



*Our Precision, Your Advantage*

## Environmental/Social Report

# 2008

2007.4 ~ 2008.3



## Company Overview

**Company Name:** KYB Corporation (official corporate name: Kayaba Industry Co., Ltd.)  
**Founded:** Kayaba Research Center, November 19, 1919  
**Established:** Kayaba Manufacturing Co., Ltd. March 10, 1935  
**Incorporated:** November 25, 1948  
**Head Office:** World Trade Center Bldg., 4-1 Hamamatsu-cho, 2-chome, Minato-ku, Tokyo 105-6111, Japan  
**Chief Representative:** President Satoru Yamamoto  
**Capital:** ¥19,113,680,000 (As of March 31, 2008)  
**Plants:** Sagami, Kumagaya, Gifu North, Gifu South  
**Laboratories:** Basic Technology R&D Center, Products Technology R&D Center

### Major Products (Groups)

#### Hydraulic Shock Absorbers

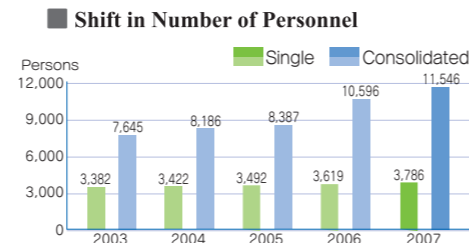
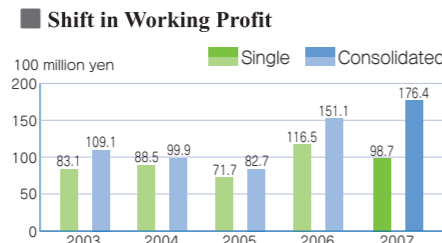
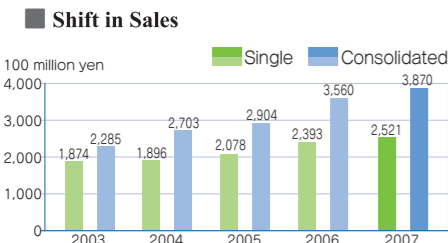
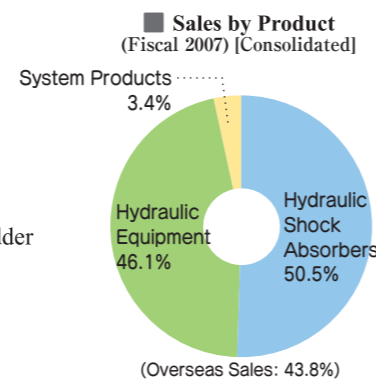
For automobiles: Shock absorbers, suspension systems, stay dampers  
 For motorcycles: Front forks, oil-cushion units  
 Others: Oil dampers for railroad, shock absorbers for buildings and structural applications, free locks

#### Hydraulic Equipment

For industrial use: Pumps, motors, cylinders, valves  
 For automobiles: Power steering systems  
 For aircrafts: Equipment for landing systems, flight control systems and pneumatic/hydraulic systems  
 Others: Jacks, electronic control systems

#### System Products

Special-purpose vehicles: Concrete mixer trucks, granule carriers, pruned branches shredder trucks, special function vehicles  
 Devices: Simulators, hydraulic systems, stage mechanisms, hydraulic systems for mines, tunnel boring machines, marine equipment



## Contents

- P1 Company Overview
- P2 To Our Stakeholders
- P3 Topics
- P4 Management Principles  
Management Principles/Management Vision
- P5 Environmental Management  
Environmental Policies  
Activity Plan Related to Environmental Preservation  
Environmental Management Organization  
Environmental Auditing  
Environmental Accounting
- P7 Reduction of Environmental Impact  
Global Warming Prevention Activities  
Waste Reduction Activities
- P8 Environmentally Friendly Product Development  
Energy Saving  
Automobile Related  
Technologies that Support Safety  
Technologies that are Kind to People, and Bring Safety and Comfort
- P10 Involvement with Society  
Social Contribution Activities – Exchange with Local Community
- P11 Along with Employees  
Safety and Health Activities  
Exchange among Employees
- P12 Environmental Preservation Activities of Plants  
Environmental Preservation and Safety Activities of the KYB Group that are Spreading Globally

## • To Our Stakeholders •



### Aiming for a company that provides comfort and kindness to the environment

Our management principle is "KYB Group contributes to society providing technologies and products that make life safe and comfortable." From the words of creativity, vitality and harmony by the founder, we have raised 3 principles. Adopting one of the management principles of "Maintain grace and good faith, and pay attention to nature and the environment," we have made technical developments and productions that are "earth friendly" to fulfill the social role as a company. We have also raised "Protect the green earth and create products gentle to the environment" as an environmental policy not only for environmental efforts in product development and production activities, but daily efforts by each employee as "Team minus 6%" activities.

We are currently building new plants in Sagamihara of Kanagawa and Kani of Gifu. These plants aim at coexistence with nature and region through the use of solar power generation, rain water, solar lightening, etc. As an important topic of management, we have raised "Management of high reliability and transparency" based on internal control to establish optimal corporate governance.

We are also implementing as a group the realization of fire and earthquake resistant plants and OSHMS (Occupational Safety & Health Management System) as this year's enhanced measure for a company that is kind to the environment and where employees can work safely.

The KYB Group will make diligent efforts so that each employee aims at company bearing the responsibilities of social and environmental preservation as a person living in the society and earth. We hope that the efforts and perspective of the KYB Group can be understood by as many people as possible through this "Environmental/Social Report 2008."

Satoru Yamamoto,  
President



### Environmental/Social Report -About the 2008 edition

We at KYB have been striving to become a manufacturer that "provides high-quality products and services to gain safety, satisfaction and trust of our customers." In the society, however, the environment is ever worsening with such phenomena as global warming and desertification. We believe that corporate activities that take into consideration the society and environment have become an important issue.

