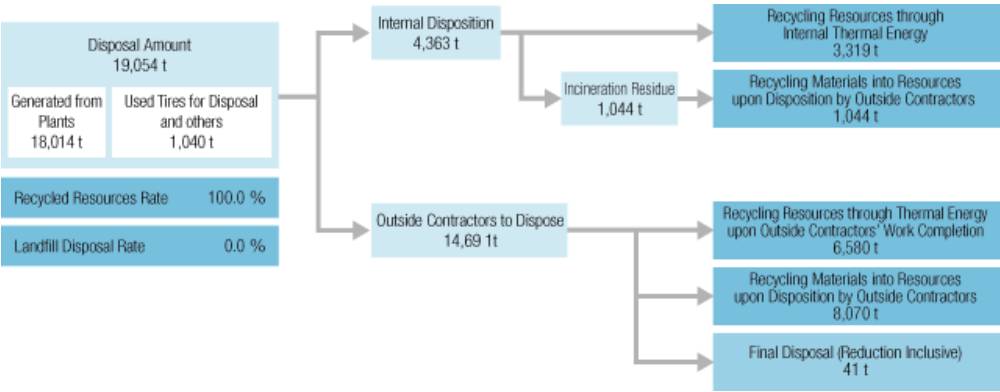
▶ Together with our Society

■ Achievement of 100% Recycled Resources from Industrial Waste of our Domestic Operation Sites

Since Yokohama Rubber has achieved Total Zero-Emissions\*2 in all our domestic operation sites in March 2006, we have been working on "100% recycled resources\*3 from our industrial waste". As a result, we were able to achieve our target of "recycling 100% of our industrial waste into resources" in all our domestic operation sites in the fiscal year of 2009. We maintained this in the fiscal year of 2010 as well; we will continue to do likewise from the fiscal year of 2011 onwards.

\*2 Definition of total zero-emissions: not generating any direct landfill disposal at all.  
\*3 Definition of 100% recycling resources is not to leave any disposal (= direct landfill disposal + incineration amount of the materials without any useful purposes) until the end.

Flowchart of Industrial Waste Disposal



■ Zero-Emissions Achieved at out Factories in China, the Philippines, and Thailand

In order to promote environmental activities with the same level of our domestic operations, we are facilitating various activities so that all our overseas operation sites can achieve total zero-emissions as well. As a result, starting from our tire plant of Hangzhou in China, it achieved total zero-emissions in April 2010; followed by our tire plant in the Philippines and a tire plant in Thailand likewise achieving total zero-emissions. Also in October 2010, the very first case of total zero-emissions in our overseas industrial plants was achieved by two plants in Hangzhou, China. As such in the fiscal year of 2010, there were five operation sites successfully able to realize total zero-emissions. In the fiscal year of 2011 as well, we will continue to expand our operation sites that are able to achieve total zero-emission.

■ Management of Proper Disposition with Waste Disposal Contractors

In order to prevent any case of unlawful disposal such as unauthorized dumping, every year we are conducting onsite audits based on Yokohama Rubber's own auditing standard. We have conducted 97 cases of audits in the fiscal year of 2010 in total. As a result, we were able to confirm that all our contractors are handling our disposal in the proper manner.

■ Storage and Disposal of PCB-Containing Waste

We are properly storing and disposing of used machines that contain PCB such as transformers or condensers in accordance with our national legislation (Law Concerning Special Measures against PCB Waste). In the fiscal year of 2010, we had completed the disposition of 16 machines in total that contain PCB in our Shinshiro and Nagano Plants. From fiscal year of 2011 onwards, as for our machines that contain PCB registered in advance, we will continue to store them properly and wait for the notification of availability for disposal.

▲ [Go to Page Top](#)

Consideration towards Raw Materials for Product

■ Proactive Deployment of Non-Petrified Raw Materials

In order to expand our usage of natural resources, we are trying to deploy more non-petroleum raw materials. As a part of this effort, we are deploying massive amount of silica as an ingredient to be used for tires. Its usage in the fiscal year of 2010 has significantly increased; the result of steady increase since our fiscal year of 2004.

■ Expansion of the Usage Ratio of Recycled Rubber

As a part of our efforts on the reduction of environmental burden, we are trying to proactively facilitate the development of "Environmentally-Friendly Products" such as "Low Fuel Consumption Tires" or "Retread Tires (regenerated tires)".

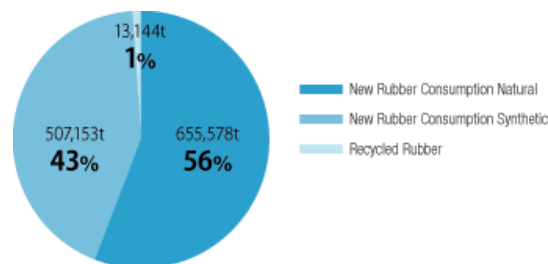
We are also trying to promote various activities on 3R for raw materials of tires (Reduce, Reuse, and Recycle); we are deploying more recycled rubbers being manufactured within our operations (hereinafter called "Recycled Rubbers"\*1) and recycled rubbers available in the market as well. In order to expand our usage rate, we need to develop processing technologies of raw materials, not just blending and processing technologies. The usage ratio of the recycled rubbers (recycled rubbers + recycled rubbers available in the market) in the fiscal year of 2010 is estimated to be about two times of 0.88% which is the result of the fiscal year of 2008 (it refers to the ratio versus the usage of new rubber based on our inspection upon acknowledgement). The expansion of the usage of recycled rubber powders will lead not just to 3R (utilization of resources) and reduction of environmental burden, it will also result in cost reduction of our raw materials.

\*1: This name is used to refer to recycled rubber being manufactured within our operations

## ■ Ratio of Recycled Raw Materials being Used

In 2010, the usage ratio of recycled rubber for production operations of tire products was 1% of the entire tire industry.

### Consumption Figure of Raw Materials for Automobile Tires and Tubes in 2010



Source: data from the homepage of Japan Automobile Tyre Manufacturers Association

▲ [Go to Page Top](#)

## Addressing Cases in the Fiscal Year of 2010

### ■ Addressing by our Retread Tire Business

#### Expansion of the Usage of Recycled Tires through Regeneration

All Yokohama Rubber's tire products for trucks and buses are designed to deploy retread tires. Currently, Yokohama Tire East Japan Retread Co., Ltd. and Sanyo Retread Co., Ltd. are expanding this business by replacing the ditched parts of used tires (tread part) with new ones, followed by providing them to their customers.

Currently the ratio of regenerated tires is about 15% of the tires for trucks and buses (source from Council of Regenerated Tires in Japan) but in the midst of growing demand for retread tire as recycled resources, we are trying to expand their sizes and attend to more diversified needs.

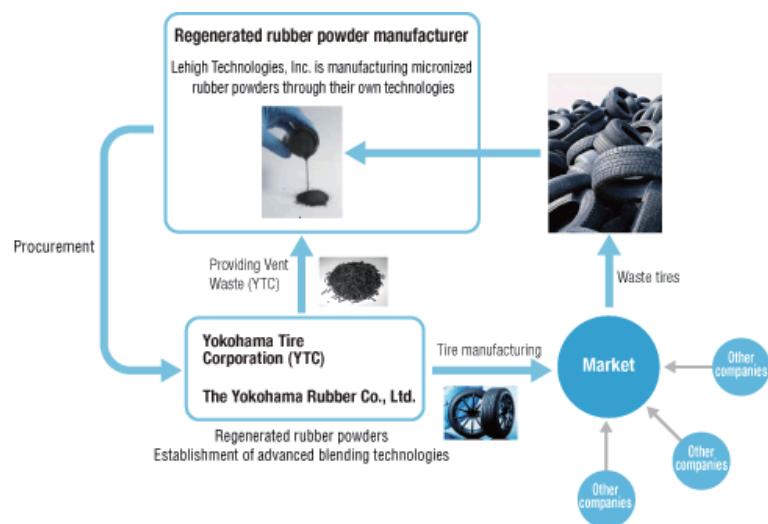
### ■ Expansion of Usage of Tread Recycled Rubber

In the Yokohama Rubber Group, we have been making various efforts to expand the usage of the tires made of various recycled rubbers to proactively utilize any recycled raw materials.

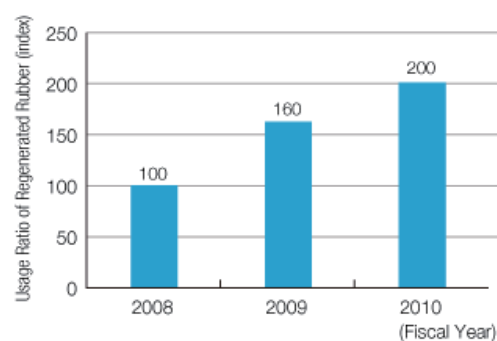
Regenerated rubber powder refers to recycled rubber in powder form being made by crushing waste tires; this generated raw material is tremendously contributing to resources saving and circulation of resources by utilizing waste tires where most of them are for thermal usage. In the past, regenerated rubber powders were not suitable for the usage of tires due to their bigger grain diameters; they would deteriorate the physicality when being blended with the rubbers. However since February of 2009, Yokohama Rubber was able to commence mass production of tires by blending this regenerated rubber, powders as we have successfully established our blending technology to deter physicality deterioration by blending fine powder grade. By expanding the usage of regenerated rubber powders for the past two years, now the entire Yokohama Rubber's usage ratio of various regenerated rubber has doubled compared to the year 2008.

Currently, the usage of regenerated rubber powders has been expanding for various compounds both in Japan and the United States mainly as tread liners of PC, TB, and OR. Meanwhile, we are gradually developing likewise for the rest of our overseas plants; we will promote the production of tires by using regenerated rubber powders for all over the world.

### Resources Circulation by Using Regenerated Rubber Powder



## Changes in Usage Ratio of Regenerated Rubber\*1



\*1 Refers to the ratio versus the usage of new rubber based on our inspection upon acknowledgement.

## Reuse of Used Vulcanized Bladder as Raw Materials

In 2007, we successfully commenced our internal mass production of used vulcanized bladder\*2; this is the very first case in our industry by establishing technologies for mass production of recycled rubbers to be reused as raw materials of tire products. Since recycled rubbers being produced through twin axis screw extruders which we deployed for treatment facilities are able to produce raw materials for rubber with relatively higher quality compared to conventional technologies, the great feature is they can be used as raw materials of tire products, etc. without compromising their quality.

In the fiscal year of 2009, we were able to reduce 293 tons of industrial waste by reusing about 80% of bladder rubber being generated. As for tire products, we are using them mainly for tires for passenger cars and part of the tire parts for trucks and buses. Also, regenerated rubbers available in the market are to be used more widely other than tire products such as a part of raw materials of industrial rubber products like conveyor belts; we are also considering their deployment for the tires of construction vehicles. We will continue to expand their usage by applying them to tire products and rubber products from now on.

\*2: Refers to sub-material made of rubber to be used during vulcanization process of tire manufacturing; it will be blown like a balloon to press tires from inside onto the mould.

## Bladders



### ■ Total Water Usage, Usage of Reused and Recycled Water, and Water Circulation Rate

In the fiscal year of 2010, total water usage in our domestic operation sites resulted in 84,780,000m<sup>3</sup>; the breakdown is 7,707 m<sup>3</sup> for the usage amount of reuse and regeneration and 7,710,000m<sup>3</sup> for water withdrawal amount; the water circulation rate was as good as 91%.

### ■ Total Water Withdrawal Amount

In the fiscal year of 2010, our total water withdrawal amount from water source resulted in 9,180,000 m<sup>3</sup> both in our domestic and overseas operation sites. The breakdown is 7,710,000 m<sup>3</sup> from domestic operation sites and 1,470,000 m<sup>3</sup> from overseas operation sites.

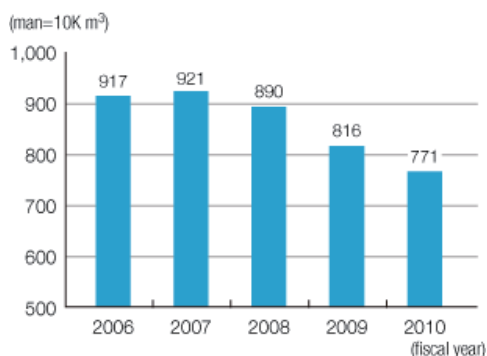
### ■ Addressing to Reduce Water Withdrawal by our Domestic Operation Sites

In the fiscal year of 2010, with anticipation of the recovery of production quantity we developed our activities by targeting a 3% (240,000 m<sup>3</sup>) increase from 8,160,000 m<sup>3</sup>, which is the result in the fiscal year of 2009; consequently, we were able to achieve our target with 7,710,000 m<sup>3</sup>, which is a decrease of 5.5%. The breakdown of water withdrawal from water source in the fiscal year 2010 was 520,000 m<sup>3</sup> for clean water, 1,340,000 m<sup>3</sup> for river water withdrawal, 60,000 m<sup>3</sup> for industrial water, and 5,790,000 m<sup>3</sup> for well water withdrawal.

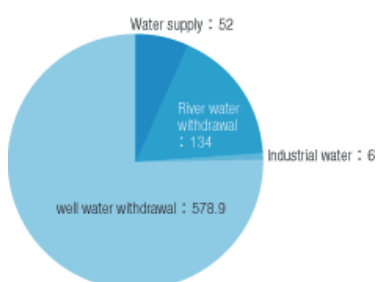
#### ○ Primary Actions for Water Resource Preservation

1. Usage of the circulated facility cooling water
2. Collection of steam condensate from vulcanization process
3. Conduct overflow prevention of our reservoir tanks
4. Save clean water: installing saving water pieces onto the faucet
5. Conduct water leak prevention measure of underground piping
6. Ensuring of daily inspection and patrol

#### Changes in Water Withdrawal Amount at our Domestic Operation Sites



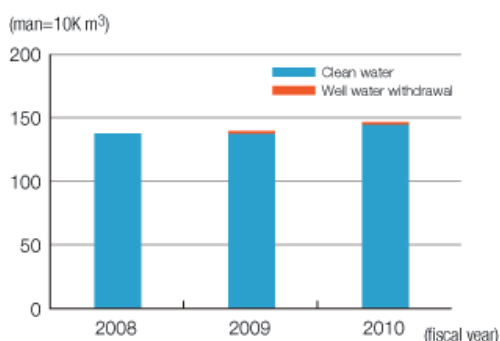
#### Breakdown of Water Withdrawal Amount from Water Source in the Fiscal Year of 2010



### ■ Addressing to Reduce Water Withdrawal by our Overseas Operation Sites

In the fiscal year of 2010, with anticipation of the increase of production quantity we developed our activities by targeting a 15% (210,000 m<sup>3</sup>) increase from 1,410,000 m<sup>3</sup>, which is the result in the fiscal year of 2009; consequently, we were able to achieve our target with 1,470,000 m<sup>3</sup>, which is a decrease of 9%. The breakdown of water withdrawal from water source in the fiscal year 2010 was 1,469,000 m<sup>3</sup> for clean water and 1,000 m<sup>3</sup> for well water withdrawal.

#### Changes in Water Withdrawal Amount at our Overseas Operation Sites



## Addressing in the Fiscal Year of 2011

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From fiscal year of 2011 onwards, we will take actions one step further from water quality control over discharging into the river.

Our approach in the first fiscal year was conducting our exploration of biodiversity around Miyagawa River where is adjacent to our Mie Plant. In addition to our existing water quality control, we are also planning several approaches on "biodiversity" to commence surveys on the eco-systems of aquatic benthic animals, plants and birds inhabitant near the river. Also for various rivers close to each operation site other than our Mie Plant, we will continue to get involved with cleaning activities together with local residents.

▲ [Go to Page Top](#)

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[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Environmental Preservation](#) > Management of Chemicals and Emission Provision onto Water, Air, and Soil



## Management of Chemicals and Emission Provision onto Water, Air, and Soil

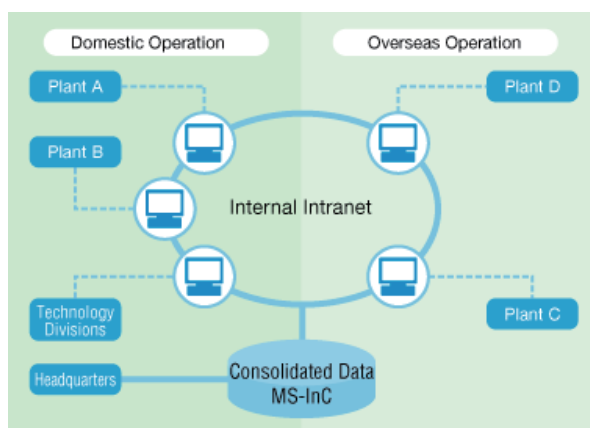
[Guidelines and Supporting Systems](#)
[Achievements \(Initiatives\)](#)

### Guidelines and Supporting Systems

#### Establishment of Chemical Control Supporting System

In order to structure exhaustive measurements as to chemical control both in domestic and overseas operation sites and cross-sectional chemical control supporting system, we have established our corporate-wide management tool common for the entire company (raw materials, sub-materials, and parts) and consolidated management system as to information on purchased items. We are trying to make further improvements on our database by adding our data earned from our consolidated management onto our internal chemical data's consolidated management system called "MS-InC". Also, through this database, we are controlling materials contained within our sub-materials that are used both by domestic and overseas operation sites.

#### Overview Diagram of MS-InC



As for our overseas operation sites, they are trying to structure their supporting system for non-containing guarantees of environmentally burdening materials (SOC) for their purchased sub-materials and parts (establishment of the non-containing evidence of SOC and development in MS-InC) in order to ensure of proper chemical control. For example, we were able to complete the examination at our overseas operation sites (6 sites) by going about our understandings of various issues on SOC management through self-evaluation and related activities for improvement which had started from the fiscal year of 2010. From now on, we will conduct the same measures for the balance of our overseas operation sites, aiming to complete this by March 2013. By doing so, we can work on the establishment of the system to maintain and improve the same level of SOC management of our domestic operation sites by applying it likewise to our overseas operation sites.

▲ [Go to Page Top](#)

### Achievements (Initiatives)

#### Reduction in Water Discharged and Enforcement of Water Quality Control

#### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

**Management of Chemicals and Emission Provision onto Water, Air, and Soil**

Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

As for water quality control of discharging water, we are trying to enforce our management system by setting up our "Voluntary Set Parameter Value" which is stricter than the parameter set by the law.

From fiscal year of 2010, we have newly started its operation by setting up a definition of environmental accidents, environmental troubles, any major environmental near-accidents, and environmental near-accidents. "Environmental Accident" refers to any incident that was picked up by media such as newspapers.

There was no incident of "Environmental Accident" in the fiscal year of 2010.

In any event where a level slightly exceeding the parameter set by the law is observed it is defined as "Environmental Trouble", whereas a "Major Environmental Near-Accident" refers the level of parameter exceeding our voluntary set value; we would immediately act on any corrective measures to conduct cross-sectional development to each operation site. As for "Environmental Trouble" in the fiscal year of 2010, we had reported to the government followed by our corrective measures arising from excessive levels of pH and oil density (animal and plant) parameter of sewage water observed from some of our plants; consequently, it did not result in any significant impact on their surrounding areas.