In particular, prevention of global warming, reduction of CO<sub>2</sub> and total reduction of energy consumption are the highest priorities. We at KYB have established 4 teams consisting of specialist groups to start activities that include not only employees but family members rather than just energy saving in the production process to cope with these issues in addition to the past activities. We have also launched the development of products (environmental dampers) that are environment-friendly by not producing wastes. We would like the "KYB Group" to remain trusted by the society as a good corporate citizen by harmonizing with the regional society.

This 2008 report summarizes the activities of fiscal 2007 and the future, and the same contents can also be found in our website. We will further improve and enrich the contents in the future. We are looking forward to hearing your opinions and advice concerning our stance towards environmental preservation and social contributions.

Ken Mizumukai,  
Managing Director  
Executive Officer for Environment  
& Safety

## "Next-generation environmental dampers" debut as ecological products that symbolizes the future technologies of KYB at the 40th Tokyo Motor Show



Full view of booth

At the Tokyo Motor Show ('07 10.27~11.11), with the concept of "Realizing kindness to people and the environment through comfort," KYB proposed the next-generation dampers that will start a new era as the top manufacturer of automobile shock absorbers. Three types of dampers using 1) gas, 2) water-soluble alternative fluid and 3) biodegradable oil were displayed, aiming at the reduction of amount of oil used and the amount of environment load while maintaining the "same riding comfort."

### 1. "Oil-free type damper"

Inactive gas is used instead of oil as the operating fluid. Drastic reduction of environmental load is possible with no risk of ignition during emergency.

### 2. "Alternative fluid damper"

Water-soluble alternative fluid is used rather than oil. Superior in biodegradability and temperature characteristics for improvement of response.

### 3. "Biodegradable fluid damper"

Biodegradable oil is used as the operating fluid rather than conventional oil. Damper closest to practical application since the existing technologies can be applied.

83,000k (415,000 drum cans) of oil is used a year for dampers produced worldwide. Reduction of this amount will greatly reduce the environmental load. We at KYB have been researching and developing new-generation products and technologies based on the vision of "coexistence with earth." In the future, we will tackle environmental issues by developing earth-friendly products using our cultivated traditions and technology power as a specialized manufacturer.

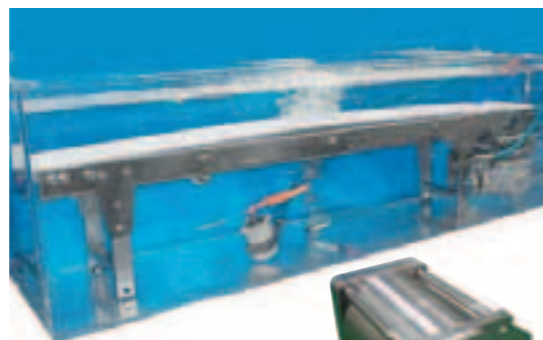


Environmental damper

## KYB's Aqua Drive System that is kind to earth, people and environment

KYB ADS (Aqua Drive System) is a new water-pressure drive control system that uses easily accessible tap water or freshwater. Currently, machines are driven by electricity, hydraulic pressure or air pressure. However, there are such issues as "large size of machines due to heat measures or drop in transmission efficiency of energy for electrical systems," "pollution of the surrounding environment from leak of operating fluid for hydraulic systems," and "bad energy consumption efficiency for air-pressure systems."

KYB ADS has the characteristic of blending with the clean environment since "tap water or freshwater" is used as the operating fluid with no harmful effects. It is not a mere replacement of electrical and hydraulic systems, but is a system that performs best in areas requiring a clean environment and safety such as semiconductors, chemicals, medical, pharmaceutical products and food products.



Water-pressure conveyor system



Water-pressure axial piston pump

# Management Principles

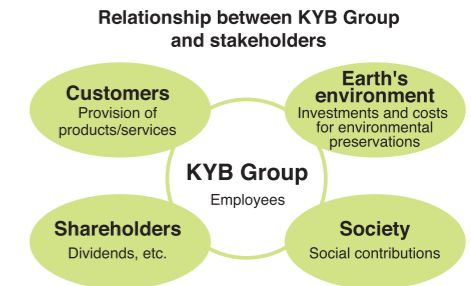
We have clearly indicated what the KYB Group aims in the future, how it will manage its business, and how it will contribute to the society.

Based on the management principles, we aim to become a corporate group that gains the satisfaction of our stakeholders.

## Management Principles

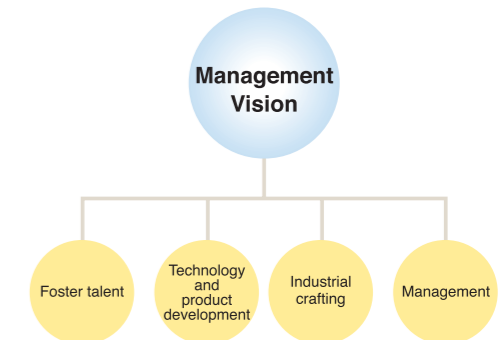
"KYB Group contributes to society providing technologies and products that make life safe and comfortable."

1. Challenge higher objectives and construct livelier corporate cultural climate.
2. Maintain grace and good faith, and pay attention to nature and the environment.
3. Always seek creative ideas and contribute to the progress of customers, shareholders, suppliers and society.



## Management Vision

1. **Foster talent:** To foster the talent to achieve the objectives with a thorough understanding of the policies and the strategy.
2. **Technology and product development:** To provide products that are impressive, comfortable and reliable to customers throughout the world.
3. **Industrial crafting:** To make our plants enjoyable, dynamic places to work, and at the same time full of discipline based on the field priority doctrine, in order to produce products satisfactory to the customer.
4. **Management:** Always keep social responsibilities of the corporation in mind and provide efficient group management.



## Compliance

At KYB, we believe that "compliance" is not merely the "observation of laws, orders and regulations within the scope of society," but as the "observation of articles of incorporation, inhouse regulations and contracts" as well as the "observation of corporate ethics" in order to promote healthier corporate activities.