As for reduction of discharge water, in accordance with our reduction measures for water usage, we were able to reduce our water discharge by 62,000 m<sup>3</sup> compared to the fiscal year of 2009.

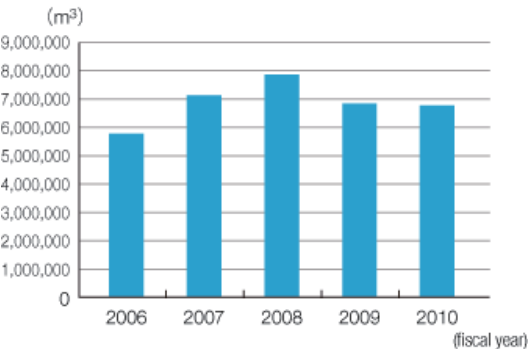
Our Mie Plant is discharging water into the Hinokijiri River, our Mishima Plant into the Goten River, our Shinshiro Plant into the Noda River, our Shinshiro-Minami Plant into the Kuroda River, and our Ibaraki Plant into the Sonobe River. The average parameter of each plant was relatively low at 2.1mg/l for BOD density whereas 2.7mg/l for COD density; there was no impact on the river at a 10.2 ton BOD loading amount and a 13.2 ton COD loading amount.

Incidentally, our operation sites that had switched into direct discharge to sewage system were not subject to this survey.

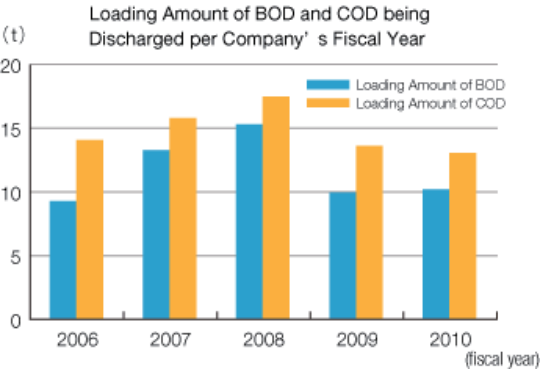
■ Definition of Terminologies

- Environmental Accidents
  - Refers to any incident of significant impact to the surrounding area which was picked up by media such as newspapers.
- Environmental Trouble
  1. Incident resulting in non-compliance with regulated parameters from atmosphere and water quality measurement.
  2. Where contaminated materials mainly carbon, waste oil, and solvent had scattered or flown outside of the plant premises.
  3. Where the plant is not meeting its voluntary parameters (reference value) of noise and vibration.
  4. Where the Environmental Manager of each operation site has concluded an environmental accident to have taken place.
- Major Environmental Near-Accident
  1. Where any of the items had exceeded voluntary set parameters.
  2. Where any of the contaminated materials, mainly waste oil or solvent, had gone into the drain outlet.
  3. Where the Environmental Manager of each operation site has concluded a major environmental accident to have taken place.
- Environmental Near-Accident
  1. Where a minor case of liquid flow or powder scattering observed in their plant premises other than the preceding cases of environmental accident or major environmental near-accident.
  2. Where liquid flow or power scattering was about to occur, or was anticipated.

Changes in Volume of Water Discharged



Changes in Loading Amount of BOD and COD



▲ [Go to Page Top](#)

We are trying to enforce our management system by setting up our voluntary set parameter values in order to comply with various regulated values.

Since our fiscal year of 2010, we have newly commenced this operation by setting definitions of environmental accidents, environmental trouble, any major environmental near-accidents, and near environmental accidents. These are set forth to take corrective measurements in the event of any exceeding amount of our voluntary set values considered as a major environmental near-accident.

Incidentally, there were three exceeding cases of voluntary set parameter values in the fiscal year of 2010.

Also, we reviewed our voluntary set parameter values at some of our plants.

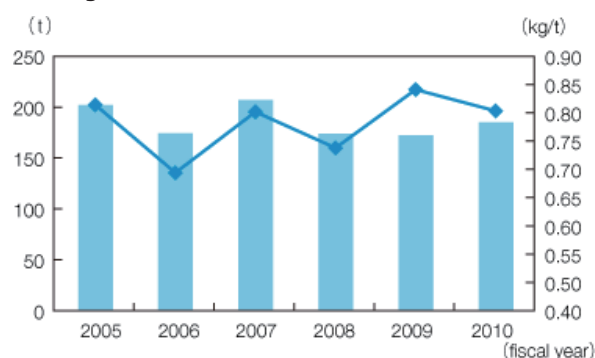
## ■ Discharging Volume of NO<sub>x</sub> and SO<sub>x</sub>, plus Production Quantity per Base Unit

As for NO<sub>x</sub> and SO<sub>x</sub>, we are controlling through the density from our discharge; we do keep up with legally set parameters but there were two cases of excess from our voluntary set value, we have therefore taken corrective measures accordingly.

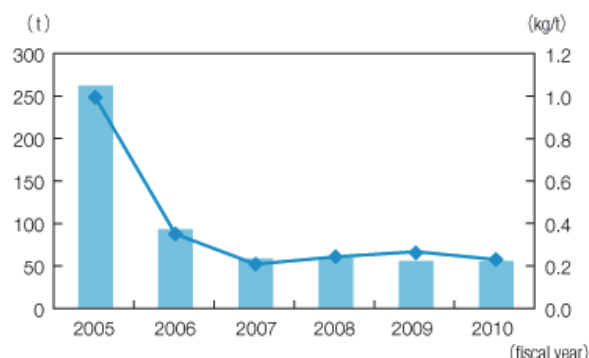
Due to the increase in our production volume in the fiscal year of 2010, our emissions amount of both NO<sub>x</sub> and SO<sub>x</sub> has increased as well compared to fiscal year of 2009; however, the base unit versus production amount has slightly decreased for both substances.

As for emission amount of SO<sub>x</sub>, we were able to significantly decrease it as we had switched our fuel (crude oil into gas) from fiscal year of 2006 onwards.

### Loading Amount of NO<sub>x</sub> Emission and its Unit Base



### Loading Amount of SO<sub>x</sub> Emission and its Unit Base



▲ [Go to Page Top](#)

## Emission of Ozone-Depleting Substances

We used to deploy as a metal cleanser chlorofluorocarbon-141b (HCFC-141b), which is controlled under Montreal Protocol as ozone-depleting substance; as such we had completely abolished using it effective from September 2007 by making some improvements with our cleansing methods. Since then, we no longer use or emit any ozone-depleting substances anymore.

▲ [Go to Page Top](#)

## Our Measurements on Contaminated Soil

We are regularly conducting water quality inspections by installing a shallow well for observation purposes in seven of our domestic operation sites (for our Nagano Plant, we are conducting direct soil analysis as they are located high in the water vein, whereas for our Onomichi Plant, we are conducting the analysis of leachate as they are located on the land reclaimed from the sea). In the fiscal year of 2010 as well, we have cleared all the standards as to controlled substance according to soil contamination measurement law. Also, even though our Hiratsuka Factory had exceeded the standard on chlorine-organic solvents in the past, currently they are still continuing with the cleansing treatment through aeration; now their density of underground water is below standard for the underground water environment.

## Our Measurements for Dioxide

Our Mie Plant has a waste incinerator is equipped and they are regularly conducting measurement of its density once a year.  
They have cleared the regulated parameter in the fiscal year of 2010 as well.

### Result of Measurement for Dioxide at our Mie Plant

Office Names Facility Names	Items	Regulated Parameters	Value of FY2010	Legal Names
Mie PlantIncinerator	Gas Emission (ng-TEQ/m3N)	10	0.001	Act on Special Measures against Dioxins
	Water Discharge (pg-TEQ/L)	10	0.001	
	Residue in the Incinerator (ng-TEQ/g)	3	0	
	Scattered Ash (ng-TEQ/g)	3	0.18	

## Measurement for Legal Regulations

### ■ Measures on Revised Chemical Substance Control Law in Japan

In lieu of the revision of the Japanese Chemical Substance Control Law<sup>\*1</sup>, it became compulsory to register any chemical substance being manufactured or imported at more than one ton annually. As our response to this revised law, we have completed all the registration of chemical substances mainly with their amount and purposes which we import.

<sup>\*1</sup> The Japanese Chemical Substance Control Law refers to legislation related to the control over screening and manufacturing of chemical substances (from 2011 we have commenced our registration of existing chemical substances).

### ■ Our Measures for Chemical Substances under European Directives

We are currently addressing as to our measures on REACH/CLP mainly by our REACH Sub-Committee which is a cross-sectional organization to comply with the REACH Directive<sup>\*2</sup> and CLP Directive<sup>\*3</sup> in the EU.

As for chemical substances subject to registration under the REACH Directive (two kinds), we completed their registration in November 2010. Meanwhile, some of the approved substances such as DEHP (diethylhexyl phthalate) and BBP (butyl benzyl phthalate) were also subject to replacement in the light of their risk management aspect; we have completed their replacement with alternative substances excluding certain specifications. Also, we are conducting surveys to ensure our supply chain suppliers intend to register required substances stipulated under the REACH Directive per each raw material, by following up to make sure they have been duly registered according to the survey result. From now on as well, we will work together with our suppliers to ensure our compliance with the REACH Directive.

As for our measures for the CLP Regulation, we have completed our registration for required substances by compiling distribution quantity, purpose of usage, and substance information related to any contained chemical therein (CAS number, content percentage, etc.) as per product number being sold in Europe.

<sup>\*2</sup> The REACH Directive refers to regulations as to registration, evaluation, approval, and control over chemical substances in Europe

<sup>\*3</sup> The CLP Regulation refers to regulations as to classification, labelling, and package as to substance and blended materials in Europe.

### ■ Our Measures for ELV (Heavy Metals) Directives

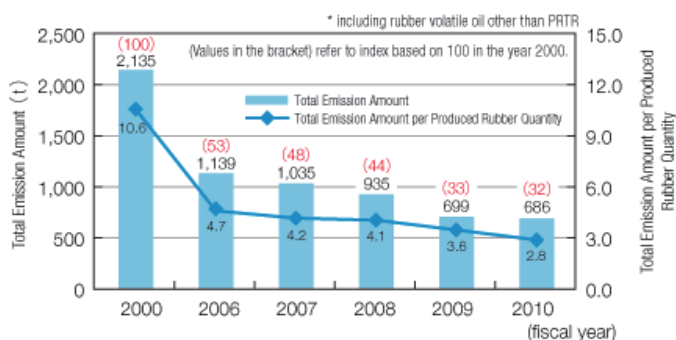
By working together with our suppliers, we have been trying to procure raw materials, sub-materials, and parts which do not contain any heavy metals such as lead, hexavalent chromium, cadmium, and mercury, major chemical substances (SOC); ultimately, we intend to totally abolish the usage of these.

Continuing from fiscal year of 2007, in the fiscal year of 2010 we have completed the process of non-containing guarantee of those four substances for our newly deploying brands. Also, we are trying to fortify our SOC management supporting system under the operation of our internal management standard towards both of our domestic and overseas operation sites.

## Reduction of VOCs

As a result of our effort to reduce volatile organic solvent (VOCs) which is the major substance as to emission amount, we were successfully able to reduce by 1.7% compared to the previous fiscal year whilst 12% of production increase in the fiscal year 2010. This is because of our deployment and operation of solvent collection facilities, plus our operation to collect a part of VOCs which we used to emit in the atmosphere in the past; we will continue to promote the reduction of emission amounts from now on.

### Total Amount of VOCs Emission and Base Unit of Production Quantity



The bars above refer to the total emission amount (emission amount + shifted amount) expressed by the unit [ton].

The line above refers to the emission amount per produced rubber quantity expressed by the unit [kg/ton].

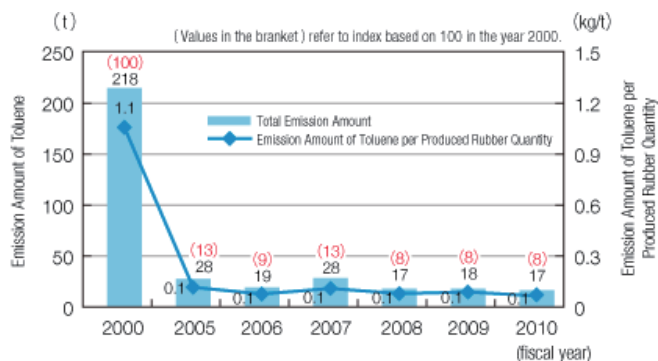
- Calculation formula of unit base = total emission amount / produced rubber quantity
- Including rubber volatile oil other than PRTR (Pollutant Release and Transfer Register)
- Total Emission Amount = Emission Amount + Amount to be Disposed as Industrial Waste (equivalent to shifting portion under PRTR)

▲ [Go to Page Top](#)

## Reduction of Chemical Substance under PRTR\*

In the fiscal year of 2010, the total of emissions and shifting amount of chemical substances under PRTR was 75.4 tons, which was a reduction by 79.0% compared to the fiscal year of 2000. Especially toluene, which used to be the majority of our emissions to the atmosphere, was reduced by 92.4% compared to the fiscal year of 2000.

### Emission Amount of Toluene and Production Amount per Base Unit



\* PRTR refers to a system to register emission and shifting amount of chemical substance. This is a system to understand the source and emission amount of any toxic chemical substances followed by announcing them to the public.

▲ [Go to Page Top](#)



### Biodiversity

[Guidelines](#)
[Achievements](#)

#### Guidelines

#### Formulation of Guidelines on Biodiversity

The "Basic Law on Biodiversity" was announced and became effective in June 2008, followed by the "Biodiversity Declaration – Action Guidelines and its Guidance" by the Japan Business Federation, and the "Guidelines of Public Participation on Biodiversity" that announced by the Ministry of the Environment in Japan in the following year of 2009. Since Yokohama Rubber is in the same line of those concepts, we have established "Yokohama Rubber's Guidelines on Biodiversity" in order to facilitate corporate-wide approaches on biodiversity.

#### Basic Guidelines

We are running our business by heavily relying on the grace given by nature. We should pass on this rich nature to our future generations by addressing the preservation of biodiversity and utilization of sustainable biological resources through our business activities, whilst recognizing the fact that the "linking diversified lives equals to biodiversity", which is the basis of this grace, has been dwindling rapidly on a global scale lately.

#### Action Guidelines

##### 1. Recognition as a Management Issue

Since Yokohama Rubber is directly using biological resources and conducting business activities that may affect biodiversity, we recognize the importance and risks towards the grace of nature. Therefore we will address the preservation of biodiversity from a long-term perspective.

##### 2. Participation by All Employees

We will raise the awareness of our employees in regards to the grace of nature. All our employees will contribute to the preservation of biodiversity both at work and their local communities.

##### 3. Determine the Effect on Biodiversity and its Reduction

We will determine the effect that our business activities may have on biodiversity, and shall thereby try to avoid or minimize such effect.

##### 4. Preservation of Biodiversity through the Supply Chain

In order to preserve biodiversity, by understanding that it is important to be considerate as early as the stage of resource extraction, we shall contribute to the preservation of biodiversity at resource mining sites through cooperation with relevant personnel of the supply chain.

##### 5. Sustainable Usage of Biological Resources

We will work on any sustainable usage of biological resources by gathering knowledge with regards to biodiversity, and also through technological development, innovation of design and production, or approaches to biodiversity in the value chain.

##### 6. Information Sharing and Communication

We will work on the information gathering or social requirement as to preservation of biodiversity; we shall thereby disclose our activities and achievements proactively to facilitate dialogue and tie-ups with our stakeholders, such as customers, local communities, NGOs, and the government.

[▲ Go to Page Top](#)

### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

#### Biodiversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society



## Addressing the Preservation of Biodiversity

Yokohama Rubber has started our preliminary exploration of the surrounding area of our offices (15 offices in domestic and 15 offices in overseas) in order to ensure that none of our activities are affecting biodiversity in those areas. During this exploration work, we intended to check whether there is rich nature near our offices, then shortlisted some as adjacent to areas with richer nature. From now on, we are considering proceeding with our necessary approaches by studying the effect on biodiversity of such surrounding areas, followed by making our objectives clear. From April 2011, we have started our exploration of the current situation for the midstream and downstream of Miyagawa River, and on the riverside of Hinokijiri River. We are planning to conduct explorations three times in total by December 2011.

Our company is currently in the middle of the "YOKOHAMA Forever Forest" Project which is to plant about 500,000 trees in our operation sites both domestically and overseas based on the potential natural vegetation. This is done together with our residents in local communities under the guidance of Dr. Miyawaki, Professor Emeritus at Yokohama National University, by 2017 to commemorate our company's 100<sup>th</sup> anniversary of establishment. In order to confirm whether this "YOKOHAMA Forever Forest" project is generating richer forests in terms of biodiversity as well, some of our offices have started exploration of the birds inhabiting the forest.

Also, our company is conducting business activities by utilizing biological resources, metal and mining resources primarily as natural rubber. Among them, natural rubber is produced in the farms of South East Asia which is considered to be impacting the biodiversity of those areas. The majority of those rubber farms are small-scale and usually run as a family business; we are procuring from them through processing companies or several intermediary distribution companies. As such, it is not easy for our company to get involved with those farms that belong to the top of supply chain to contribute to the preservation of biodiversity, but we would like to do our best as far as our authority can prevail from a long-term and global perspective in order to contribute to the preservation of biodiversity.

### ■ Current Status of Protected Areas and Surrounding Areas

We have conducted our explorations at our operation sites (15 from domestic, another 15 from overseas) to see whether they are adjacent to the areas rich in biodiversity.

Our exploration method is as follows: first we conducted a visual exploration of the environment near our offices by using Google Map and aerial photos from Google Earth, followed by individual exploration for those offices with rich nature (eg. greenery, river) to a certain degree. The current status of the environment adjacent to our offices per location (outcome of simplified exploration) is as follows. You may wish to refer to the description below as for the classification type.

#### 1. Mie Plant

Our Mie Plant is located alongside the Miyagawa River. The Classification Type of Environmental Standard as to contaminated water quality for the Miyagawa River is the most stringent Classification Type AA, applicable to water area requiring preservation of the natural environment. Mud flats and seaweed beds still remain in the outlet area; this is a place extremely rich in nature where loggerhead turtles may lay eggs or little terns may breed; both are endangered species under RED by the Ministry of the Environment in Japan. Its upstream possesses the forest of Ise Shrine. In order to review our consideration towards biodiversity there, we have conducted another exploration by inviting some experts of that field. We conducted it first by confirming what kind of consideration is needed. Before our first exploration took place, we reported to the governmental agencies such as the prefectural government and city hall, followed by conducting briefing sessions towards local associations of forest, fishery, and local residents.

#### 2. Shinshiro Plant, Shinshiro - Minami Plant

Our Shinshiro Plants are located alongside the Toyokawa River. The Toyokawa River is a medium-sized river with the Hokusetsu Mountainous Region as its source with numerous rapid flows and brinks in its upstream; you can even find species of catfish inhabiting it (under RED by the Ministry of the Environment in Japan, and also specified as a National Natural Treasure). The Classification Type of Environmental Standard of the Toyokawa River is under Classification Type either AA or A which is applicable to water areas requiring preservation of the natural environment. From the Furi Dam in the upstream as far as the downstream is classified as Biology B.