1. We are making efforts to establish corporate ethics and to abide by laws/regulation through "Corporate Guideline" that must be observed when executives and employees pursue corporate activities.
2. We are providing compliance training through training by level and training by field including board members.
3. We have established an inhouse reporting system (immediate reporting/complaint box) targeting the entire group. We have also established special windows for reports and consultations with the enforcement of the Whistleblower Protection Act.
4. We have defined a policy concerning the protection of personal information, created inhouse regulations and established an inhouse committee. We have also established a contact window for inquiries concerning personal information from outside the company.

# Environmental Management

KYB has established the basic environmental objectives so the entire group acts as a unified team in carrying out environmental activities.

## Environmental Policies

### Slogan

# Protect the Green Earth and Create Products Gentle to the Environment

## Basic Environmental Policies

The KYB Group creates products gentle to both people and the earth. As a company that provides power and comfort, we are dedicated to the promotion of environmental activities as an important tool for evaluating management.

- (1) Strive to ensure long-term and sustainable operations throughout the entire KYB Group.
- (2) Work to promote harmony with society and contribute to the global community as a good corporate citizen.
- (3) Clarify every employee's role so that all employees can participate fully.



## Activity Plan Related to Environmental Preservation

We are promoting activities on a company-wide scale by defining goals every year according to the "Activity Plan Related to Environmental Preservation."

### <Activity results of 2007>

Compilation range: Sagami Plant, Kumagaya Plant, Gifu North Plant, Gifu South Plant

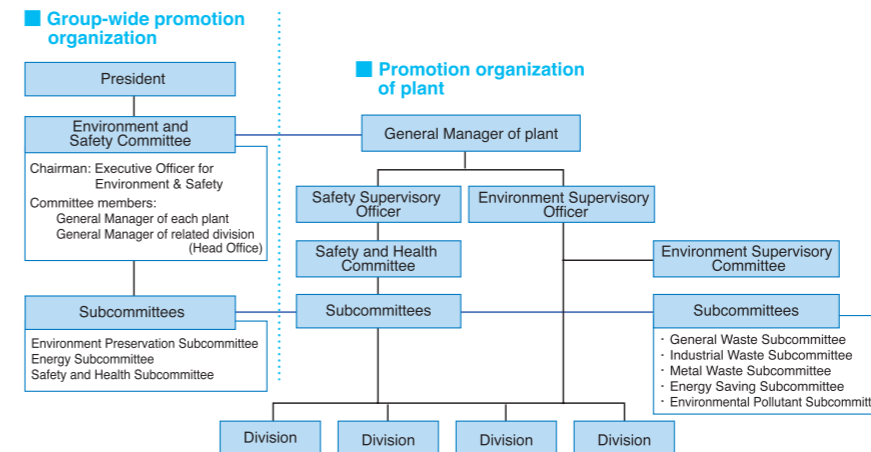
Activity items	Fiscal 2007 goals	Activity results of 2007	Activity plan Fiscal 2010 goals	
<b>Prevention of global warming</b>	CO <sub>2</sub> emission	100,021 ton-CO <sub>2</sub> /year or less (4.5% increase compared to 2004)	100,278 ton-CO <sub>2</sub> /year (4.8% increase compared to 2004)	7% decrease of emission (1990 comparison)
<b>Energy saving</b>	Energy usage (basic unit)	247.62/million yen or less (3% decrease compared to 2004)	209.12/million yen (18.1% decrease compared to 2004)	6% decrease of basic unit (2004 comparison)
<b>Improvement of recycling and recycling rate</b>	Recycling	86.2% recycling rate (2% increase compared to 2006)	84.6% recycling rate (1.6% decrease compared to 2006)	Improvement of recycling and recycling rate
	Zero emission	3% or less landfilled waste	4.0% landfilled waste	3% or less landfilled waste
<b>Decrease of waste</b>	General waste	867 ton/year or less (4% increase compared to 2004)	1,034 ton/year (24.0% increase compared to 2004)	Decrease of discharge to level of 2004 or less
	Industrial waste	4,531 ton/year or less (9% increase compared to 2004)	5,874 ton/year (41.3% increase compared to 2004)	Decrease of discharge to level of 2004 or less
	Metal scraps (basic unit)	96.4 kg/million yen or less (3% decrease compared to 2004)	94.8 kg/million yen (4.7% decrease compared to 2004)	6% decrease of basic unit (2004 comparison)

In line with the changes following fiscal 2003 such as closure of plants and establishment of subsidiaries, the activity plan up to fiscal 2010 was reviewed based on the fiscal 2004 from the fiscal 2005 activities. Due to the further expected increase of production in the future, goals are set to keep general and industrial wastes to level of fiscal 2004 or less.

## Environmental Management Organization

The KYB Group has established the "KYB Group Environmental Committee" in July 1992 to promote environmental preservation activities on a group-wide scale. Since then, the Committee has been renamed to the "Environment & Safety Committee" in October 2001 to include safety and health activities. "Environment and Safety Committee" meetings are held twice a year, for group-wide unification on the policies and activities concerning environment and safety of each plant.

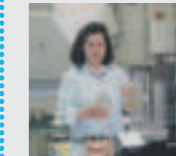
### Environment and Safety Committee Organization



## INSIDE ▶▶▶

### Assured measurement of water quality for the environment

I am in charge of measuring pH, BOD and COD values of final effluent every week, as well as the analyses of volatile organic compounds and heavy metals. Since water treated at our plant is released into the river where they are taken as drinking water downriver, maintaining and improving the level of water quality is indispensable as CSR (Corporate Social Responsibility). I have been analyzing water quality of 7 years now, but will continue to participate actively in training programs of outside organizations to further improve our analysis skills.



Takae Okumura  
Environment & Antidistaster Control Sect., General Affairs Dept. (stationing at South Plant) Gifu North Plant

## Environmental Auditing

In order to prevent environmental risks in advance, environmental preservation activities as well as observation of laws and regulations are audited to make sure they are being implemented as planned such as the achievement status of environmental goals.



External auditing (Gifu North Plant)



KMNA environmental auditing

## Environmental Accounting

This report is compiled by using categories of invested amount and cost according to the environmental accounting guidelines indicated by the Ministry of the Environment.

### Environmental preservation cost

Unit: million yen

Category	Description of main activities	Invested amount	Cost
(1) Environmental preservation cost to suppress environmental impact occurring within the area of operation due to main business activities (cost within operation area)	① Pollution prevention cost	224.3	256.3
	② Earth's environment preservation cost	7.9	24.4
	③ Resource circulation cost	40.3	269.4
(2) Cost for suppressing environmental impact generated at upstream or downstream from main business activities (upstream/downstream cost)		0	0
(3) Environmental preservation cost for management activities (management activity cost)	○ Maintenance and periodic screening of ISO14001 ○ Environmental training	16.7	75.8
(4) Environmental preservation cost for research and development activities (R&D cost)	○ Research and development for lighter and recycled products ○ Development of environment-friendly products	204.7	122.1
(5) Environmental preservation cost for social activities (social activity cost)	○ Afforestation and maintenance of scenery surrounding plant ○ Issuing of environmental/social report	0	9.8
(6) Cost for handling environmental damage (environmental remediation cost)	○ Monitoring and measurement of surrounding underground water	0	0.1
	Total	493.9	757.9
	Grand total	1,251.8	

### Categories and definitions of environmental preservation cost

[Invested amount]  
Expense for the purpose of environmental preservation during the target period with effect that continues for a number of terms and cost running for those periods. (Amount acquired during the current term of the depreciable asset)

[Cost]  
Cost or loss generated from expenditure of finance/service for the purpose of environmental preservation.

Compilation range: Sagami Plant, Kumagaya Plant, Gifu North Plant, Gifu South Plant Target period: April 1, 2007~March 31, 2008

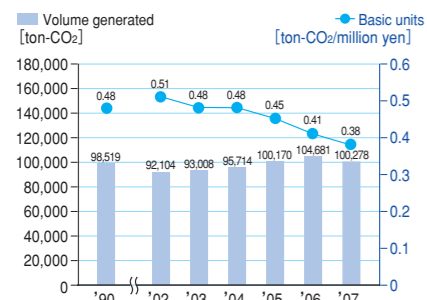
# Reduction of Environmental Impact

Input and output following business activities such as manufacturing processes are appropriately grasped to effectively and comprehensively reduce load on the environment.

## Global Warming Prevention Activities

### Reduction target for CO2 emissions 7% reduction by the end of fiscal 2010 from fiscal 1990 levels

The annual target (4.5% increase or less) could not be achieved slightly as amount of CO2 emissions in fiscal 2007 was 4.8% more than in fiscal 2004. However, reduction of 4,403t compared to the previous year was achieved.

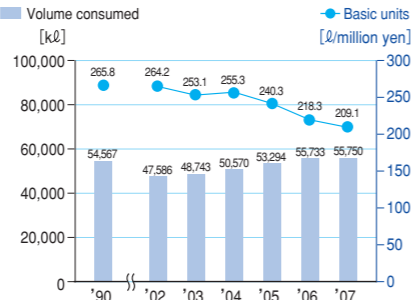


※Assessment of the CO2 reduction effect by cogeneration was changed from comparison with thermal power generation to all power generation.

### Reduction target for energy consumption 6% reduction of total energy usage volume (basic unit) by the end of fiscal 2010 from fiscal 2004 levels

The annual target (3% reduction) was surpassed as unit energy consumption was 18.1% less than in fiscal 2004.

The amount of energy consumed was kept lower than the previous year with energy saving using newly-installed equipment and change to optimal operation of existing equipment despite the increase in production volume.

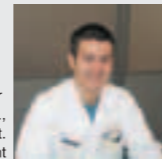


※Energy consumption: total electricity and fuel converted to crude oil.  
※Basic units are calculated based on the shipment volume of production. (Basic unit = energy consumption ÷ production/shipment volume)

## INSIDE ▶▶▶

### Energy saving activities that expand to households

At KYB, we call for "energy-saving catch-phrases" during the energy-saving month of February every year. 12 phrases selected as group-wide winners are presented at the workplace one by one every month to improve the awareness concerning energy saving among employees throughout the year. This year, the call was expanded to include households rather than employees of plants and related companies. 2,329 phrases were received, among which 246 were from households. We would like to continue making efforts to improve the awareness concerning energy saving in the future.



Hiroyuki Takahashi  
Environment & Antidisastr Control Sect.,  
General Affairs Dept.,  
Gifu North Plant

# Environmentally Friendly Product Development 1

Strong efforts are being made to reduce the load on the environment along with safety and security by taking into consideration the stages products are used and the product cycle at the time of development and design.

## Energy Saving

### Awarded the 28th (2007) Best Energy-saving Device "Japan Machinery Federation President Award"

#### e-MIXER

(electronically controlled concrete mixer truck)

e-MIXER is environmentally friendly mixer truck that incorporates electronic control technologies and hydraulic technologies such as hydraulic pump/motor, etc. Other than the present large-size vehicles, e-MIXER will also be adopted in small and medium size vehicles in the future.

Utilization of electronic control allows high-speed rotation of the drum even at low engine rotation. The noise has been reduced by half on an audible level and fuel consumption during work has been improved by 14%.

The electronically controlled unit adds an automatic washing feature that repeats rotation and reverse rotation of the drum at a



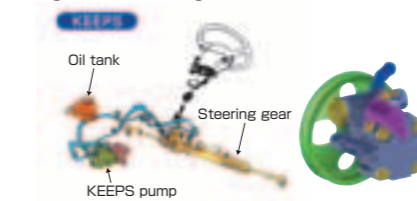
single touch to drastically reduce the load of cleaning work within the drum that has been a major burden in the past as well as to improve the operability of the mixer.