#### 3. Nagano Plant

Our Nagano Plant is located alongside the midstream of the Tenryu River. It is located in Inadani Valley, the central point between the Central Alps and Southern Alps; adjacent greenery can be utilized as a stopping point for birds flying from both Alps. The Tenryu Koshibu Water System Prefectural Park and Nobeyama Natural Park are both in the area, which is a Local Environmental Preservation Area. The area of the midstream of the Tenryu River is designated as Classification Type A for Environmental Standard.

#### 4. Yokohama Tire East Japan Retread Co., Ltd. – Hokkaido Plant

Their adjacent "Utonai Lake and Surrounding Wetland" was the first wet bog designated by the Wild Bird Society of Japan in 1981 as Sanctuary, also being designated as a National Beasts and Birds Preservation Area in 1982, followed by being designated as a registered wetland under "the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention)" in 1991. Currently,

four Rangers are stationed full-time from the Wild Bird Society of Japan.

"Utonai Lake" is a fresh water lake 9 km in circumference, 275 ha in area, 0.6 m in average depth; its entire area for preservation including the surrounding wetland is approximately 510 ha. It is a lagoon visited by more than 20,000 winter birds flying in spring and fall, such as Geese, Ducks, and Swans. Other than those birds, there are also some animal inhabitants like Red Fox, Yezo Deer, chipmunks and more. This is also a place where Bean Geese, species under RED by the Ministry of the Environment in Japan, fly in to visit. Incidentally, the upstream of the Yufutsu River is designated as Classification Type AA.

5. SAS Rubber Company (SAS)

Located by facing the Mentor Marsh State Nature Preserve; Lake Erie which is one of the Great Lakes, and also the Headlands Beach State Park via Grand River about two kilometers distance apart.

6. Y. T. Rubber Co. Ltd. (YTRC)

Their entire surrounding consists of numerous rubber farms; as such it is unknown whether or not nature to be preserved is remaining; since this is an area of tropical forest extremely high in biodiversity, their location in the area requires a lot of consideration in the light of raw material procurement.

## ○ Description as to Classification Type of Environmental Standard with Regards to Living Environment Preservation in the River

There are six Classification Types designated by the Ministry of the Environment in Japan as to environment standards with regards to living environment preservation in the river from AA, A, B, C, D, to E. For example, the description of AA and A is as follows.

AA: In accordance with the First Grade of Tap Water, Nature Environment Preservation, plus any items stipulated under category A or below. BOD (Biochemical Oxygen Demand) should be 1mg/l or less, and DO (Dissolved Oxygen) should be 7.5mg/l or more.

A: In accordance with the items under Second Grade of Tap Water, First Grade for Fishery, and Water Bathing. BOD should be 2mg/l or less, and DO should be 7.5mg/l or more.

Also, as environmental standard in the light of adaptability of the inhabitants of water creatures in the river, there are four classification types which are Biology A, Biology Special A, Biology B, and Biology Special B. For example, the descriptions for Biology A, Biology Special A, and Biology B are as follows.

Biology A: Water area inhabited by water creatures that relatively prefer low temperature regions such as char, salmon, salmon trout, and so on, and their accompanying microorganisms.

Biology Special A: Among water areas of Biology A, water area needing special preservation as egg-laying sites (farm) or nursing ground for baby fish of water creatures indicated in Biology A thereof.

Biology B: Water area inhabited by water creatures that relatively prefer high temperature regions such as carp, gibel, and so on and their accompanying microorganisms.

## ■ Features of Value Chain of Rubber Manufacturing Industry

As we utilize numerous kinds of raw materials (major categories: natural rubber, synthetic rubber, carbon, various blending agents, fibres, and metals), our supply chain is spreading all over the world, mainly overseas. The greatest impact to be made on biodiversity is "natural rubber" and "metals". Natural rubber is being produced from the farms that are being established by developing the areas rich in biodiversity of Southeast Asia. Metals are being extracted in the mines from developing countries.

## ■ Supply Chain of Natural Rubber

Regions of Southeast Asia where natural rubber is being produced (Thailand, Malaysia, Indonesia, and so on) are rich in biodiversity; but at the same time they almost match with "Biodiversity Hotspots", i.e. areas with high risk of destruction; it requires consideration towards nature preservation when conducting development and procurement in those areas.

The supply chain of natural rubber consists of (1) farms, (2) processing companies, (3) several intermediary distribution companies, (4) trading companies, and so on; the majority of the capital for establishment of such farms comes from local conglomerates or English companies from Malaysia. The structure of the farms is Small Holders (tenant farming) in Thailand, and mainly plantations in Indonesia and Malaysia; this type is currently spreading into Laos, Myanmar, and so on as well.

The majority of the processing companies and intermediary companies upstream consist of local capital mainly held by Chinese Immigrants. Due to their stringent concern for interests it is very difficult for foreign capital to intervene; it is therefore not easy to secure traceability of raw materials or apply development of our CSR procurement per se.



## Together with our Customers

### Guidelines

#### Basic Notions

#### ■ Our Approaches by Reflecting Customer Feedback to Improve our Quality

Tires are exhaustive products which require replacement when their end-of-life draws near. We are conducting wear testing or evaluating performance changes when it starts to wear out from the stage of our development; other than that we are also addressing various kinds of approaches for quality improvement in order to meet a wide range of various requirements from our customers. In order to understand how our tire is used by our diversified domestic and overseas customers, Yokohama Rubber is conducting Customer Satisfaction Surveys to get feedback and opinion on the products purchased to apply to our development of new products. Both our Tire Group and MB Group are utilizing our customer feedback for overall quality improvement.

#### ■ Improvement of Customer Satisfaction through Integration of Relevant Divisions

After launching our product, we store our data upon conducting evaluation of the products being used by gathering information from each region, i.e. Service Department, Quality Assurance Department, and Product Planning Department taking their own parts. During our designing work, we try to extract our issues in a comprehensive manner from qualitative information such as reputation at the store to evaluation results of tires actually worn out. Through our CS (Customer Satisfaction) Follow-up Meeting where information that was gathered by our personnel from various departments, not just our Planning & Development Department, through their visitation in person is shared making efforts by raising awareness that the entire corporation will "continue to make better products" in order to fulfil customer satisfaction.

#### ■ Internal Development with our Customers' CSR Activities as Reference

It is important to facilitate CSR activities throughout our entire supply chain. We have been receiving various requirements from automobile manufacturers who are the consignees of our tires such as the "development of tires with low fuel cost" through our sales representatives; in addition, we are taking action as well upon receiving some other requests such as "facilitation and development of CSR activities". In addition to a "survey on the environmentally burdening materials" and "survey on CO<sub>2</sub> emission", we are participating in various research sessions or seminars including "facilitation of CSR activities and actions for supporting system to be in place", "workplace safety", and "compliance issues related to labour" organized by automobile manufactures and industry association of automobile parts in order to apply those contents to our various internal activities therefrom.

▶ Understanding the Needs of Safe Products (Quality) – Tire Group

▶ Understanding the Needs of Safe Products (Quality) – MB Group

▶ Communication with our Customers (in order to select our products correctly)

## Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

### ▼ Together with our Customers

Understanding the Needs of Safe Products (Quality) - Tire Group

Understanding the Needs of Safe Products (Quality) - MB Group

Communication with our Customers (in order to select our products correctly)

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society



## Understanding the Needs of Safe Products (Quality) - Tire Group

[Guidelines](#)
[Achievements](#)

### Guidelines

#### Basic Notion of the Activities for Quality Assurance

The basic notion of our quality assurance activities at the Tire Group is expressed by our Tire Group President under the "Quality Guidelines" in our quality manual in accordance with Yokohama Rubber's Corporate Philosophy; "We will enrich people's lives and contribute to their happiness and wellbeing by devoting our wholehearted energies and advanced technologies." We are continually working on our daily operation with quality assurance based on these quality guidelines.

#### Quality Guidelines

1. We will continually provide quality products so that our customers from all over the world can purchase with confidence followed by their sense of satisfaction. We will thereby grow as a corporation and contribute to society by maintaining proper profits through not just customer satisfaction, but also winning their sense of trust afterwards.
2. We will continue to make improvements on our activities of the entire process of Tire Group in order to meet our customers' requirements, as well as to comply with the entire regulations related to all the products we provide, plus any requirements of the quality management of ISO9001 and ISO/TS16949 by aiming for the establishment of even better corporate structures.
3. In order to realize these quality guidelines, each division will set forth their own quality targets, review their status, followed by ensuring their achievements.
4. We will get all our relevant directors and employees thoroughly familiarized with these quality guidelines.

[▲ Go to Page Top](#)

### Achievements

#### Our Approaches for our Domestic Tire Service

##### Basic Notion of the Activities for Domestic Services

The basic guidelines as to quality of our Tire Group are set forth in our "Quality Guidelines". Tire Domestic Technical Service is always developing service activities from our customers' perspective in order for them to duly satisfy with our products and establish a sense of trust according to those guidelines.

##### Supporting System of our Services

In order to facilitate obtaining highly-accurate market information and prompt action in case of any defect of our products, our supporting systems are already in place as follows:

#### Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▼ Together with our Customers

[Understanding the Needs of Safe Products \(Quality\) - Tire Group](#)

Understanding the Needs of Safe Products (Quality) - MB Group

Communication with our Customers (in order to select our products correctly)

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

- We have placed our personnel from the Tire Domestic Technical Service Department in six cities nationwide in Japan (Sapporo, Sendai, Tokyo, Nagoya, Osaka, and Fukuoka).
- We have formed our service network by operating our qualification system (YFS = YOKOHAMA FIELD SERVICE)\* applicable to our regional distribution companies and sales offices in Japan (398 nationwide).
- We are holding seminars and reporting sessions for our regional distribution companies and sales offices to introduce our new products, develop our service guidelines, and share some market information.

\* Qualification system (YFS = YOKOHAMA FIELD SERVICE) refers to our system to grant qualifications to eligible personnel as to product knowledge, judgement over products upon customer complaints and so on upon training and testing at our seminar organized by the Tire Domestic Technical Service Department. There are 587 individuals who possess this qualification at the point of fiscal year of 2010.

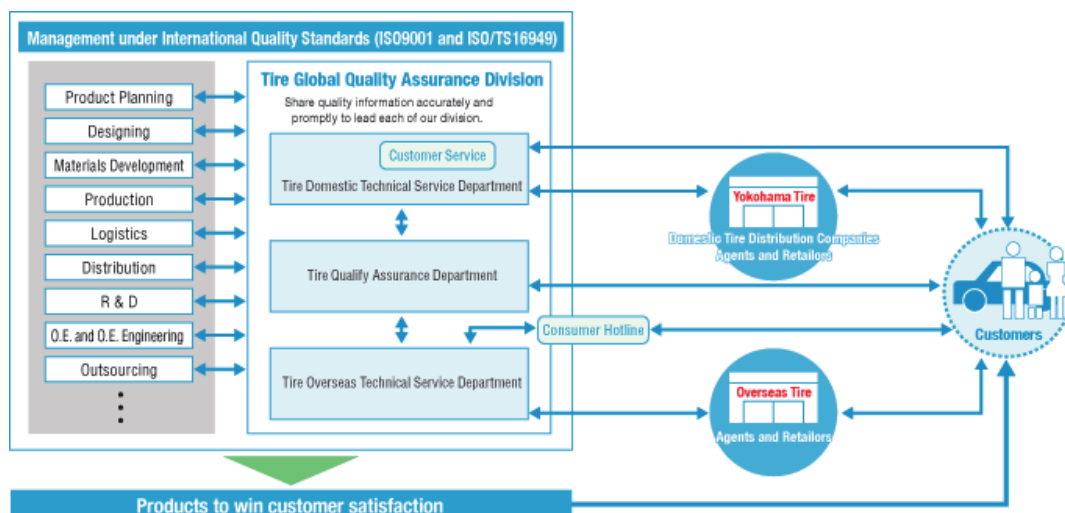
## ■ Obtaining Market Information and Application to our Products

We have our framework in place to obtain and analyse customer feedback and market evaluation, develop them internally, and apply them into our next products in order to provide products to ensure we win continual customer satisfaction.

### 1. Obtaining Market Information

Our personnel from Tire Domestic Technical Service Department are conducting hearings from our customers and surveys of actual tires based on the information from our distribution companies. The gathered information will be developed internally as Technical Correspondence to improve the strength of our products and apply it into our next products as well. 818 pieces of correspondence were issued in 2009, in contrast to 673 in 2010.

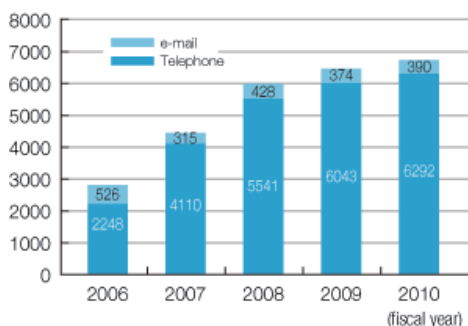
#### Flow Chart of our Customer Feedback and its Notification



Thin arrows in the diagram refer to information flow; the thick arrows refer to the providing flow.

### 2. Development of Gathered Information at our Customer Service

#### Changes in the Number of Cases Directed to our Customer Service



Our Customer Service team stationed in our headquarters is handling customer inquiries as to tires including obtaining information such as market evaluation or complaints as to our products. They are dealing directly with our customers through telephone or e-mail, followed by developing such precious information gathered throughout the company in a prompt manner. This is to help improve our product performance, catalogue, and our homepage. Also, we gather and analyse information from our customers, or for any information related to quality issue, followed by reporting internally to apply them into our next product.

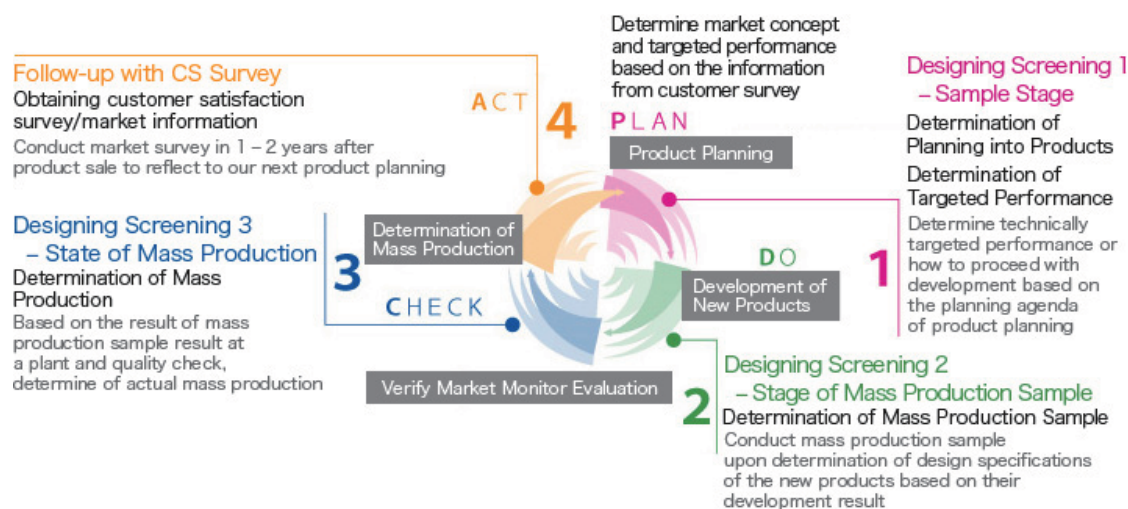
### 3. Holding Reporting Sessions for Customer Satisfaction (CS Reporting Session) of our New Products

We are obtaining and analysing market evaluations as to our new products by holding CS Reporting Sessions together with our Development Division to apply such information into our next products. We held such sessions



five times in the fiscal year of 2010.

## Flow Chart of our Market Adaptability Verification



## ■ Market Enlightenment Activities – Customer Seminar

We are conducting various activities that will lead to customer satisfaction; as we hope that we could draw more interest and attention from many of our customers into tires by enlightening them with proper usage of tires. We have conducted such Customer Seminars 114 times in the fiscal year of 2010.

### ○ Filling Operation of Tire Air – Special Seminar

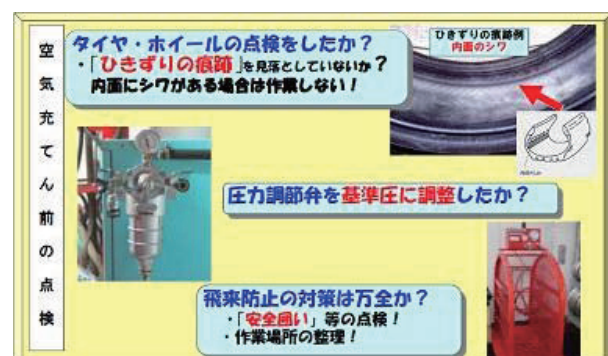
It is required by law to conduct special seminars and so on under Ordinance on Industrial Safety and Hygiene (Ministerial Order by Department of Labour) towards the workers who are involved in the filling operation of tire air.

Yokohama Rubber is conducting various seminars in accordance with our regulations conducted by our personnel of Tire Domestic Technical Service Department or employees at our distribution companies who are qualified as a lecturer for Filling Operation of Tire Air – Special Seminar mainly for our valued customers from Tire Distributors and Transporting Companies.

### ○ Seminars for Drivers (Mainly our Valued Customers from Bus Companies and Transporting Companies)

We are conducting various seminars as to basic knowledge of tires plus daily inspection and maintenance work in order for professional drivers, i.e. our valued customers who deal with precious passengers and cargoes, to keep making improvements with their safety driving, economical driving, and quality transportation. These days since we have noticed that many of our valued professional drivers are more inclined to be concerned about environmental issues and various approaches on cost cutting, we are bringing up the relativity of tire and fuel efficiency as well.

### Sample of the Materials from Filling Operation of Tire Air - Special Seminar



### Materials of our Seminars for Drivers





## ■ Activities for Quality Assurance

### 1. Approaches for ISO9001/TS16949 (Establishment of Quality Management System)

The basis of the supporting system of quality assurance in automobile industry is to comply with ISO/TS16949. This is the quality management system standard required by major automobile industry which is a prerequisite in order for us to develop our various businesses on a global scale. So far, our three domestic plants, plus four plants overseas who manufacture tires for passenger cars, trucks, and buses have obtained preceding certifications; we are about to expand this on a global stage.

Also, we are proactively facilitating so that our managerial level of supervisors of each division can obtain qualification as internal auditor; we have newly registered 163 personnel in the fiscal year of 2010 through our various training sessions and seminars.

#### Status of Certification Obtaining as to International Quality Standards (the Latest Year/Month for Renewal)

		ISO9001	ISO/TS16949
Domestic	Mishima Plant	Jan. 2010	Jan. 2010
	Shinshiro Plant	Jan. 2010	Jan. 2010
	Mie Plant	Jan. 2010	Jan. 2010
	Onomichi Plant	Jan. 2010	—
Overseas	Yokohama Tire Corporation	Dec. 2009	—
	Yokohama Tire Philippines Inc.	May. 2008	July. 2010
	Hangzhou Yokohama Tire Co., Ltd.	Oct. 2009	Oct. 2009
	Yokohama Tire Manufacturing (Thailand) Co., Ltd. (*)	Aug. 2009	Aug. 2009
	Suzhou Yokohama Tire Co., Ltd.	Apr. 2009	—

(\*) Obtained at 2 plants; tires for passenger car plus tires for trucks and busses

### 2. Improvement of the Support System of Quality Assurance from the Perspective of our Customers

In order to improve our supporting system of quality assurance, we are trying to leverage the level of our quality system aiming for the solution for any issues being identified from our customers' perspective through our internal quality audit.