## Automobile Related

(energy saving, riding comfort, increased efficiency)

### Energy-saving power steering (KEEPS)

This is an electronically controlled hydraulic power steering system. This energy saving system detects at all times the vehicle speed and handling of the steering wheel to minimize loss of energy by supplying just the right amount of flow and to realize optimal steering. Fuel consumption was improved by about 2.5% in the 10/15 mode tests using the actual vehicle. (55% improvement compared to our "normal PS")



KEEPS: Kayaba Electronic Controlled Energy Saving Power Steering

### Motorized rear-wheel steering actuator

Rear-wheel steering heightens the turning performance of the vehicle and enables smoother lane changes by appropriately controlling the rear wheels according to the

operation of the steering wheel and vehicle speed. Although hydraulic actuators were used at first, they were replaced with motorized actuators for lighter weight and better energy saving. In the future, application in active steering systems for avoiding danger can be expected by upgrading the control.



### CVT vane pump

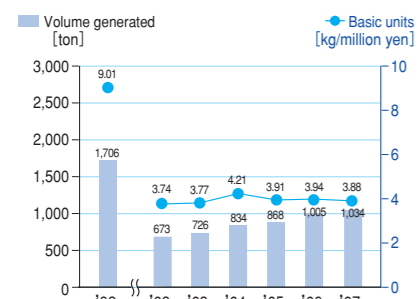
The CVT vane pump was developed as the ideal transmission for operating the engine at the optimal conditions. The vane pump is used as the hydraulics source for 2.0 - 2.5 liter class engines. Use of this vane pump has allowed 38% reduction of the drive torque loss of the pump. In addition, it also contributes to smaller and lighter CVT. The pump greatly contributes to the improvement of fuel consumption while improving the operability and noise of the vehicle.



## Waste Reduction Activities

### Reduction target for general waste Reduction to fiscal 2004 levels or less by the end of fiscal 2010

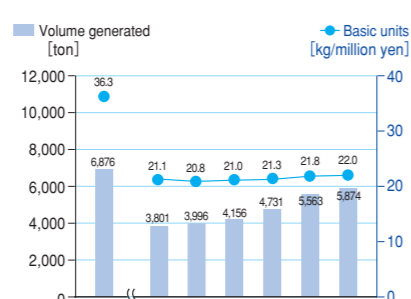
The annual target (4% increase or less) was not achieved as waste generated in fiscal 2007 was 1,034 tons, 53.1% more than in fiscal 2004. The level state increases due to the increase in production.



※Some waste wood was not taken into factor and added since fiscal 2005.

### Reduction target for industrial waste Reduction to fiscal 2004 levels or less by the end of fiscal 2010

The annual target (9% increase or less) was not achieved as waste generated in fiscal 2007 was 5,874 tons, 41.3% more than in fiscal 2004. The volume of alkaline fluid waste increases due to higher production volumes.



## INSIDE ▶▶▶

### Aiming at 0 industrial fluid wastes

We are reducing the amount of industrial fluid wastes by reusing (filtering) "alkaline cleaning fluids" discharged as industrial waste. We were able to reuse about 4,000L/month for the 20 units of assembly lines at first. At the present, we are able to reuse double the amount of 8,000L/month (40 units of assembly lines).

We will aim at 0 industrial fluid wastes in the future by expanding reuse of "alkaline cleaning fluid" on processing lines.

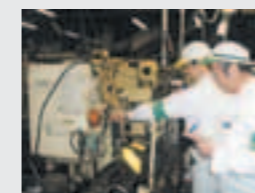


Toshio Yamaguchi  
PPM Compact Manufacturing Sect.,  
Manufacturing Dept.,  
Sagami Plant

## INSIDE ▶▶▶

### Will not miss air leaks!

Air is used in many of the facilities at the North Plant and air leaks from seals of air-pressure devices and pipe joints are becoming a major energy loss. To deal with this problem, we conduct the "air leak inspection patrol" on a regular basis during lunch break. At first, there was an overwhelming number of leaks. After 2 years of steady effort, we were able to achieve a total of 30% reduction.



Air leak inspection



Kazushige Kimura  
Equipment Control Sect.,  
SA Manufacturing Dept.,  
Gifu North Plant

## INSIDE ▶▶▶

### Contribute to earth using technology and development power

We developed low-noise, energy saving concrete mixer truck (e-MIXER). Reduction of approximately 640 kg of CO2 per vehicle was achieved in annual calculation when compared to conventional mixers. The electronically-controlled hydraulic pump uniquely developed by KYB and the 2-speed hydraulic motor realizes low noise and low fuel consumption by detecting load pressure and automatic switching of motor capacity.

We are relieved when hearing such comments as "The vehicle is surely quiet and there are no more complaints from neighbors" from our customers. We will continue to provide concrete mixers that are easy to use and more environmentally friendly.



Shigeru Kawashima  
Engineering Dept.,  
Special-purpose  
Vehicle Div.,  
Kumagaya Plant

# Environmentally Friendly Product Development 2

## Technologies that Support Safety

- **Reducing the vibration of buildings and installations**  
Vibration isolation/control technologies

**Vibration-control oil damper**  
"Gifu City Tower 43" opened in front of the JR Gifu Station is the highest complex building in the Chubu area also serving for residential purposes, with 43 floors from the ground up and height of 163m. A mass (heavy-weight structure) oscillating at the rooftop to absorb energy and the vibration control system using ultra-large multi-layer mass damper to reduce building vibration are expected to reduce vibration during earthquakes by 20%.  
Our oil damper is used in this vibration control system to be adopted for the first time in Japan.



Building vibration-control oil damper



Installation example of vibration-control oil damper (Gifu North Plant)



Gifu City Tower 43

- **Improvement of riding comfort on the Shinkansen**

### Damper technology

Trains running at high-speeds such as the Shinkansen require various efforts other than the design to improve riding comfort due to the strong horizontal vibrations inside the tunnel and when trains pass each other. Our semi-active suspension system is one of them. The system improves the riding comfort by reducing vibrations and internal noise to realize a space for pleasant transportation.



N700 Shinkansen

## Technologies that are Kind to People, and Bring Safety and Comfort

- **KURUMAME (drive recorder)**

The development concept of KURUMAME is to reduce traffic accidents for a safe and pleasant living. When the device detects impact to the body such as during an accident, it automatically records a video 30 seconds before and after the impact, the speed and acceleration. Installing the device is expected to prevent accidents from occurring in advance by improving the driver's attention and awareness concerning safe driving.



Compact main unit



The camera can be installed separately from the main unit such as behind the rearview mirror.

### INSIDE ▶▶▶

#### For the widespread of KURUMAME

I am introducing KURUMAME to the people I have become acquainted with through work. Installing KURUMAME has the effect of driving safely since there is the consciousness that someone is watching. Not only does it reduce accidents, it also serves to realize eco-driving by preventing sudden accelerations and braking. There are such comments as, "Driving of my driver has become much more careful and he has more awareness now concerning safety," "The insurance premium has dropped with fewer accidents," and "Eco-driving has saved me gas" from business owners installing the device.



Kumi Furukawa  
Secretary Section,  
General Affairs Dept.

# Involvement with Society

Various regional and social support activities are being implemented such as events that unite the plant and region, clean-river activities, etc.

## Social Contribution Activities - Exchange with Local Community

- **Global warming prevention symposium**

A symposium for enlightening/the widespread of global warming prevention for Gifu residents and firms was held at the Kani Public Arts Center in January 2008. Other than the case study presentations by regional elementary students and citizen groups, KYB made the presentation entitled "Environmental Preservation Activities by KYB." The easy to understand contents were assessed highly by the 300 participants.

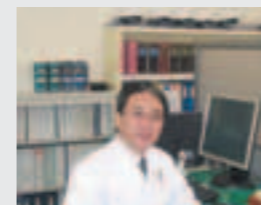


At the presentation hall

### INSIDE ▶▶▶

#### Importance of communicating

We were most careful about how our activities are understood by people since the symposium is participated by many elementary students and the general public. The presentation was probably easy to understand since I avoided as much as possible the use of technical terms. It would make me extremely happy if people became more aware about preventing global warning through the presentation.



Shinichi Higuchi  
Environment & Antidisaster  
Control Sect., General Affairs Dept.  
Gifu North Plant

- **"Plant tour by local elementary students"**

"Local company tour and cafeteria visit using summer break" was held for local elementary students. 30 elementary students and 22 guardians were invited to visit the production lines and cafeteria of the plant. The students chose side dishes enthusiastically and showed off their huge appetites by ordering ramen additionally.



Family plant tour (Gifu North Plant)

- **For the children of tomorrow P. T. KYBI (Indonesia)**

P.T. KYBI has started a scholarship program 5 years ago to support children of employees. Scholarship is given to children with excellent grades. This year, 45 children were selected: 24 elementary school students, 6 intermediate school students, 10 high school students and 5 college students. The students themselves participated along with their family members during our commemoration day



(P.T. KYBI)

on February 26, 2008 for a wonderful awarding ceremony. We hope that these children will study hard to grow as adults who will not only lead KYB, but Indonesia and the world.

- **Industrial nursing training of nursing college students**

At the Gifu South Plant, trainees from a nursing college are accepted every year. Trainees learn about our safety and health management through lectures and group works of case studies. They learn the real situation of health management of people working at the workplace through hearings to operators by also visiting sites handling organic solvents restricted by law.

In 2007, the plant accepted 23 trainees for one-day nurse training 3 times and a trainee for a 5-month period nurse research training from the Gifu College of Nursing. There were many comments from the trainees that they had a valuable experience.



Industrial nursing training of nursing college students (Gifu South Plant)

# Along with Employees

Each and every employee supports the growth of a company. We make jobs more meaningful by providing a system and environment where workers can fully exercise their skills.

## Safety and Health Activities

### ● Safety experience dojo

"Safety experience dojo" was opened at the Sagami Plant for safety and health training. There are 10 hands-on experience facilities available.

Here, the fear of past labor-related accidents can be experienced on just what kind of situations accidents can occur including getting hands caught in something, falling of heavy objects and getting caught in rotational bands. This training was started for new workers (regardless of employee, dispatched employee or contractor employee) since



Safety experience dojo



(Sagami Plant)

80% of labor-related accidents that have occurred in the past involve workers with less than 1 year of working experience. Training is held almost daily and 420 workers have participated in the program in 2007.

### INSIDE ▶▶▶

#### "Danger" lies everywhere

This program is scheduled to be expanded by fulfilling the contents for veterans. "Those who don't know should learn, and those who do know should familiarize themselves again to the various types of danger." The aim is to increase awareness concerning danger for 0 injuries and disasters.



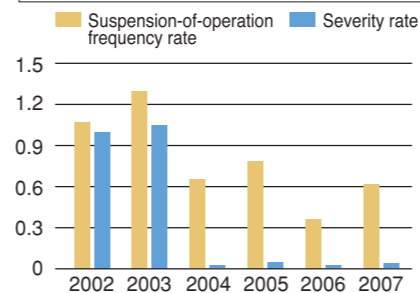
Tetsuo Satou  
Administration Dept.  
Sagami Plant

### ● Number of disaster cases

Number of disasters occurring at KYB is shown as a graph. There were extremely high number of disasters between 2002 and 2003. Following such state, OSHMS (Occupational Safety & Health Management System) was introduced in 2003 for start of activities in all plants.

As a result, both frequency rate and severity rate have dropped from 2004. However, the level is still high and we will continue to implement activities in the future to aim at 0 disasters.

#### Disaster figures



\*Suspension-of-operation frequency rate = number of disaster (suspension-of-operation) involved workers/gross labor hours×1,000,000  
\*Severity rate = labor loss days/gross labor hours×1,000

### INSIDE ▶▶▶

#### Supporting the training of human resources and handing on of technologies and skills

The Human Resource Training Center is a new department that has just been established last year by integrating with the training department for the purpose of training human resources within and outside of Japan, and to support the handing on of technologies and skill necessary for industrial crafting. The center also serves as a point of contact for accepting KYB overseas base engineers and is in charge of training planning, interpretations, Japanese training, lifestyle training, airport transport, etc. I am happy to be in touch with various cultures and ways of thinking through these operations.