### 3. Conducting Quality Examination by our Top Executives

We believe that any activities on quality improvement can be achieved only through high awareness of our top executives including our President in order to motivate our workers at our various operation sites; further actions for improvement could even accelerate and fortify it. Therefore our company is conducting "Quality Examination by our Top Executives" to examine annually each of our plants and divisions by our management team.

### 4. Improvement on the Performance Level by Plant Supervisors

In order to fortify our strength at operation sites, our Tire Global Quality Assurance Division is continually conducting Enlightenment and Training Programs by focusing on the quality of each hierarchy, primarily plant supervisors, to improve our overall quality level at all our plants.

5. Quality Assurance Activities Related to Development Operation

We are striving to deliver products with quality assurance by conducting Design Reviews to evaluate achievements for each step from product planning, designing, to production. Also we follow up with our customers how much they are satisfied after sales, followed by feedback to our development operation team in order to develop and provide even better products all the time.

6. Safety Assurance through the Entire Life Cycle of Tires

In order for our customers to continue to use our safe products comfortably, we handle promptly in the event of any incident that may cause inconvenience to our customers such as product recall by notifying to our customers as soon as possible.

In September 2010 at our overseas subsidiary, it turned out that the air pressure in normal tires, generally available for passenger cars, may gradually deteriorate in certain regions in the USA and Canada called the "Salt Belt" under the condition with a presence of corrosion in rim flange inside of the wheel. We have conducted a voluntary campaign to encourage our customers to take precautions; we have also conducted our inspection free of charge for those who need it.

We will continue to make various efforts in order to provide safe products so that our customers can continue to feel comfortable with our products.

▲ [Go to Page Top](#)

Approaches of Overseas Tire Service

■ Basic Notion of Overseas Service Activities

To embody our company's basic guidelines into our service activities, we set forth that "we will always conduct service activities from our customers' perspective by aiming to become a corporation with extremely high in customer satisfaction and market position" as our basic guidelines.

■ Execution of Market Adaptability Verification for Product Development

We are conducting the below-mentioned activities in each step from the stage of product planning to after service.

- 1. Prior to Market Launching: Market adaptability verification of new products through utilization of market monitor
- 2. After Marketing Launching: Obtain market quality information and conduct customer satisfaction survey
- 3. Planning Stage: Propose objectives of new products based on market information

You may wish to refer to [Our Approaches for our Domestic Tire Service](#) for the Flow Chart of our Market Adaptability Verification.

■ Expansion of our Service Network that Covers All over the World

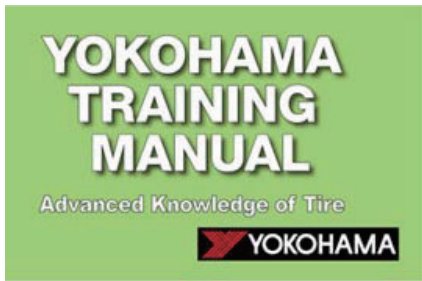
We are conducting the below-mentioned measures in order for our customers located all over the world to be able to use our products with a great level of satisfaction as we expand our service network that covers all over the world.

- 1. We have placed our Technical Service Personnel in each of our regional offices in North America, China, Europe, Asia, Central and South America, and Africa.
- 2. We have established the network by technical staff from each distribution companies and agencies under our regional offices. This is to provide our technical service to each country all over the world excluding Japan.
- 3. Obtain highly accurate information as to product usage and requirements from our products for each region and country.

■ Enlightenment for our Technical Staff

We are developing our enlightenment program per region per level for our technical staff and sales staff in charge of providing various services.

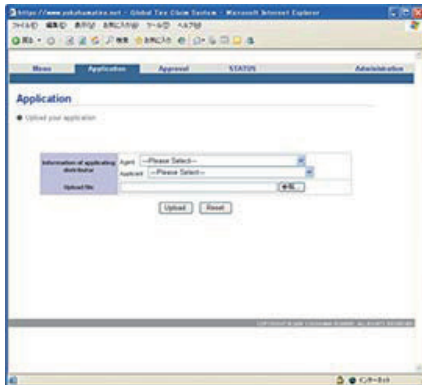
Textbook for Staff Enlightenment with Intermediate Level	Conducting Training for Technical Staff in Asia and Middle East
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■ Gathering Quality Information in Timely Manner

We are gathering information from all over the world in timely manner by using our quality information gathering system through the website. Through this system, information obtained from all over the world will be promptly shared internally to come up with better products in the future.

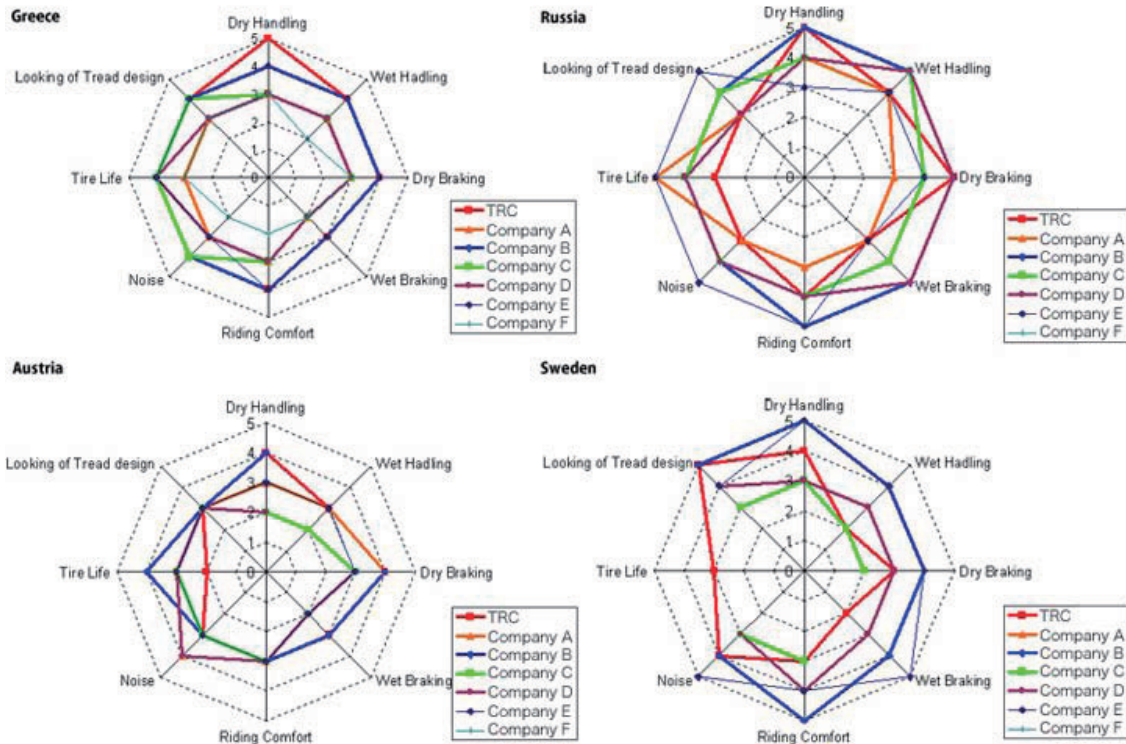
Information Gathering System through the Website



■ Customer Satisfaction Survey for our New Products

We are conducting customer satisfaction surveys in our major countries to utilize for our future product development.

Survey Result from our Agency in Europe



▲ [Go to Page Top](#)



## Understanding the Needs of Safe Products (Quality) - MB Group

[Guidelines](#)
[Achievements](#)

### Guidelines

#### MB Group - Our Approaches for Quality Assurance

##### Basic Notion of the Activities for Quality Assurance

Our MB Group sets forth its mid and long term guidelines as to "raise customer credibility by continually providing high quality products all the time". We are trying to facilitate to enforce our quality assurance supporting system in mid and long term by ensuring safety for not just our primary customer mainly manufacturers, but subsequent secondary, tertiary users, and every consumer's life being surrounded by products from our MB Group, followed by granting them with peace of mind.

##### MB Group – Mid and Long Term Approach Guidelines as to Quality Assurance

We will raise customer credibility by continually providing high quality products all the time.

In order to gain customer credibility, we will ensure:

1. Organizational quality management and product manufacturing through customer as our first priority.
2. Validate quality management system and voluntary continuation of various activities on quality improvement:
  - (1) No more outflowing complaints
  - (2) Operation of Quality Management System (smooth implementation at new offices and entities) in consideration of QCD (Quality, Cost, and Delivery)
3. Risk management supporting system in place and its continual operation
4. Global expansion of preceding guidelines

▲ [Go to Page Top](#)

### Achievements

##### Work Operations by our MB Group

Our MB Group is dealing with various commodities for mainly hoses and couplings, industrial products, adhesives and sealants, and aerospace products. Our mainstay products are industrial rubber products such as various hoses and conveyer belts, adhesives, various sealing materials, fuel tanks for aircraft, lavatory units and more; our major customers are the manufacturers of automobiles, construction equipment, air frames, vehicles, industrial facilities, public corporations, and construction companies. Our products will be delivered to our customers through our distribution companies and agencies. In addition to those B-to-B products, we are manufacturing various B-to-C products as well, such as golf goods.

As for those products, we will ensure safety assurance through incoming goods inspections for raw materials to use, half-finished goods inspections such as blended rubber materials, product inspections for final products; we are also trying to secure quality with their design by conducting designing screening from the stage of product planning, the stage of designing, and the stage of process designing.

## Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▼ Together with our Customers

Understanding the Needs of Safe Products (Quality) - Tire Group

### Understanding the Needs of Safe Products (Quality) - MB Group

Communication with our Customers (in order to select our products correctly)

▶ Together with our Employees

▶ Together with our Business Partners

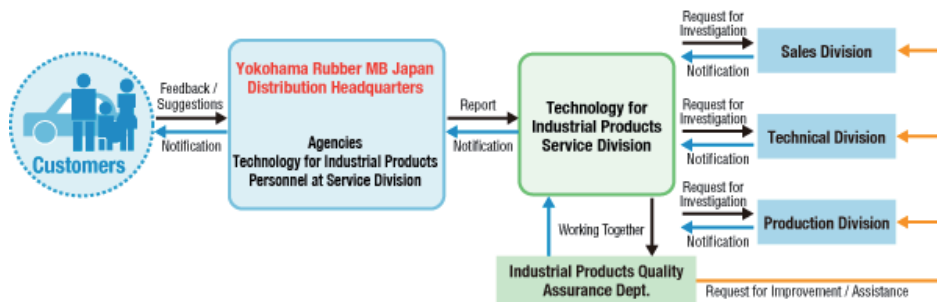
▶ Together with our Shareholders and Investors

▶ Together with our Society

## ■ Approaches for our Customers

In October 2010, we have established "YOKOHAMA INDUSTRIAL PRODUCTS JAPAN CO.,LTD..", a new company by integrating eight domestic MB distribution companies and a part of our Industrial Products Sales Division from our headquarters. This way, the sales force from our distribution companies is closer to our customers and backup functions for manufacturers have been unified together so that we can realize more integrated organizational management and expedite our various decision-making.

### Flow Chart of our Customer Feedback and its Process



## ■ Our Internal Activities for Quality Assurance

### 1. Risk Management – Dealing with Customers

We are operating under, and revising the requirements of the "Measurement Action for the Market" in emergency situations in order to act promptly and accurately for various business practices of diversified product lines of our MB Group by making clear about actions and supporting system for our MB products' safety issues. Also, in the event of any quality issues or complaints in the market over our products already delivered to our customers, not just we act promptly to solve the problems, but also we take actions to avoid any recurrence. As for preventive measure for recurrence, we will verify its validity by conducting quality audit on a regular basis whilst checking whether corrective measures are duly conducted.

Also, we have our framework called the "Meeting for Product Improvement" where relevant divisions get together to lead to product improvement based on quality information in the market not to allow any quality issue to occur. We are aiming for the improvement on CS by relevant divisions to get together through this framework. There was no case of violation on product safety in the fiscal year of 2010.

### 2. Activities on Quality Improvement – Framework to be in place to maintain customer credibility

Our MB Group has formed their activities on quality improvement by reflecting their mid and long term guidelines to facilitate their activities.

1. We are continually making improvements based on the verification of international quality management systems such as "ISO/TS-" per sector. Our Industrial Products Business Group has obtained this certification by establishing quality assurance supporting system with more clear regulations and structures as to their operational responsibility at our Technology, Production, and Sales Division; upon integration and organizational shifting based on their functions as Industrial Products, Adhesives and Sealants, and Hoses and Couplings Businesses.
2. Our internal audit and examination activities have been conducted throughout all the plants, technical divisions, and overseas operation sites of MB Group; we are trying to facilitate to raise awareness of quality and activities for improvement including "Quality Examination by our Top Executives" conducted by our Directors. Also, for the purpose of fortifying our quality framework, we are promoting the obtainment of qualifications as internal auditor; about 230 employees have obtained this qualification at the point of March 2011.



### 3. Fortification of Global Quality Assurance Supporting System

Our MB Group has overseas operation sites; 2 in North America, 3 in China, 1 in Taiwan, and 1 in Thailand. We



are expanding our activities by aiming for our universally common quality standard by summarizing various rules on quality assurance activities, by making clear about the authorities on responsibilities between overseas operation sites and relevant domestic divisions from product planning to quality assurance supporting system after sale. Enlightenment materials for quality for both expatriate staff and local staff are duly utilized in all our operation sites.



#### ■ Supporting System for Customer Complaints by Working with YAA

Our Aerospace Division is producing a Lavatory Module (a unit for washroom) for 737 passenger aircraft to be manufactured by Boeing in the USA. They are manufactured in our Aerospace Products Plants in our Hiratsuka Factory; only Lavatory Modules which have passed our final inspection will be shipped out to the USA.

Lavatory Modules which have been installed in the passenger cabin of 737 passenger craft by Boeing in the USA will be subject to appearance checks and various performance tests (turning on the lights, fire alarms, water for hand-washing, etc.); a Non-Conformance Tag would be issued as a countermeasure for the problems in the event of any irregularities being detected at this stage.

Our Quality Assurance Department is always monitoring Boeing's website (exclusive site for Yokohama Rubber); we would immediately contact via e-mail to our personnel of quality assurance of YAA (YOKOHAMA AEROSPACE AMERICA, INC.) to request to find out the situation along with investigation at Boeing. Based on the discussion at YAA, investigation result, internal discussion, and its investigation result, we are trying to improve Yokohama Rubber's credibility by filing an appeal to Boeing if necessary. Also, any issues related to the parts made in USA, we are trying to improve our sense of trust by YAA's investigation for the source of its cause at the manufacturer, following-up, and confirmation, followed by giving an explanation to Boeing where necessary.

▲ [Go to Page Top](#)

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[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Customers](#) > Communication with our Customers (in order to select our products correctly)



## ○ Communication with our Customers (in order to select our products correctly)

[Guidelines](#)
[Achievements](#)

### Guidelines

#### Our Basic Stance and Attitude

Yokohama Rubber's Corporate Code of Conduct, that "we will win customer satisfaction and credibility through developing and providing socially valid products and services with meticulous consideration for safety", comprises Yokohama Rubber's strong intention to deliver correct product information to our customers as per described below.

#### Our Ideas towards Advertisement and Rules to Comply

We are paying attention all the time as to how our advertisement and promotion styles ought to be in order for more people to understand our products, services, and corporate activities as much as possible. We are trying to disseminate the latest information accurately and in a timely manner through our home page or press releases to all our stakeholders. Especially, our website consists of two structures; one is the homepage to provide information on entire Yokohama Rubber Group's business including Yokohama Rubber and our Affiliated, another one is the homepage by mainly focusing on providing product information such as domestic tires for mending, hoses and couplings, adhesives and sealants, industrial products, aerospace, golf products and more. Also as a member of the Tire Fair Trade Council, we are striving in various advertising and promotion activities in accordance with applicable regulations by regularly attending and cooperating with the respective committees in charge of various levels derived by formulating the regulations of the said Council along with its actions, and also, by conducting status surveys in the market to make sure that members are strictly complying with the notion of fair competition. The same notion for advertisements can be applied to our overseas offices as well.

#### Attending to Customer Inquiries

Product inquiries can be made through [Homepage](#) in addition to via telephone. We will try to attend to your inquiry as soon as possible from our relevant department.

▲ [Go to Page Top](#)

### Achievements

#### Product Labelling

Japan Automobile Tyre Manufacturers Association has established a Grading System by integrating the "performance on rolling resistance" of tires and "wet grip performance" as an effort in order to facilitate the promotion of low fuel consumption tires; not just to define as low fuel consumption tires for those tires meeting certain parameters, but also that they have a labelling system (display method) in place to provide correct information for our customers started from January 2010. Incidentally, there was no case of violation as to information provided on performance through labelling in the fiscal year of 2010.

## ○ Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▼ Together with our Customers

Understanding the Needs of Safe Products (Quality) - Tire Group

Understanding the Needs of Safe Products (Quality) - MB Group

**Communication with our Customers (in order to select our products correctly)**

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

One of the Examples of the Label



▲ [Go to Page Top](#)

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[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > Together with our Employees



## ○ Together with our Employees

### Guidelines

#### Guidelines about "People"

According to our Corporate Philosophy which reads "Create a workplace that values, improves, and energizes people", it is our desire to create a workplace where all our personnel with diversified value systems can acquire the necessary skills and make use of them to the fullest. Also, we will aim for a workplace where our personnel can nicely balance work and their family lives. Furthermore, we are about to nurture personnel who can perform on the global stage whilst realizing business strategies on our GD100 and technical strategies as well.

▶ Employment

▶ Workplace with Safety and Health

▶ Enlightenment and Training

▶ Work-Life Balance

▶ Our Diversified Personnel

▶ Human Rights

## ○ Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▶ Together with our Customers

### ▼ Together with our Employees

Employment

Workplace with Safety and Health

Enlightenment and Training

Work-Life Balance

Our Diversified Personnel

Human Rights

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

▲ [Go to Page Top](#)

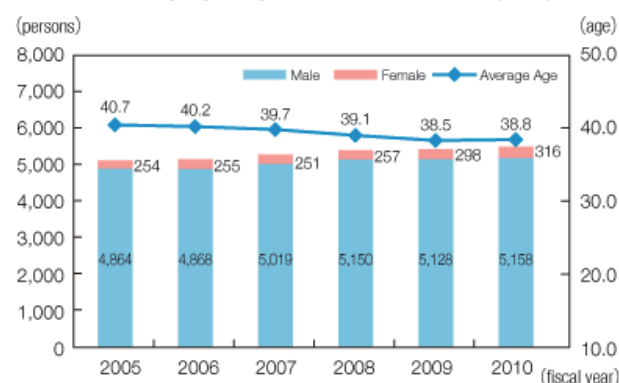
[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)
[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Employees](#) > Employment


## ○ Employment

### Achievements

### Status of Employment

#### Number of Employees per Gender and Average Age



#### Yokohama Rubber Group's Number of Employees per Region

(unit)

		FY2007	FY2008	FY2009	FY2010
Japan		10,110	10,311	10,531	10,472
Overseas	North America	1,907	1,821	1,932	2,040
	Asia	4,018	4,565	5,024	5,730
	Europe	64	75	79	223
Total		16,099	16,772	17,566	18,465

\* Consolidated Number of Employees: number includes personnel of our affiliates

[▲ Go to Page Top](#)

### Stable Employment

#### ■ Stable Employment of Fresh Graduates and Mid-Career Employment Depends on our Business Strategies

We are employing a stable number of fresh graduates from a long-term perspective. Also, we are employing professionals with relevant experience (mid-career employment) depending on our business operation needs.

#### Changes in the Number of Hiring

### ○ Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▼ Together with our Employees

#### Employment

Workplace with Safety and Health

Enlightenment and Training

Work-Life Balance

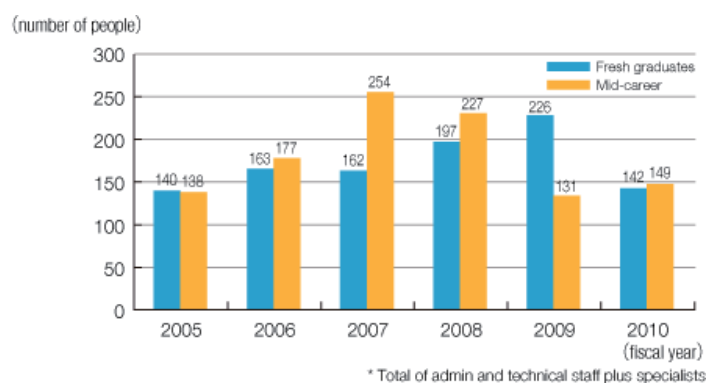
Our Diversified Personnel

Human Rights

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society



## ■ Appointing Contract Workers into Permanent Staff

As for contract workers mainly at our plants, we are proactively employing them as permanent staff for those who have gained a certain period of experience.

### Changes in the Number of Contract Workers Hired as Permanent Staff

Fiscal year	2005	2006	2007	2008	2009	2010
Number of hired persons	18	158	214	183	154	131

▲ [Go to Page Top](#)

## Employee Benefits

Yokohama Rubber has various types of Employee Benefit packages in place so that our employees can continue to work and live comfortably. As for accommodations, we provide a dormitory for single employees who have met certain criteria; also, we provide company apartments for those who relocate together with their family members, whereas we provide housing allowance for those who are with family members but have no history of relocation. Also, all our offices have a canteen for employees where healthy and affordable meals are provided; company canteens are used as a place for communication and mingling such as for social gathering at night time under the theme of local gourmet dishes. Temporary or contract workers are also allowed to use company canteens. Other than that, we are also supporting a part of employees' lives such as group insurance covering the entire employees of the domestic Yokohama Rubber Group.

## ■ Pension Plan System

Our pension consists of a one-time retirement lump sum grant and defined contribution pension; the ratio is about 60% and 40%, respectively. The one-time retirement lump sum refers to a one-off payment only without subsequent pension receivable.

▲ [Go to Page Top](#)

## Status of Labour-Management Relationship

We have established a labour-management consultation system in a wide spectrum such as employment, work conditions and employee benefits under the recognition that company growth and employees' stable life are common goals both by labour and management. Our Labour-Management Council consists of the Central Labour-Management Council and Local Labour-Management Council located in each office, and various types of labour-management committees to conduct discussion by reviewing various important issues. Specific items with regards to any changes in work operation shall be usually discussed in the committee meeting to be held one month in advance.

### Ratio of Union Members/Non-Union Members (as of March 2011) (unit: person)

Union Members	4,938
Non-Union Members	560
Total	5,498

▲ [Go to Page Top](#)



[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Employees](#) > Workplace with Safety and Health



## Workplace with Safety and Health

[Guidelines](#)
[Achievements](#)
[Case Introduction](#)

### Guidelines

#### Basic Guidelines

Safety and health is the basis of any work operation. Under the strong leadership of managers and supervisors, and under the cooperation of employees from our entire groups we will aim for the prevention of any occupational accidents, creating a comfortable workplace to bring about everybody's wellbeing.

▲ [Go to Page Top](#)

#### Supporting System of Safety and Health Management

We formed the "Safety and Health Sub-Committee" per division and workplace and the "Office-Wide Safety and Health Committee (legally stipulated)" per office under our Central Committee of Safety and Health, which consists of one representative out of about 200 persons (0.5%). Activities on safety and health are an important approach common in companies and unions. Through interaction with the Japan Rubber Manufacturers Association and Japan Rubber Workers Union Confederation to share safety information with other companies and other union confederation members, we are also trying to facilitate those by labour and management sides getting together. We also share our activities with our subcontractors by having them join their respective committees. As for our various overseas offices, they have their own supporting system in place according to the prevailing law under their country's governance.

#### Our Supporting System of Safety and Health Management

## Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▶ Together with our Customers

▼ Together with our Employees

Employment

**Workplace with Safety and Health**

Enlightenment and Training

Work-Life Balance

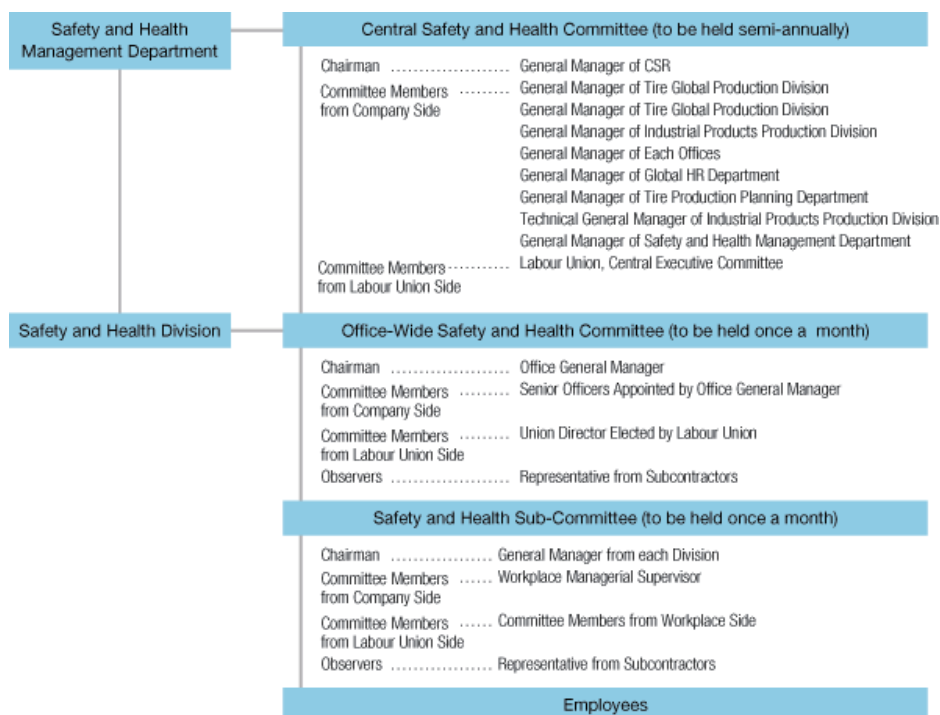
Our Diversified Personnel

Human Rights

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society



▲ [Go to Page Top](#)

## Achievements

### Status of the Occurrence of Occupational Disasters

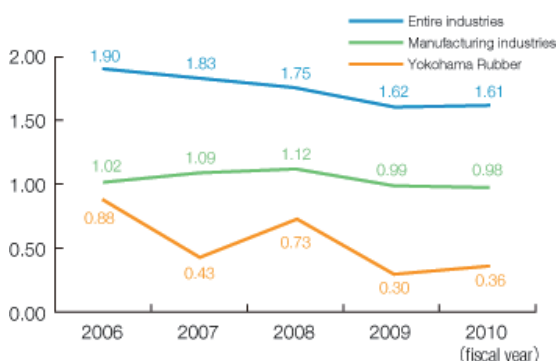
In our domestic operations, the percentage of workers' leave in the fiscal year of 2010 was 0.36, almost the same as the previous fiscal year at 0.30. The total number of leave arising from disaster is four; two out of these incidents were owing to work operation without following the troubleshooting procedures of the equipment. In order to prevent such accidents, we will continue to improve the situation by raising awareness of safety such as proactively stimulating various activities at each workplace. Examples include visualizing our activities by using a safety activities board. From now on of course, we will continue to make improvements to leverage our awareness levels by starting from identifying potential risks as well.

\* Percentage of workers' leave = (number of the case of occupational disaster / total work hours) x 100 million hours

\* Every piece of data is an aggregated value per year (from January to December)

\* All industries (excluding general construction industry), manufacturing industries are based on "Survey on Recent Occupational Accidents"; statistics announced by Ministry of Health, Labour and Welfare

### Frequency of Occupational Accidents (Percentage of Workers' Leave)



▲ [Go to Page Top](#)

### Six Pillars of Approaches Aiming For Safety Workplace

Yokohama Rubber Group is conducting six pillars of approaches in our domestic operation sites in order to fortify safety and accident prevention even further. Also, we have conducted "Corporate-Wide Convention for Safety and Accident Prevention" for entire domestic operation sites grouped together, pledging to "aim for a workplace environment without any existence of risks" as an entire corporation as a team by sharing various activities with regards to safety and health, plus accident prevention from each operation site.

In our overseas offices, each of our operation sites is conducting their own convention for safety and accident prevention to promote various approaches towards safety.

## 1. Establishment of Occupational Health Safety Management System (OSHMS)

Out of the strong intention by our management to aim for the establishment of organization systems or management systems in order for our operation sides to duly fulfil to bring about total zero risks, we are trying to get each of our offices to obtain the certification of Occupational Health Safety Management System (OSHMS); as a result, four of our offices were able to obtain in the fiscal year of 2010. Also, in order for us to keep making improvements by understanding each office's strengths and weaknesses, we are conducting internal audits for safety both in domestic and overseas offices by setting up our auditing items all in common in our entire corporation.

## 2. Making our Facilities Safer

We have taken measures by utilizing the method of risk assessment that can be "pre-emptive management" of accident prevention, conducting identification and evaluation of any potential risks in our existing facilities, followed by prioritizing them. Also by gathering our workers' ideas, we are creating repair tools and facilitating automation of the facilities so that they can still be processed without workers acting when trouble occurs; this is how we aim to create various facilities that ensure safety and comfort.

## 3. Further Enlightenment for Safety

We are trying to train our workers for good sensibility; who can foresee risks in any potential incident. We are conducting KYT (Kiken [Risk] Yochi [foresee] Training) which is to be done by every worker every day, along with sampling and improvement for Hiyari Hatto (a near accident) incident that are voluntary activities to be attended by everybody. We are also conducting training at Taikan Dojo (training through actual experience for accident prevention). Also, we have facilitated enlightenment on safety by focusing on communication like supervisor interacting with a worker one-by-one whilst understanding the meaning of each operation until they can have autonomy to conduct safe operations on their own. Through those approaches, we are trying to share and utilize our activities for accident prevention towards all entire workers in all our premises.



## 4. Creating Comfortable Workplaces

We have been proceeding with facility maintenance, improvement on work method, maintenance management in order to maintain comfortable work sites by conducting measurement of the work environment. Also, using 5S as a basis (Seiri [tidiness], Seiton [being organized], Seisou [cleanliness], Seiketsu [hygiene], and Shitsuke [discipline]), we are trying to facilitate efficient manufacturing such as required products when needed, and at required quantity only.

## 5. Promoting Workers' Mental and Physical Health

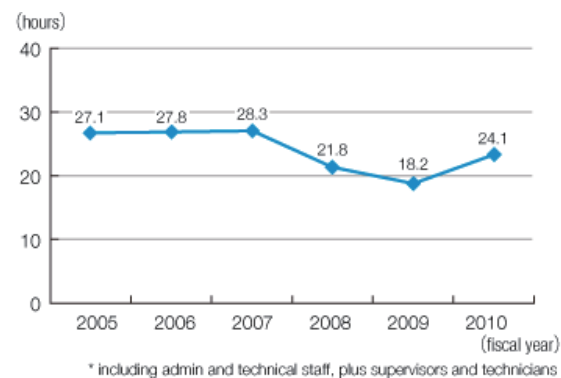
In order to prevent overworking or health hazard that comes from overstress, we are monitoring workers' working hours, also, we are providing counselling session or making improvement of work operation for our workers who engage in long hours. Also, we have set up our company's preventative management and placed a counselling care as our activities for workers' mental health. Furthermore, we are conducting special health screening as well; we have started giving medical guidance for those who are subject to special medical guidance.

### ○ Establishment of Measurement as to Working Long Hours and No Overtime Work Days

We are trying to shorten working hours by specifying the days for workers to go home without any overtime work; this is determined by our each office.

Also, when the special provisions as to Overtime Work Agreement were to be applied, both labour and management sides verify the legitimacy in advance, make sure such overtime work cannot be habitual from now on; we are also conducting a hearing session along with future improvement plans.

### Changes of our Average Overtime Work Hours



### ○ How to Deal with our Personnel who are Working Long Hours

We are conducting counselling by our company doctor or giving guidance according to the working hours based on our guidelines by properly managing workers' hours spent in the premises and their actual working hours.

### ○ Measurement for Workers' Mental Health

We are providing various counselling sessions by psychiatrist, specialized counsellor, or counselling on the phone; we are also conducting consultation by company doctor to prevent any health hazard arise from overworking.

### ○ Counselling Support System and Program to Assist Workers to Return to Work

As for returning work for those workers on a long leave associated with mental health, we are trying to have them return by planning as follows; upon conducting hearing session with him or her in person, checking with his/her doctor-in-charge, company doctor, and company, followed by reviewing its method, timing, or any restriction for work. Even after their return, we are still conducting 3-party counselling by himself/herself, company doctor, and company to release any restrictions on work gradually; we are following up until it there are totally no restrictions with him/her at all.

## 6. Prevention of Traffic Accidents

All our offices are continually conducting traffic accident prevention activities by fortifying supporting system, functions, and activities to prevent traffic accidents especially through standing on the side of the road in traffic by holding a placard during rush hours. Also, we are conducting enlightenment activities under the cooperation with local police or agency related to traffic safety.

▲ [Go to Page Top](#)

## Case Introduction

### Introduction of Approach by our Operation Site

#### ■ Approach by YH America

With safe workplace environments as the primary foundation, YH America is getting involved with various supporting programs to fulfil their Safety, Health and Wellness Activities by inviting specialists from outside so that they can give more objective and effective advice.

#### Activity Items

1. Physical Therapy (injury prevention activities based on physiotherapy)
2. Method to Stop Smoking (program by medical specialists to assist stop smoking)
3. Weight Watchers (promotion activities by dieticians for healthy diet)

### ○ Injury Prevention Activities based on Physiotherapy

To prevent any symptoms related to musculoskeletal systems owing to conducting the same work operation for prolonged period of time, or any other illnesses arising from the workplace environment, a physiotherapist is visiting their offices (once a week) to provide various health advice at each workplace. For example, the physiotherapist is observing their workplace, encouraging effective stretching exercise, and attending to inquiries from employees. This is highly appreciated by the employees as they can get advice without leaving their offices.

#### Work Operation Survey by Physiotherapist (left)



#### ○ Program by Medical Specialists to Assist Stop Smoking

In the United States, there is even more concern over the health impact arising from smoking than in Japan. The "Program to Assist Stop Smoking" in YH America is a program by a medical specialist visiting their offices once a week for one hour to assist stopping smoking for those who wish to stop smoking so that they can quit smoking more effectively. The duration of this program for stop smoking is 12-weeks long and so far 14 of them were totally able to quit smoking. In addition, our company is supporting with some aid agents to assist them to stop smoking.

#### ○ Promotion Activities by Dieticians for Healthy Diet

Obesity due to various types of stress has become a serious problem in the United States as much as smoking. In YH America, specialist dieticians are advising by making use of every Wednesday lunchtime issues such as weight control, how to take meals, and so on. This is highly appreciated by their employees as they can talk to dieticians in person in the light of protecting their privacy.

#### Diet Guidance Surrounded by Low-Calorie Diet Food



**Ms. Joy Morris, the lecturer of the program (centre)**  
**Ms. Marly Maristany, who was successfully able to lose weight (left)**  
**Ms. Courtney Sidor, Human Resources Manager (right)**





[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Employees](#) > Enlightenment and Training



## Enlightenment and Training

### Achievements

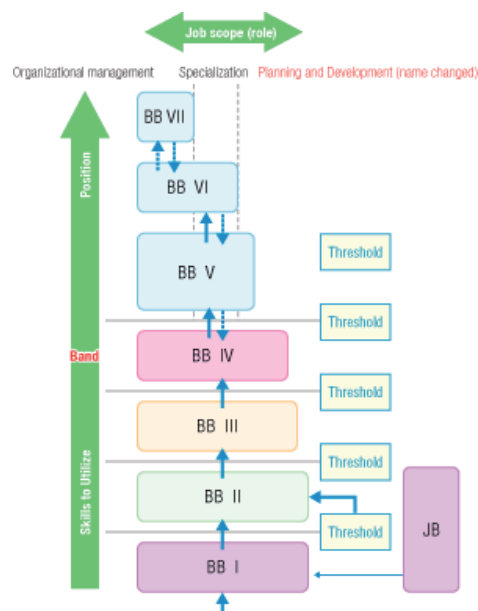
#### Guidelines on Training our Personnel

We are fully supporting aforementioned notion based on the idea that it is growth of every single one of our employee that will lead to our company's growth. We have an enlightenment system in place to train "professional personnel" with a strong desire for achievement and wide spectrum, and those who fulfil their performance by influencing people around them.

#### Training of the Candidates as Core Personnel

We are trying to develop our personnel's individual skills such as required mind-set, capabilities, and development of various skills to expand our businesses on a global scale, as well as leadership skills per hierarchy, problem solving skills related to workplace, presentation, and negotiation. Our new Human Resources System called GLOBAL which has been implemented in 2010 is focusing on personnel training for those who are able to perform on a global stage. For example, we have set up seven hierarchies from new entry level to divisional General Manager; each threshold must be cleared in order to go up to the next level. The threshold comprises of performance evaluation, work experience (total number of work rotation), compulsory training, and language skills; this way, relevant personnel can acquire necessary skills as a candidate so he/she can perform on the global stage by clearing each threshold one-by-one.

#### Overview of GLOBAL, our New Human Resource System



▲ [Go to Page Top](#)

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▼ Together with our Employees
  - Employment
  - Workplace with Safety and Health
- Enlightenment and Training
  - Work-Life Balance
  - Our Diversified Personnel
  - Human Rights
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society



## ■ Brother System for Fresh Graduates

This is our system for senior employees to take care of our fresh graduates both for their work and personal lives for the next two years from their commencement. This system has been around for as long as 20 years already; initially it started as a system to give man-to-man training by seniors to nurture young technicians, now it has been spread to the entire fresh graduates under comprehensive work position (main career track).