Chiho Oosawa  
Human Resources  
Development Center,  
Human Resources Dept.



## Exchange among Employees

### ● KYB Idea Contest 2007

"KYB Idea Contest" was held as an occasion to compete creativity through free imagination of workers. Number of ideas from workers and children of workers exceeded 600 and an outstanding performance award was awarded for each category. Some ideas fit into environmental issue themes such as "Carbon-dioxide absorbing paint" (adult category) and "Rainbow-colored house car" (children category). Various ideas from those of high practicality to those with fun dreams were gathered.



Adult category, most outstanding performance award "Development of carbon-dioxide absorbing paint"



Children category, most outstanding performance award "Rainbow-colored house car"



Adult category, outstanding performance award "Power-generation mat"

# Environmental Preservation Activities of Plants

ISO14001 mark indicates a certified plant of ISO14001.  
OSHMS mark indicates a certified plant of the labor safety management system.

## Sagami Plant

ISO14001  
JQA-EM1171 OSHMS  
TS05-14-3

●Location: 12-1 Asamizo-dai 1-chome Sagami-hara-shi, Kanagawa 228-0828 TEL 042-746-5511  
●Beginning of operation: May 1975 ●Floor surface area: 53,951m<sup>2</sup>  
●Main products: hydraulic equipment (pumps, motors, valves), railroad equipment (semi-active/passive dampers), aircraft parts (wheels, brakes), electronic devices (car-mounted controllers)



Construction machinery energy-saving motor Shinkansen semi-active system Aircraft actuator

### 2007 Topics & Environmental Preservation Activities

- ① Effective application of energy is being practiced following the ESCO operation.
- ② Exhaust heat from gas engine power generation is also used for plant air conditioning for a pleasant working environment.
- ③ Asbestos was removed from high-voltage transformer stations and adjacent wings.
- ④ Alkaline cleaning fluids are periodically filtered for reuse to reduce industrial waste.

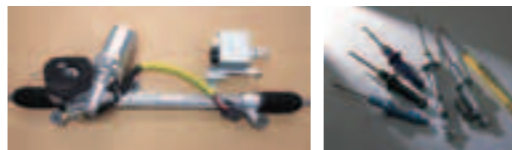


2500Kw gas engine installed by ESCO operation

## Gifu North Plant

ISO14001  
JQA-EM1288 OSHMS  
TS04-21-01

●Location: 2548 Tsuchida, Kani-shi, Gifu 509-0298 TEL 0574-26-5111  
●Beginning of operation: April 1968 ●Floor surface area: 156,817m<sup>2</sup>  
●Main products: shock absorbers for automobiles, hydraulic equipment for automobiles



Automobile motorized power steering Automobile shock absorber

### 2007 Topics & Environmental Preservation Activities

- ① Fuel of once-through boilers and cogeneration equipment was changed (from heavy oil A to city gas) to reduce CO<sub>2</sub> emission.
- ② Continuous power-saving activities by installing energy-saving devices and improving air loss.
- ③ Earthquake-proof construction work for the plant building is in progress as earthquake-proof measures. In addition, earthquake-proof flanges are being installed to chrome fluid pipes of chrome-plating devices.
- ④ Environmental dampers in research and development were disclosed and a test ride was held.



Reduction of CO<sub>2</sub> by changing boiler fuel

## Kumagaya Plant

ISO14001  
JQA-EM1152

●Location: 2050 Nagazaike, Fukaya-shi, Saitama 369-1193 TEL 048-583-2341  
●Beginning of operation: January 1971 ●Floor surface area: 68,118m<sup>2</sup>  
●Main products: special-purpose vehicle (concrete mixers, granule carriers, pruned branches shredder truck), hydraulic equipment (gear pumps, large-size valves, reduction gears)



Electronically-controlled mixer (E-MIXER) Confidential document dispatch shredder vehicle (Saidan) Construction machinery running motor

### 2007 Topics & Environmental Preservation Activities

- ① Amount of power consumption was reduced by changing the ceiling lighting of the plant to ceramic metal halide lamps.
- ② The conventional aggregation drainage treatment method was changed to a treatment method that separates living wastewater and water-purifier tank water.
- ③ Large trees capable of taking in large amounts of CO<sub>2</sub> were planted for the expansion of afforestation area.



Large trees capable of taking in large amounts of CO<sub>2</sub> were planted

## Gifu South Plant

ISO14001  
JQA-EM0700 OSHMS  
TS06-21-4

●Location: 505 Tsuchida, Kani-shi, Gifu 509-0297 TEL 0574-26-1111  
●Beginning of operation: July 1943 ●Floor surface area: 108,010m<sup>2</sup>  
●Main products: front forks for motorcycles, hydraulic equipment (cylinders, valves)



Construction machinery hydraulic cylinder Motorcycle front fork

### 2007 Topics & Environmental Preservation Activities

- ① Cogeneration device with LNG as the fuel was installed and operation was started in April. In 2008, operation efficiency will be further increased for reduction of CO<sub>2</sub> discharge.
- ② Energy consumption is being reduced by using new energy-saving equipment, adopting the optimal operation method of existing equipment, use of high-efficiency devices, etc.



Installation of cogeneration system by ESCO operation

# Environmental Preservation and Safety Activities of the KYB Group that are Spreading Globally

We are involved in environmental preservation and safety activities at overseas production plants in the same way as plants in Japan.

Some of the overseas activities such as the acquisition of ISO14001 certification, which is the international standard of environmental management, and environmental preservation, waste reduction and safety measures are introduced.

## [P. T. KYBI (Indonesia)] Safety and health patrol

The Environmental Safety and Health Committee performs safety and health patrol every day. During the patrol, safety including the work environment and clothing of onsite workers including cooperative company workers is checked and guided thoroughly. In the case rules are not being observed such as not wearing protective goggles, gloves or helmets, the chief in charge is directly told and instructed on-site, and inadequacies are reported to the manager in charge after the patrol is complete.