## ■ "Advanced Specialist" and "Technical Masters" to Accumulate and Inherit our Technologies and Skills

We are certifying our personnel as "Advanced Specialists" with a top level of specialization in a technology area those who have contributed greatly among them and those who are necessary to fortify our businesses so that they can focus on their activities on technology. Also, we are certifying from our personnel as "Technical Masters" those who are able to train juniors by utilizing their specialized skills and knowledge among our employees in the technical fields in order to inherit our technology to the new generation. We have certified 17 Advanced Specialists and 20 Technical Masters at the point of March 2011.

## ■ Conducting Overseas Training for Fresh Graduates

Starting from the fiscal year of 2009, we have been providing training for all our fresh graduates under comprehensive work position in our overseas group offices for about two months plus in order to have them enhance their sensibility towards different cultures through hands-on experience of diversified culture while they are young.

## ■ Voices from Training Attendees

- Female (training destination: China from July 2010 to August 2010)  
I was able to have a good understanding as to the necessity to expand our business globally by having hands-on experience with our products which are actually used in all over the world; also I came to know how massive overseas markets are. Furthermore, by getting training under Japanese expatriates, I was able to get a clear picture about what are the challenges our company expatriates may face and what it means by working abroad.
- Male (training destination: the United States from July 2010 to August 2010)  
I was able to have a broader picture as to my outlook by having a hands-on experience with my seniors from Yokohama Rubber who are performing on the global stage. Now I also have a better understanding by learning how our products are utilized in their local market; this means I may have an opportunity to work in all over the world.

## ■ Enlightenment for Company Expatriates and their Family Members

Amid global expansion of our businesses, currently about 100 employees are working overseas and their number is on the rise every year. Starting from the fiscal year of 2009, we are providing overseas pre-relocation seminars to enlighten them with mainly how to proceed with work operation in different cultures. The seminar consists of any necessary formalities, safety lecture per destination region (necessary knowledge as to status of their public order and ensure safety), language training, and information on schooling for their dependent family members.

## ■ Group-Wide Development Activities to Eliminate Redundancy

To encourage our production sites to utilize own creative ideas, we are expanding group-wide development activities (activities to eliminate redundancy) to aim for efficient usage of time, materials, space, stocks, and so on by all our production divisions including our overseas subsidiaries. The number of the cases where such improvement plans are executed is as follows.

### Achievements in FY2010 (number of the cases where improvement plans are completed)

First Half of the Year	424 cases
Last Half of the Year	468 cases
Total	892 cases

## ■ Incentive to Obtain Official Certifications

We have an incentive system for our employees to obtain official certifications which are advanced levels which may not be easy to obtain but yet are essential for our company growth; the company is thereby trying to encourage our personnel to obtain as many as possible.

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Certification	Incentive Amount	Number of Achievement Cases		
		2008	2009	2010
1 <sup>st</sup> Grade as Boiler Engineer	JPY20,000	1	2	4
Land Surveyor	JPY100,000	0	0	2

## ■ Personal Information Sharing for Training (Personal Folders)

We have our personal folders in place which are open to both comprehensive work positions and administrative staff so that the staff him/herself or their supervisors can view through their PC for their employment history, training history, language skills, and so on. This is meant as an assistant tool to set up their future training plans by verifying their background.

▲ [Go to Page Top](#)

## Human Resource Evaluation System Aiming for Personal Growth (C2S)

C2S is an acronym of Challenge & Communication System; this has been in place for active interaction between organization and individuals by realizing fair remuneration through objective human resource information as much as possible. Every half year supervisors have a discussion with their subordinates where employees will set their challenges to address upon hearing action suggestion as to their challenges and roles. There will be another dialogue in the end of the term to verify their achievements and growth, followed by supervisor's evaluation. Individual employees will grow through pertinent guidance and advice from their supervisors. C2S is subject to all the personnel in comprehensive work position in YRC unit.

Implementation Ratio of C2S (comprehensive work position/all the personnel): 28.0%

▲ [Go to Page Top](#)

[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)
[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Employees](#) > Work-Life Balance


## Work-Life Balance

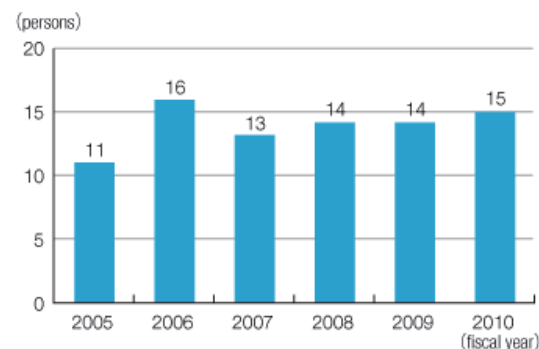
### Achievements

#### Support through our Systems

#### ■ Childcare Leave System

Since 1992, we have been supporting our employees with a child less than 1 year old (up to 1 year and 6 months if certain criteria are met) by establishing some regulations for childcare leave.

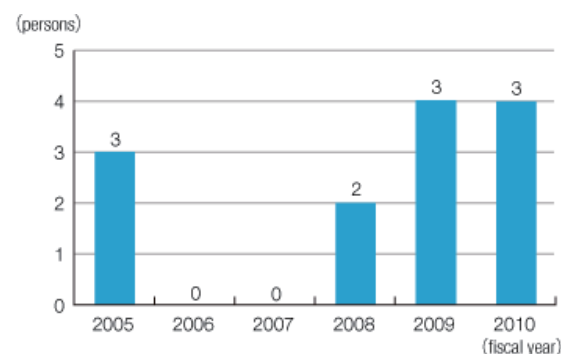
#### Changes in the Number of Employees who have Taken Childcare Leave (unit: person)



#### ■ Family-Care Leave System

Since 1994 we have deployed a system to support our employees with family members who need nursing care on a steady basis. Also, we are expanding the range for "nursing leave for children" (5 days/annually) which is to take care of the children who became ill, until their children graduate from primary school.

#### Changes in the Number of Employees who have Taken Nursing Leave for Children (unit: person)



#### ■ Shorter Working Hour Scheme

Employees may utilize our a shorter working hour scheme for those who have pre-school children or any family members who need nursing care upon the relevant employees' request. Also, we have a staggered working

## Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▶ Together with our Customers

▼ Together with our Employees

Employment

Workplace with Safety and Health

Enlightenment and Training

### Work-Life Balance

Our Diversified Personnel

Human Rights

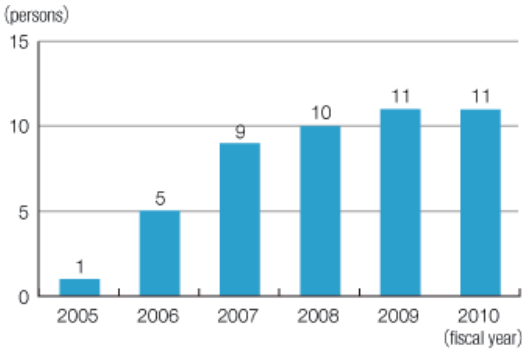
▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

hour system for those who have children with in the third year of primary school or younger.  
Furthermore, since fiscal year of 2010 we have deployed a system for employees those who wish, located in the assigned area only without having relocation for the next two years.

**Changes in the Number of Employees who have Taken Shorter Work Hour Scheme (unit: person)**



**■ Volunteer Leave System**

Since 2008, we have established our volunteer leave system up to five days annually to provide the environment for our employees so that they can get involved with some volunteer activities rather easily. As of June 2011, three of our employees have taken this leave to assist disaster-hit areas by Great Eastern Japan Earthquake.

**■ Leave System for Jury**

We have established a jury-leave system since fiscal year of 2009.

▲ [Go to Page Top](#)

**Assistance through Various Seminars**

**■ Second Life Seminar**

We are holding a seminars for our employees in their 50's to assist their lives during employment and their plans after retirement as much as possible; this is being held under co-organization by labour and management sides every year. The seminar consists of Yokohama Rubber's pension plan, briefing over re-employment system, purpose to set up their life plans, pension scheme, know-how on fund operation, and so on by bringing up some actual cases. Since the seminar contents may be peculiar depends on their region, this is organized and conducted by each of our offices.

▲ [Go to Page Top](#)

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[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Employees](#) > Our Diversified Personnel



## Our Diversified Personnel

### Achievements

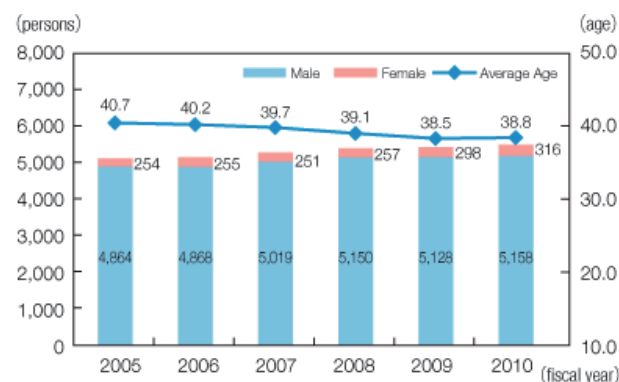
In order to continue to survive in the global business world by achieving our various goals as set forth in GD100, we need to facilitate utilizing our personnel with diversified value more than ever before. We will continue to make efforts to create workplaces so that all our employees including foreigners, female workers, and disabled persons can work together as a team with passion and enthusiasm.

### Proactive Employment of Comprehensive Work Positions for Female Workers

During employment, we are trying to employ more female candidates for comprehensive work positions. Our new human resources system GLOBAL has a purpose to proactively provide an opportunity to perform for those who are equipped with enthusiasm and capabilities; also, we have greatly expanded our transfer system from administrative assistant to comprehensive work position. In April 2011, 41 of our employees have been successfully transferred by utilizing this system.

Incidentally, there is no gender gap as to our basic salary. Currently, we have three female employees who are appointed as managerial positions.

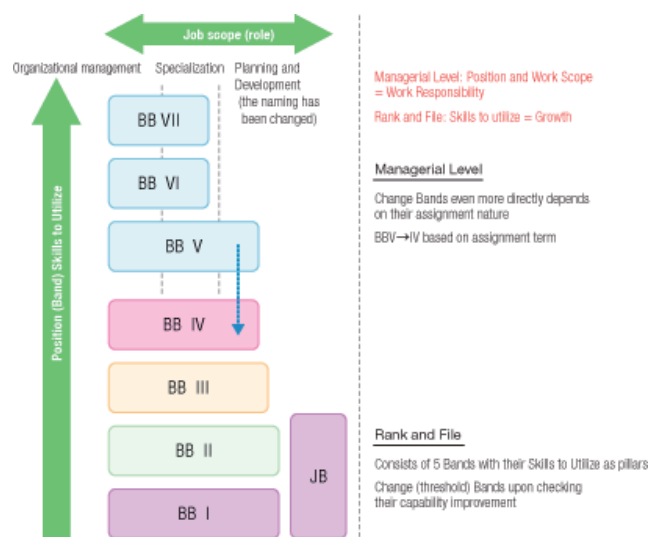
### Changes in the Female Ratio in Entire Comprehensive Work Positions (FY2010)



### Our Human Resource System GLOBAL

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▼ Together with our Employees
  - Employment
  - Workplace with Safety and Health
  - Enlightenment and Training
  - Work-Life Balance
- Our Diversified Personnel**
  - Human Rights
  - ▶ Together with our Business Partners
  - ▶ Together with our Shareholders and Investors
  - ▶ Together with our Society



▲ [Go to Page Top](#)

## Case Introduction from Yokohama Tire Corporation (YTC)

Here is the report from Ms. Noriko Argue, who is with YTC's Salem Factory in Virginia State (VP), a tire manufacturing and distribution company in the United States as a supporting measure for female workers.

There are approximately 900 employees in YTC and 40 of them are females. There are 720 workers in operation site with 24 of female workers. Various challenges we face to juggle work and child rearing are the same both in Japan and the United States. They are under a lot of stress, in addition, any concerns over their personal lives may lead to troubles at work; as a result, that may leave them no choice but to resign and I think that would be such a bad cycle. Here, we would like to introduce some programs our company have in place to make some improvements for situations like this.

Our company is entitled to the support from EAP (Employee Assistance Program) through private corporations. This is truly giving our female workers peace of mind as they can get a support from specialized counsellors at company's expense. Also, even though we do have another supporting system for mental issues, I hear that the majority of our female workers would usually talk about issues at home or personal lives. This system is very effective as basically, females have the nature to feel better just by talking with someone. Of course, contents are strictly kept confidential and it is grateful that they are from an outside organization, not like company's human resource labour division or that kind.

The Flexible Employee Benefit Plan refers to tax relief for those who need day-care centre where the smaller your child is, the higher the tuition becomes, plus any expense for healthcare centre. These are not YTC's unique system but none of us could utilize it unless company deploys them. Also as you may know, medical expenses in the United States are so expensive as such it is very challenging to make ends meet for any household with small children; I think it is grateful that our company has deployed this system for tax relief with that respect as well.

### Female Managers in Charge of Operational Sites from YTC Salem Factory



▲ [Go to Page Top](#)

## VOICE

### Mr. Mitsuo Sakurai, Vice President of Yokohama Tire Corporation

It is not that American society has a preferential treatment over female, but I feel that the notion of equal opportunities is more



advanced than in Japan. In that sense, our operation site has no qualms about appointing female workers to operation managers or forewomen. From now on, I am thinking of appointing more capable women to various positions where their own capabilities will be utilized to the maximum.

In Japan, I have recently started to see more females in comprehensive work positions but I still feel that they may be still reluctant thinking about possible relocation, getting married, and so on. Even so in Japan, I have started to see more females in the workplace with triple-shifts; among them, the number of the candidates for operation chief is gradually increasing. I think it would be good to form a system like that for more capable female workers to be appointed as operation chiefs whilst the company will support from various aspects for them.



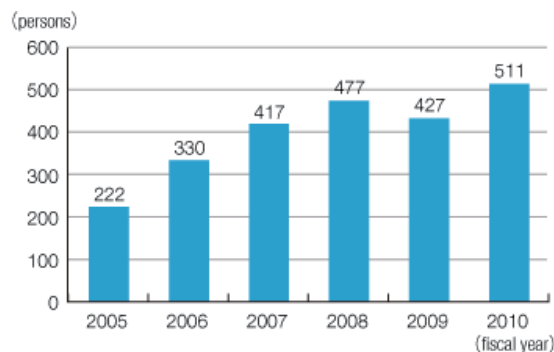
▲ [Go to Page Top](#)

## Utilization of Re-Employment for 60 years old or above

As of in the end of March 2011, there are about 400 employees who belong to the "Partner System" which was implemented in 2006; this is to re-employ our personnel who have reached 60 years old. Requirements for this system are (1) those who wish, (2) they are meeting certain evaluation standards, (3) it is confirmed that they are suitable for re-employment from the latest medical check-up, and so on. At the end of March 2011, 70% of those who have retired are utilizing this system as active workers in order to pass down various techniques to the young generation, or as company assets fully equipped with various advanced skills.

Also, to provide flexibilities in terms of their job security and work style for senior citizens, we are promoting Shorter Working Hour Scheme as well.

### Change in the Number of Re-Employment



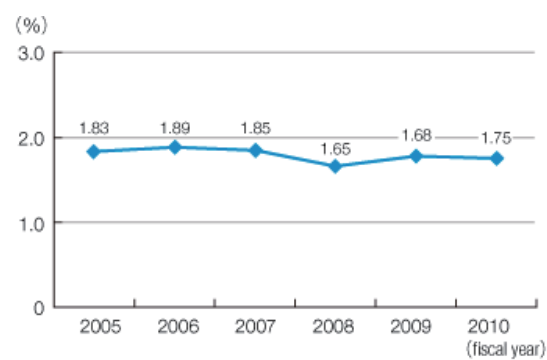
▲ [Go to Page Top](#)

## Employment of Disabled Persons

As for employment of disabled persons, we were employing fresh graduates at each of our office for the positions from our existing work operations that can be fulfilled regardless of the degree of their disabilities; we are currently trying to develop new work operations so that we can have wider positions available to employ more disabled persons. For example, we are accommodating employees with mental disabilities as administrative assistants of the seminar house. Through those approaches, even though we were unable to achieve our targeted percentage throughout of the fiscal year of 2010, we are able to fulfil the employment rate in the single month of March.

Also, in order to promote more employment of disabled persons including our domestic group companies from now on, we are in the midst of the review to aim for the establishment of an extraordinary subsidiary in the fiscal year of 2012.

### Change in the Employment Rate of Disabled Persons

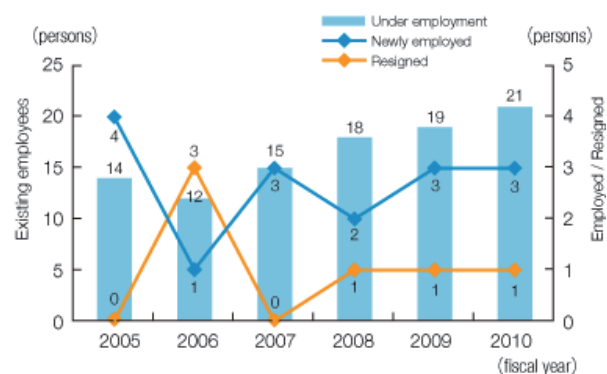


▲ [Go to Page Top](#)

## Employment of Foreigners

We are proactively hiring foreigners as well as our approach for our personnel with diversity. At the point of the end of March 2011, four employees other than Japanese national have been appointed to managerial positions.

### Numbers of Foreigners Employed



▲ [Go to Page Top](#)



## Human Rights

### Achievements

#### Respecting Human Rights and Legal Compliance

##### ■ Compliance Card

We are ensuring a sense of respect towards human rights by distributing cards with descriptions herein for all our domestic employees that reads; "We (Yokohama Rubber and Group Companies) will act based on the following eight pillars of principles, regardless of being inside or outside of the country, respecting all kinds of human rights, complying with related legislations, international rules, and their spirits, in order to create a sustainable society by applying good common sense all the time."

As for our overseas offices, each subsidiary has their own code of conduct catered to their region based on these principles.

1. Provide socially useful products and services, followed by securing customer satisfaction and credibility
2. Fair, transparent, and free competition with proper trading
3. Fair disclosure of company information
4. Realize employees' comfort and affluence
5. Proactive approach for environmental issues
6. As "good corporate citizens"
7. Protection and management of company assets and information
8. Contribute to each country or region by complying with their prevailing laws

##### ■ Countermeasures for Sexual Harassment

We have set forth our basic guidelines as to workplace without any form of sexual harassment; we have placed it on our "Human Resources Corner" of our internal intranet with its supporting system such as where to contact for counselling and to lodge complaints. There were three cases reported to our Compliance Hotline (Whistle-Blowing System) as to harassment and we have settled all the cases in the proper manner.

##### ■ Countermeasure for Power Harassment

We have set forth our tips to solve any form of power harassment; we have placed it on the "Human Resources Corner" of our internal intranet with its supporting system such as where to contact for counselling and handling complaints.

Also, we have conducted a seminar at all of our offices to prevent power harassment targeted at our managerial positions based on our guides and actual cases where about 200 managers have attended for 120-minute-long lecture. We intend to continue to hold these in the fiscal year of 2011 as well.

##### ■ Survey of Labour Laws and Labour Practices at our Group Companies

Every year, we are conducting a survey with regards to labour conditions or CSR on human resources at our group companies both in domestic and overseas to ensure they comply with the prevailing legislations.

▲ [Go to Page Top](#)

## Activity Report in the Fiscal Year of 2010

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▶ Together with our Customers

▼ Together with our Employees

Employment

Workplace with Safety and Health

Enlightenment and Training

Work-Life Balance

Our Diversified Personnel

### Human Rights

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

## Together with our Business Partners

### Together with our Business Partners

#### Guidelines

Yokohama Rubber Group is aiming for co-development under fair and equal trading as our basis, by establishing the sense of trust to realize our co-existence and co-prosperity. Especially, we will proceed with our activities to establish our credibility; for example by developing our CSR activities to our business partners, green procurement, and co-research as examples.

#### Basic Guidelines of Yokohama Rubber's Procurement

We will conduct our procurement based on the below-mentioned basic guidelines to realize GD100.

#### Basic Guidelines

##### Procurement of Optimum Raw Materials, Materials, and Construction

In order to provide better products, we will continue to procure optimum raw materials, materials, and construction.

##### Fair and Equal Trading

We will conduct fair and equal trading based on the notion of free competition.  
Also, we source all our business partners from all over the world through global perspective.

##### Reasonable Partner Selection

As for the selection of our partners, we will determine them based on economical reasonability under consideration of comprehensive perspectives; their quality, price, stable supply, ability for technology development, and environmental friendliness.

##### Partnership

We will establish an equal and fair cooperative relationship through healthy trading with our business partners; we will enhance mutual understandings and credibility to achieve growth with one another.

##### Compliance

During our procurement activities, we will abide by all the related regulations and social standards in addition to not disclosing any confidential information we came to know during trading.

Also, we will try not to conduct any misleading behaviour by reflecting onto our socially accepted ideas.

##### Harmony with the Environment

We will try to purchase raw materials with a lesser burden to the earth environment.

#### Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▼ **Together with our Business Partners**
  - Development of CSR to our Business Partners
  - In Order to Establish Credibility with Business Partners
  - Green Environment
  - ▶ Together with our Shareholders and Investors
  - ▶ Together with our Society

▶ In Order to Establish Credibility with Business Partners

▶ Green Environment

▲ [Go to Page Top](#)

---



## Together with our Business Partners

### Development of CSR to our Business Partners

#### Achievements

We are trying to establish a reliable relationship one another based on fair and equal trading; we will continue to ensure our co-existence and co-prosperity and leverage our service levels as a partner through our various CSR activities.

#### Holding a Seminar of CSR Guidelines Internal Request Division

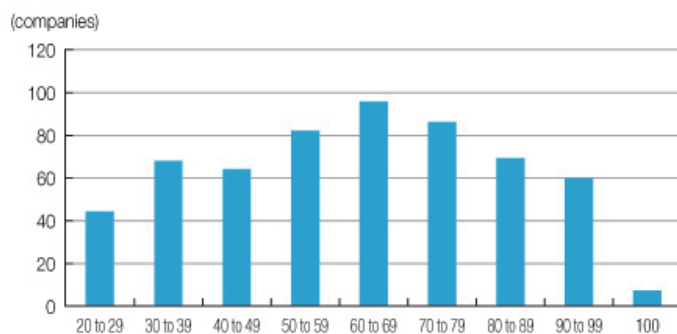
Yokohama Rubber has decided to go about green procurement and CSR activities comprised of Corporate Compliance, followed by their development to our business partners. Before we explain our CSR guidelines to our business partners, we hold an internal seminar as to our CSR activities among relevant personnel to get them to know thoroughly the contents of our CSR and understand fair and equal trading to ensure they are thoroughly familiarized with them.

▲ [Go to Page Top](#)

#### CSR Guidelines Seminar for Business Partners

Starting from our Headquarters and Hiratsuka Factory in March 2010, we have held CSR Guidelines Seminars for our business partners for all our domestic offices at which about 500 of our partner companies have attended. At the seminar, we have requested to them a self-evaluation called the "Self-Evaluation Sheet for Business Partners" which comprises of "Compliance", "Safety and Quality", "Human Rights and Labour", "Environment", "Social Contribution", "Information Disclosure", "Risk Management", and so on; we were able to hear from 576 companies among them. Furthermore, in order to develop the same level of activities, we had conducted the same briefing session for our personnel in charge of procurement at our overseas plants (China, the Philippines, and Thailand).

#### Graph of Self-Evaluation Score from 576 Companies



#### Graph per Item

#### Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▼ Together with our Business Partners

#### Development of CSR to our Business Partners

In Order to Establish Credibility with Business Partners

Green Environment

- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society



**CSR Guidelines Seminar for Business Partners  
(Held in March 2011)**



**Briefing Session for Personnel in Charge of  
Procurement in Thailand**



**Briefing Session for Personnel in Charge of  
Procurement in China**



[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Business Partners](#) > In Order to Establish Credibility with Business Partners

## Together with our Business Partners

### ○ In Order to Establish Credibility with Business Partners (Fair and Equal Selection of Partner)

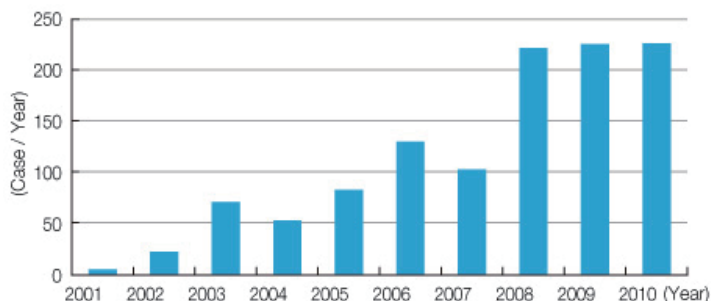
#### Achievements

We select our business partners based on the notion of "open trade, fair and equal free competition". We are proactively recruiting new business partners by fully utilizing such methods as obtaining quotations from multiple companies, determination of the supplier through auction, and so on.

#### Conducting Auctions

The number of auctions held over the past three years has been a little over or less than 220 per year. Until now, we have been conducting auctions in the light of fairness and equality; from now on, we aim to conduct auctions higher in quality; selection through participated companies for auctions based on our database in the past, or screening results of opening projects as our axis of selection, instead of focusing on simply how many times they participated in the past.

#### Changes in the Number of Auction Held



▲ [Go to Page Top](#)

#### Compliance and Guidance towards Overseas Plants

We are trying to enhance the above-mentioned by reviewing the contents on a regular basis to meet the requirements of TS16949 (quality standards mainly for automobile industry), proper procurement operation and law-abiding, and to prevent any fraudulent activities. Also, we issue Basic Requirements of Material Procurement by incorporating the preceding items for our overseas plants in order to guide them with their proper work operations.

#### ■ Compliance with Subcontracting Law and Supervision of Procurement Operation

We conduct internal training for personnel in charge of materials and subcontracting as to Subcontracting Law, followed by having them attend external seminars for Subcontracting Law on a regular basis. Our Global Procurement Division pays a visit to all the Material and Subcontracting Division in our offices regularly, to ensure there is no case of breach against any items under Subcontracting Law by conducting operational audit, in order to maintain our law-abiding stance.

▲ [Go to Page Top](#)

### ○ Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▼ Together with our Business Partners
  - Development of CSR to our Business Partners
  - In Order to Establish Credibility with Business Partners**
  - Green Environment
  - ▶ Together with our Shareholders and Investors
  - ▶ Together with our Society

## Co-Research with our Business Partners

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Currently, we are proactively working together with ZEON Corporation, a manufacturer of environmentally friendly products, especially synthetic rubber which is optimum material for fuel efficient tire or lightweight tire, and a synthetic rubber manufacturer to develop steel code, in addition to Tokyo Rope Manufacturing Co., Ltd., a manufacturer of steel code. Also, we are conducting co-research together with Songkran University in Thailand, one of the major production sites, to utilize resources at the production site of natural rubber and to contribute to the improvement of work conditions of rubber farmers there.

[Refer to Up Close Article](#)

▲ [Go to Page Top](#)

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## Together with our Business Partners

### Green Environment

#### Achievements

Yokohama Rubber has been working on the development and usage of raw materials to contribute to the environment under the cooperation of our business partners with preservation of forest resources, control global warming, usage of recycled raw materials, and expansion of non-petroleum raw materials as the main themes.

#### Preservation of Forest Resources

In order to preserve forest resources, we have abolished wooden pallets or wooden crates which we used to deploy massively in the past. We have almost completed switching all of them into recyclable metal pallets or plastic pallets. As for imported raw materials, we used to have some problems with extra costs incurred by using used pallets for re-export but this issue was closed at the last half of fiscal year 2009. These days we are trying to apply the same approaches at our overseas operation sites.

Also as for the paper made of wood as raw material, we were able to significantly reduce the amount of importing by addressing the company-wide reduction effort on paper usage. The fiscal year of 2010 resulted in 68% compared to the fiscal year of 2006. As for the type of paper to use, we purchase paper classified as eco-friendly as the first priority.

#### Changes in Amount of Purchased Paper

Fiscal Year	2006	2007	2008	2009	2010
Purchased Amount (JPY1000)	10,458	10,108	9,206	8,245	7,083
Comparison with FY2006	100%	97%	88%	79%	68%

▲ [Go to Page Top](#)

#### To Control Global Warming

We are currently working on the development of resin for air-conditioning for automobiles by collaborating with downstream automobile manufacturers and upstream raw material manufacturers. This is in accordance with the scheme to switch to CFC 134a with high in coefficient for global warming into CFC with lesser coefficient for global warming. Also in terms of the transportation of raw materials, we contribute to the reduction of CO<sub>2</sub> emissions by trying to have our overseas plants procure their raw materials from local suppliers to reduce CO<sub>2</sub> through logistics operations.

#### ■ Development of Resin for AC Hose to Cope with New CFC

Since CFC 134a, which is a cooling medium for the hose of air-conditioning for automobiles, has a high coefficient for global warming, it will be switched to 1234f, which has a lesser coefficient for global warming. We are also in the middle of the development of the hose of air-conditioning for automobiles by using resin; whilst proceeding under collaboration with resin manufacturers as a conventional nylon-kind resin low in durability which requires some development into a new type of resin.

#### ■ Reduction of CO<sub>2</sub> Emission through Transportation (Facilitation of Local Procurement)

### Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▼ Together with our Business Partners

Development of CSR to our Business Partners

In Order to Establish Credibility with Business Partners

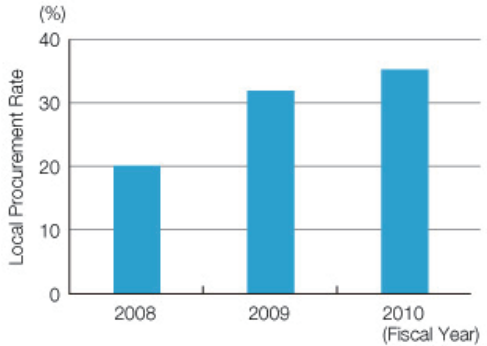
#### Green Environment

- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society

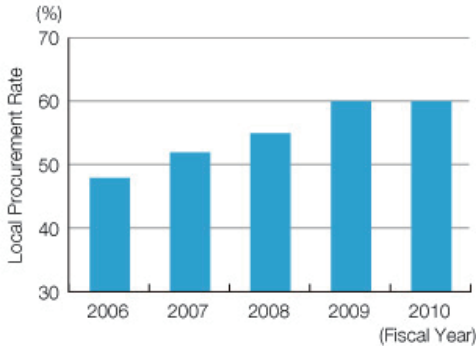
Our plants in China made a big improvement in terms of local procurement. Also, our plants in the USA used to import some of the raw materials from Japan due to being unable to arrange them locally, but now they are able to purchase them from the local market. Meanwhile, since we had to switch to importing from overseas suppliers in lieu of raw materials manufacturers in Tohoku region in the wake of Great Eastern Earthquake, we had no choice but to increase the CO<sub>2</sub> emissions temporarily.

○ **Changes in Local Procurement in China**

**Changes in Local Procurement in our Suzhou Plant**



**Changes in Local Procurement in our Hangzhou Plant**



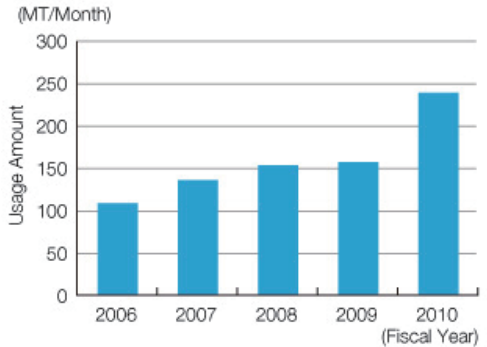
▲ [Go to Page Top](#)

**Expansion of Recycled Raw Materials**

In the past, recycled rubber used to be widely deployed as recycled raw materials for tires. However, blending this recycled rubber deteriorates their physicality, so the applicable range of their parts was quite limited; we had some limitations as to its usage. Also, as for rubber powder generally available in the market, it is likewise with recycled rubber; it used to greatly deteriorate the physicality and was unable to be used for tires.

Yokohama Rubber had signed the Agreement of Co-Development with Lehigh Technologies, Inc. in the USA with "Micronized Rubber Powders" to undertake further fining down of rubber powders to go about research on the usage of rubber powder for tires. As a result, it turned out that the deterioration of physicality is extremely low when the rubber powder is micronized into 0.180 mm without compromising manufacturing costs (mainly electricity power) too much at Lehigh Technologies. Consequently, we were able to blend 14 kinds of compounds; this way, we are able to significantly increase the usage amount of recycled raw materials which is expected to grow even further in the future. Meanwhile, Lehigh Technologies, Inc. can also plan for the expansion in the utilization of industry tire waste; later on, they were recognized at the World Economy Forum, followed by winning the Technological Pioneer Award in 2010.

**Changes in Usage of Recycled Raw Materials (Recycled Rubber and Rubber Powders)**



▲ [Go to Page Top](#)

**Be Away with Petroleum-Based Raw Materials**

In order to phase out from raw materials being dependent on petroleum as soon as possible, we are currently in the midst of development under collaboration with our business partners to develop non-petroleum-based raw materials as our main raw materials.

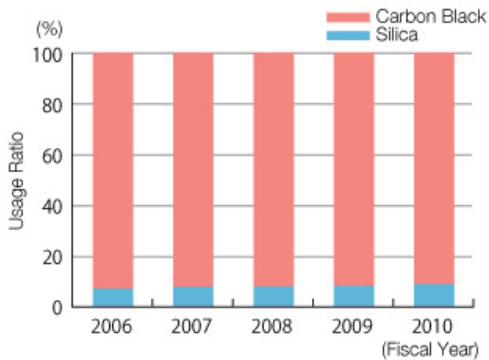
■ **Switching from Carbon Black into Silica**

Carbon black is the essential raw material for rubber; it is manufactured through imperfect combustion of petroleum-based oil or charcoal-based (tar-based) oil, as such it is not considered as high in extraction rate. At the same time, silica's basic raw material is from sand, which is almost unlimited in supply; the good thing about



silica is to limit the usage of petroleum-based resources but its negative aspect is it is fairly expensive and not easily being blended with rubber. We are thus able to overcome this problem by selecting Silane Coupling Agent and development of blending machines; upgrading to the preceding methods is currently taking place gradually.

**Changes in our Purchasing Amount of Carbon Black and Silica**



**■ Usage of Plant-Based Oil**

In the past, petroleum-based oil was the mainstream as the oil for rubber. Plant-based oil was unable to be used due to its poor compatibility with synthetic rubber such as natural rubber or SBR. Under collaboration with our business partners, we were able to develop orange oil which is high in compatibility with the preceding rubber types; we are now able to use it as a high grip oil.

▲ [Go to Page Top](#)

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[Message from Our President](#)
[Up Close](#)
[Activity Report in the Fiscal Year of 2010](#)
[Site Data](#)
[Related Information on CSR Report](#)
[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > Together with our Shareholders and Investors



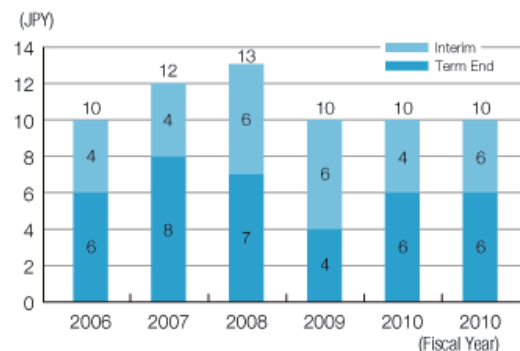
## Together with our Shareholders and Investors

### Guidelines

#### Guidelines as to Dividends

We are in the stance of applying necessary internal reserves in order to achieve our future business development and fortify our management body; our fundamental guidelines are to maintain a stable amount of dividends. As such, the dividend of this term has been determined as JPY 10 per share (JPY 4 for interim dividend and JPY 6 for term end dividend) likewise with our previous term.

#### Changes in Dividends per Share



▶ Development of our Proactive IR Activities

▶ In Order to Hear from our Shareholders

▲ [Go to Page Top](#)

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners

### ▼ Together with our Shareholders and Investors

Development of our Proactive IR Activities

In Order to Hear from our Shareholders

- ▶ Together with our Society



## Development of our Proactive IR Activities

### Achievements

#### Holding Briefing Sessions as to Financial Closing

We are holding briefing sessions as to financial closing for security analysts and corporate investors. Since the last half of the fiscal year of 2006, we have been conducting such briefing sessions at the timing of each financial closing per quarter.

#### Information Disclosure on our IR Homepage

We have upgraded our [Exclusive Homepage](#) for our shareholders and investors, where a variety of IR information, i.e. not just Messages from our Presidents, Information Related to Financial Closing, or Mid-Term Management Plans, but also Introduction of our Businesses, Explanation over Various Tables Related to Finance, can be found.

#### Distribution of IR Information Tools

In addition to our distribution of Interim and Term-End Financial Reports to our shareholders and investors, we are issuing our Annual Report (Report on Financial Closing in English) as well. Also, we create our Annual Report in a Japanese version and all the contents therein can be found in our homepage. From the fiscal year of 2008 onwards, in order to provide the material of briefing sessions for our shareholders and investors in an even more timely manner, we are currently providing such information on our homepage in PDF format.

#### Conducting of Individual Meetings

We also conduct individual meetings with our security analysts and corporate investors.

#### Conducting of General Meeting for Shareholders

During our annual General Meeting for Shareholders, we are trying to provide our business reports for our shareholders by continuing to make improvements to present it in a straightforward manner.

▲ [Go to Page Top](#)

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▼ Together with our Shareholders and Investors
- Development of our Proactive IR Activities**
- In Order to Hear from our Shareholders
- ▶ Together with our Society

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Shareholders and Investors](#) > In Order to Hear from our Shareholders



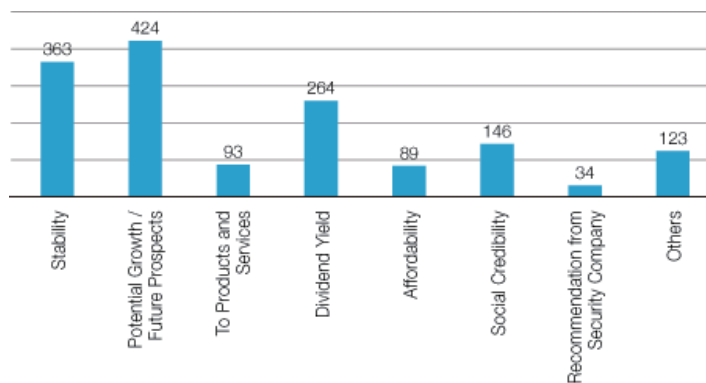
## [In Order to Hear from our Shareholders](#)

### Achievements

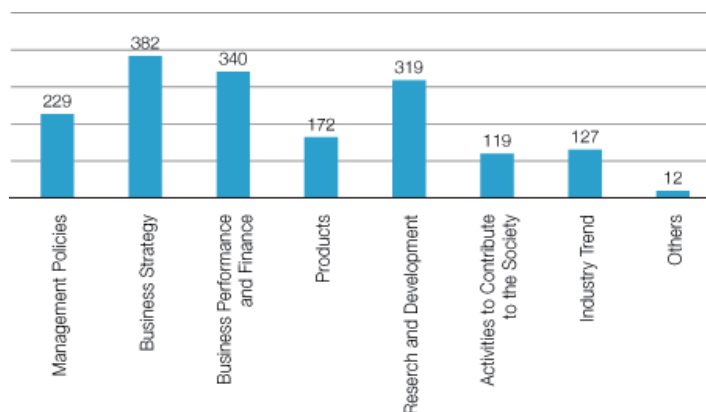
#### Conducting Questionnaires with our Shareholders

We are conducting annual questionnaires with our shareholders at the same time as the issuance of our Term End Financial Report in order to hear from them later on. We started this from the fiscal year of 2004 and have conducted seven times in total so far. In the fiscal year of 2010, we were able to hear from 888 respondents as to their Motivation of the Purchase of our Shares and Information Usable for some Improvement in the Future. Based on the opinions and requests received, since our General Meetings for Shareholders in June 2007, we have been playing a video in a visual form so that they can have a clearer picture as to our information on performance, activities, and products. Also, we have made some improvements mainly on our structure of Term End Financial Reports to present it in a more straightforward manner. We will hereby continue to utilize such information to keep improving our IR activities.

#### Motivation of the Purchase of our Shares (Multiple Replies)



#### Information Usable for some Improvements in the Future (Multiple Replies)



### Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▼ Together with our Shareholders and Investors

Development of our Proactive IR Activities

#### [In Order to Hear from our Shareholders](#)

- ▶ Together with our Society

[Message from Our President](#)[Up Close](#)[Activity Report in the Fiscal Year of 2010](#)[Site Data](#)[Related Information on CSR Report](#)[Company Overview / CSR Management](#)[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > Together with our Society

## Together with our Society

### Guidelines

#### Basic Notion

We are working on various activities for our local communication; based on the notion that it is our various approaches in order to increase the level of "comfort" we provide for our stakeholders which are precisely our CSR activities. Our aim is that the presence of our plants can disseminate various senses of "comfort" to each country and their local communities.

We are introducing our communication with local communities under "[CSR by our Plants and Affiliates](#)" for all of our operation sites.

There is no case of volunteer work such as construction of infrastructure in the fiscal year of 2010.

[▶ How we Handled External Complaints](#)[▶ Evaluation from the Society](#)[▶ Other Social Activities](#)

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors

### ▼ Together with our Society

[How we Handled External Complaints](#)[Evaluation from the Society](#)[Other Social Activities](#)[▲ Go to Page Top](#)

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Society](#) > How we Handled External Complaints



## How we Handled External Complaints

### Achievements

#### How we Handled External Complaints

Yokohama Rubber has reviewed our complaint handling procedure manual to handle any complaint at our domestic operation sites in order to cope with the same quality and the same level, and also try to get as accurate information as possible.

Also, we will verify the situation upon receipt of any complaint by visiting the person who provided such information. We shall thereby notify the result after conducting relevant countermeasures in a proper manner. We are applying numerous measures in order to achieve zero complaints from our local residents.

In fiscal year of 2010, we have increased the number of odour elimination equipment in our Mie Plant to cope with odour issues. As for noise elimination, we are continuing with our measures by conducting regular sound checks followed by identifying the source of the noise. As a result, it ended up with six cases (two cases for odour, two cases for noise, one case for air (soot dust scattering), and one case for the others (dust scattering)) against ten cases which was our initial target.

It was complaints over noise and others (dust scattering) that have increased the number compared to four cases in the fiscal year of 2009.

We have taken our measures by identifying the source of the noise. Also, we are fortifying our environmental patrol as prior management.

We are targeting eight cases or less annually in the fiscal year of 2011. As for odour elimination, we will check the effect on the odour elimination equipment which we have increased its number in the fiscal year of 2010 in our domestic operation sites. Also, we are planning to increase its number in our overseas operation sites even more. Furthermore, we will conduct our measures according to our plan as we were able to identify the source of noise and vibration issues.

### Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▼ Together with our Society

#### How we Handled External Complaints

Evaluation from the Society

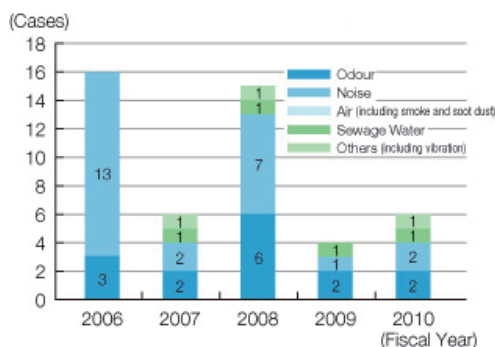
Other Social Activities

#### The Number of Complaints against our Operation Sites and their Measures

Items	Target (FY2017)	Achievement of FY2010	Evaluation	Target in FY2011
Complaints from Outside	Target to zero in FY2017	Achieved with 6 cases (target was 10 cases or less)	Passed	8 cases or less of complaints

#### Changes in the Number of Complaints

##### Corporation-Wide by Fiscal Year, Changes in the Number of Complaint Nature





[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Society](#) > Evaluation from the Society



## ○ Evaluation from the Society

### Achievements

#### Evaluation from the Society in the fiscal year of 2010

We were able to receive numerous kinds of good evaluation from our society from April 2011 to March 2011 as described herein.

#### 1. Yokohama Tire Philippines, INC. Wins General Excellence Award two years in a row (April 2010).

YTPI has won the General Excellence Award two years in a row from Clark Development, a Public Corporation which operates Clark Special Economic Zone. They were appraised of with various aspects of contribution such as investment, employment, environmental management, and labour safety sanitation; the Certificate of Merit has been handed out by President Gloria Arroyo who was attending as Honorary Guest.

##### ○ About the General Excellence Award by Clark Development

This is selected by Clark Development among corporations established in the Clark Special Economic Zone in the northern part of Manila on Luzon Island, for corporations especially excellent in management and contributed to the development of their local areas. In 2010, on top of six companies being awarded with General Excellence Award among 46 candidate companies, another 11 companies have been awarded specially for environmental sanitation, performance in investment, employment and human resources management, initial investment, and so on.

#### 2. Yokohama Wins "Club of the Year" Award (Golf Digest Award 2010) (April 2010)

"Egg", the brand of PRGR, has won "Club of the Year" in two divisions of the Iron and Extra in Golf Digest Award 2010.

##### ○ About the Gold Digest Award

This is an award sponsored by the Golf Digest through voting by the golfers in the public for individuals or clubs who have tremendously contributed to the golfing world.

#### 3. Inner Liner Technology to enhance tires' low fuel consumption performance has been awarded with an award by the Society of Rubber Industry, Japan (June 2010)

Inner Liner refers to material adhering inside a tire to prevent deterioration of fuel efficiency of the car by deterring air leaks. The award-winning Inner Liner is a new material which has a balance of a high-dimension of low permeability of resin and flexibility of its rubber; it will not just significantly reduce the air leak of tires, but by realizing a thinness at a fifth of the conventional products, it is contributing to the improvement of fuel efficiency by its light weight as well.

This time, our Inner Liner has been awarded and appraised with comments like "this product has tremendously contributed to the growth of rubber technology and the development of rubber industry, also it does prove the excellence of scientific technology in rubbers of Japan."

## ○ Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▼ Together with our Society
- How we Handled External Complaints

### Evaluation from the Society

Other Social Activities

#### ○ About the Award by the Society of Rubber Industry, Japan

This is an award to be granted by the Society of Rubber Industry, Japan for the members who have made a contribution to the development of the science of rubber or related fields, technology, or its industrial fields whose significant performance is well recognized.

▲ [Go to Page Top](#)

#### 4. "BlueEarth AE-01" has been awarded with Good Design Award (September 2010)

"BlueEarth AE-01" is the first product of "BlueEarth" which is the concept of new tire making to contribute on a global scale; this product has been launched in domestic market in July 2010. As per the Labelling System\* of the tires started from January 2010 it has been ranked at "Rolling-Resistance: AA and Wet Grip Performance: c"; rolling resistance has been reduced by 24% compared to conventional products "DNA ECOS" whilst wet performance (safety performance) has been maintained as well. At the same time, the comfort level such as quietness and comfortable ride has been enhanced. In addition to the contribution to the preservation of earth environment, another aspect we had proactively addressed was to reduce various trouble for users, the surrounding living environment, etc., as well as an elegantly designed primary tread pattern being highly appraised, which has led to this award being won.

#### ○ About the Good Design Award

By continuing the "System of the Product Selection with Good Design" established by the Ministry of International Trade and Industry (the current Ministry of Economy, Trade, and Industry) in 1957, this is the only system of comprehensive design evaluation and recommendation initiated by the Japan Institute of Design Promotion in 1998. Awarded products are granted the use of a "G Mark" to represent excellence in design.

#### 5. Our Double Addressing towards 3R has been gained a Double Award for the "Resource Circulation Technology and System Awards" (October 2010)

"Reduction of industrial waste by recycling used vulcanized bladder (Tire Sector)" and "Development and growth of ""e-can"", the container for industrial waste for 2-component-type ceiling material and establishment of recycle system (MB Sector)" have both been awarded with "Resource Circulation Technology and System Awards" under the Chairman's Award.

#### ○ About the Resource Circulation Technology and System

This is a Commendation System with the longest history in the 3R field sponsored by the CJC (Clean Japan Centre) and supported by the Ministry of Trade, Economy, and Industry. They award entities with excellent business models or approaches that have contributed to Reduction, Reuse, and Recycling (the 3Rs) of industrial waste.

#### 6. Selection Screening for Candidate Investment Brand of "Beech Forest", Eco Fund by NKSJ Risk Management, Inc. (October 2010)

We were able to get "the Highest Rank A" for four years in a row in the selection screening as the candidate brand for investment of eco fund by NKSJ Risk Management, Inc.

#### ○ About "Beech Forest" by NKSJ Risk Management, Inc.

This is an eco fund to invest in Japanese companies who are high in the awareness of preservation of environment and proactively addressing various environmental issues.

▲ [Go to Page Top](#)

#### 7. Salem Plant of "Yokohama Tire Corporation (YTC)" has obtained E4, the highest rank of the Certification in Environmental Excellence Program. (December 2010)

The Salem Plant of "Yokohama Tire Corporation", our subsidiary of tire production and distributor in the USA, has obtained the highest rank E4 (Extraordinary Environmental Enterprise) in the "Virginia Environmental Excellence Program" conducted by Virginia State. E4 entails, on top of the items of E2 and E3, an Environmental Management System Operational Report for the entire cycle (establishment of environmental policy → action plans → execution and management → measurement of the effect → evaluation), external verification of environmental management, and status report of continuous activities on the environment and local communities (3 cases or more). Upon successful screening on documentation there was an onsite inspection, followed by their obtaining of certification upon confirming all the requirements for E4 certification have been duly met.

#### ○ About the Environmental Excellence Program

Started in July 2005 aiming for the achievement of leveraging environmental management and deterring pollution in cooperation with various corporations and organizations residing in Virginia State. There are three stages for the participation program; E2 (Environmental Enterprise), E3 (Exemplary Environmental Enterprise), and E4. Obtaining this certificate refers to not just social recognition as environmentally contributing corporation, but also entitles us to some benefits such as concessions in utility bills.

### 8. The 14th Environmental Management Survey Ranking Result (Nikkei, Inc.)

Our overall evaluation at the 14th Environmental Management Ranking was 45th among 1,776 manufacturing companies.

#### ○ About the Environmental Management Survey

This is a survey done by Nikkei, Inc. since 1997. They evaluate how well the company is balancing the environmental measures such as global warming gas or reduction of industrial waste and efficient management. They announce in the newspaper in ranking style by generating the score of environmental management based on the questionnaires from various companies.

### 9. Yokohama Wins Bronze Award for the 6<sup>th</sup> Japan IAA Best Advertisement Award for TV Commercials Overseas (January 2011)

"Master of the Road" was produced to increase recognition of the Yokohama brand overseas and to highlight its high-performance tires from Japan. This TV commercial was set during the Sengoku Warring States period. Armoured samurai warriors were straddling over tires at extremely high speed charging across ice-covered roads and through a blizzard of falling cherry petals in a dramatic succession of quick-shifting scenes. The samurai in dignity not only symbolizes Japan, but embodies the high performance of Yokohama tires. The TV commercial was shown in a number of countries overseas, primarily Russia, where it inspired great public interest in samurai, and dramatically improved recognition and the impression of Yokohama brand. Mr. Toshiaki Nozue, Chairman of the awards committee (Chairman of the Japan Ad Contents Production Companies Association) commented; "This is a good piece of work. It represents the product well and it has strong visual impact and a sense of speed." Not only the concept and planning of the TV commercial but also the quality of its presentation has been highly appraised.

#### ○ About the Japan IAA Best Advertisement Award

The "Japan IAA Best Advertising Award" is sponsored by International Advertising Association Japan Chapter. In cooperation with FOX International Channels, it works to improve the standard of international advertisements in Japan. Distinctive works are selected from commercials advertising Japanese products or services - commercials either ordered or made under direction from Japan for the purpose of overseas advertising activities.

▲ [Go to Page Top](#)

### 10. Yokohama Rubber's Environmental Activities Honoured at Tire Technology Expo in Europe (February 2011)

We were able to win at the Tire Technology International Awards for Innovation and Excellence in the light of our comprehensive efforts to significantly reduce environmental burden especially in (1) efforts to preserve biodiversity including our issuance of Guidelines for the Preservation of Biodiversity, (2) promotion of our own YOKOHAMA Forever Forest Project to create forests both in domestic and overseas production sites, (3) reduction of greenhouse gas emissions by introducing solar power generation systems at our production facilities, and (4) efforts to achieve "complete zero emissions" – that is, no industrial waste subject to direct landfill disposal.

#### ○ About the Tire Technology International Awards for Innovation and Excellence

The awards recognize performance during the previous year to be given in five categories; tire manufacturing and design, tire development technology, environmental achievement, the best tire manufacture, and the best tire supplier. Judges are internationally renowned tire and auto industry experts, engineers, scientists and others.

### 11. Yokohama Rubber Wins "Mortimer T. Harvey Award 2010", Environmental Award for Development of Cashew Nutshells (March 2011)

The shells of cashew nuts used to be discarded as waste, but the cashew nutshell liquid extracted from them can be used as raw materials as rubber compounds for bead filler, a reinforcement material employed in the manufacture of tyres. This application contributes to the conservation of the environment by using natural

materials and more effectively utilizing resources. The rubber compound is more easily formed into tyres because it has low levels of rigidity prior to vulcanisation. After vulcanisation, it achieves high levels of elasticity that improves driving stability. This technology was patented in 1991 in Japan, followed by the United States in 1993.

This award recognizes Yokohama Rubber's achievement in developing, patenting, and commercializing technology using cashew nutshell liquid products about 20 years ago and in utilizing this technology for the last 20 years to contribute to preservation of the environment and development of the cashew nutshell liquid industry.

#### **About the Mortimer T. Harvey Award**

This is an Environmental Award supported by Cardolite Corporation (USA) since 1998. Its purpose is to encourage the development of cashew nutshell liquid products and technologies by recognising companies and researchers who have used cashew nutshell liquid to contribute to the society.

### **12. Yokohama Rubber's Hiratsuka Factory Wins "Kanagawa Earth Environment Award" (March 2011)**

We were able to win this award for being highly appraised of our attitudes and activities trying to raise the awareness of preservation on earth with society as a whole. Firstly we were appraised for facilitating to create our own forest by our employees together with our local residents for the entire work process from soil creating, collecting acorns, nursing seedlings, and tree planting in our "YOKOHAMA Forever Forest" Project which is currently being developed as entire Yokohama Rubber's tree planting activities. Secondly because we are providing our seedlings to various tree planting events.

#### **About the Kanagawa Earth Environment Award**

This is an award granted by the Kanagawa Prefecture and Kanagawa Earth Environment Protection Facility Convention mainly to the organizations conducting practical and continual activities for environmental preservation by aiming for the facilitation of steady activities and raise awareness from local communities towards preservation of earth environment.

▲ [Go to Page Top](#)

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[Message from Our President](#)[Up Close](#)[Activity Report in the Fiscal Year of 2010](#)[Site Data](#)[Related Information on CSR Report](#)[Company Overview / CSR Management](#)[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2010](#) > [Together with our Society](#) > Other Social Activities

## Other Social Activities

### Participation of Various Initiatives both Domestically and Overseas

#### ■ Challenge 25 Campaign

Yokohama Rubber has been participating and acting in accordance with "Challenge 25", a national program to help prevent global warming that has been developing since January 14, 2010.

#### ■ Japan Business Federation's "Biodiversity Declaration" - Facilitation Partners

Yokohama Rubber is in accordance with the idea of "Japan Business Federation's Biodiversity Declaration" and their facilitation partners since 2009 to develop various approaches for "preservation of biodiversity". Basic policies and action guidelines have been set forth as "Yokohama Rubber's Guidelines on Biodiversity" thereto.

#### ■ Japan Business Federation's "Implementation Scheme for a Low Carbon Society"

Yokohama Rubber is in accordance with, and participating in various activities for Japan Business Federation's "Implementation Scheme for a Low Carbon Society" under the vision of "Japanese industries playing a role as core functions with their technological strength in order to achieve our target which is to halve the greenhouse gas emission of the world in 2050".

#### ■ WBCSD (World Business Council for Sustainable Development)

WBCSD refers to the unified association consists of top executives from global corporations in order to perform their leadership in their industry, have lively discussion, and propose policies with regards to the environment and sustainable development. Yokohama Rubber is participating in the Tire Industry Project which is to conduct surveys pertaining to possible impact on the environment and health to be made by tires, and to promote various activities to save energies in the buildings and offices.

[▲ Go to Page Top](#)

## Activity Report in the Fiscal Year of 2010

- ▶ Corporate Governance and Compliance
- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▼ Together with our Society
  - How we Handled External Complaints
  - Evaluation from the Society
- [Other Social Activities](#)