Such grass-roots activities will be continued in the future for the eradication of labor accidents.



## [KYBT (Thailand)] Reuse of water

Wastewater from the paint line is purified and water passing the quality inspection is reused for watering the gardens and cleaning floors. 300m<sup>3</sup>/month of water is being saved.

tion is reused for watering the gardens and cleaning floors. 300m<sup>3</sup>/month of water is being saved.



Wastewater purification process facility



Reuse of purified water

## [KMCZ (Czech Republic)] Segregation of wastes

In Czech Republic, there is no custom of segregating in detail household wastes. Since all wastes were thrown away in the same trash bin, workers were needed in the past to separate wastes at the garbage site. Due to the increase of segregation work of wastes as the result of increase in production volumes, various trash bins

were prepared to decrease the work volume. At first, workers did not understand clearly the need for separating trash. However, all workers now are aware of this activity due to steady onsite efforts, and segregation of wastes is going well.



Segregated trash bins



Resident officer Matsui and Manager Robert Frank

## [KSS (Spain)] Ergonomic improvements of lines

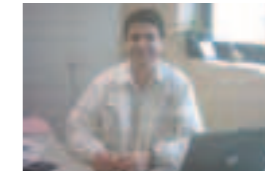
As a result of risk assessment of all operations within the plant, it was discovered that workers had to bend over heavily to operate machines. It was determined that there is a risk of workers hurting their backs and shoulders and



Before improvement

After improvement

work posture should be improved. Metal trays in front of all machines were processed so that workers could step in about 10 cm. This allowed workers to easily grasp materials and was determined that it would lower the injury rate of workers. This improvement allowed work with little burden on the back and workers are now happy and more motivated. Further improvements based on ergonomics will be made in the future.



Safety Officer Enrique González

## [KYBSE (Spain)] Training against chemical leaks

Detailed training was given on the protective tools necessary for emergencies and procedures to handle leaks. Members are ready for emergencies through logical training and hands-on experience training for handling leak accidents.



## [KMSB and KSMSB (Malaysia)] Training for chemical substance leaks

Training against chemical substance leak was conducted for members of the emergency leak handling team during November 2007. Protective tools necessary for emergencies and procedures to handle leaks were introduced in detail. Logical and practical trainings concerning chemical substances for handling leak accidents will be given on a regular basis for handling emergencies.

At the same time, the following activities are being conducted with good results:

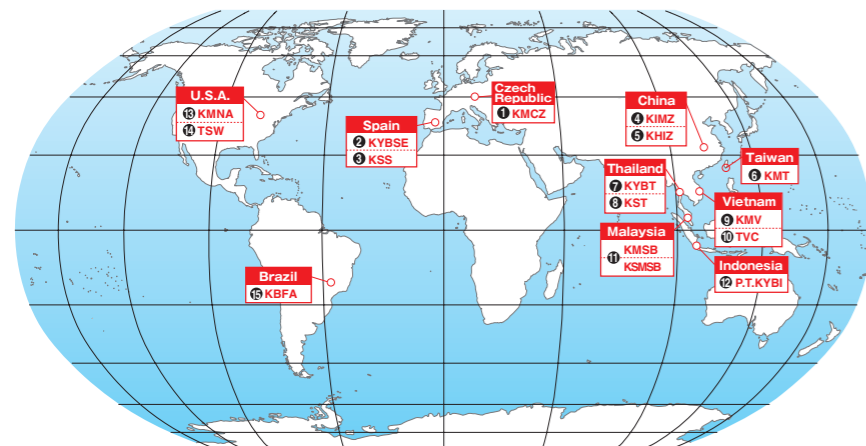
1. Dewatering of grinding waste
2. Environment and safety improvement activities (March – July 2007)
3. Use of sludge dryer as part of activities to reduce environmental impact and cost



Leak handling team training



Leak handling team having guidance on protective masks



### 1. KYB Manufacturing Czech, s.r.o.

Location: Pardubice, Czech Republic  
Main products: shock absorbers, etc.



### 2. KYB Suspensions Europe, S.A.

Location: Navarra, Spain  
Main products: shock absorbers, etc.



### 3. KYB Steering Spain S.A.

Location: Navarra, Spain  
Main products: vane pumps, etc.



### 4. KYB Industrial Machinery (Zhenjiang) Ltd.

Location: Jiangsu, China  
Main products: shock absorbers, etc.



### 9. KYB Manufacturing Vietnam Co., Ltd.

Location: Hanoi, Vietnam  
Main products: front forks, etc.



### 10. TAKAKO VIETNAM Co., Ltd.

Location: Ho Chi Minh, Vietnam  
Main products: hydraulic device parts, etc.



### 11. KYB-UMW Malaysia Sdn Bhd. KYB-UMW Steering Malaysia Sdn Bhd.

Location: Selangor, Malaysia  
Main products: rear cushions, front forks, shock absorbers, vane pumps, etc.



### 12. P.T. Kayaba Indonesia

Location: Jakarta, Indonesia  
Main products: front forks, rear cushion units, shock absorbers, etc.



### 5. KYB Hydraulics Industry (Zhenjiang) Ltd.

Location: Jiangsu, China  
Main products: hydraulic cylinders, etc.



### 6. KYB Manufacturing Taiwan Co., Ltd.

Location: Taoyuan, Taiwan  
Main products: shock absorbers, front forks, etc.



### 7. KYB (Thailand) Co., Ltd.

Location: Chonburi, Thailand  
Main products: shock absorbers, front forks, etc.



### 8. KYB Steering (Thailand) Co., Ltd.

Location: Chonburi, Thailand  
Main products: vane pumps, etc.



### 13. KYB Manufacturing North America Inc.

Location: Indiana, U.S.A.  
Main products: shock absorbers, etc.



### 14. TSW products Co., Ltd.

Location: Kansas, U.S.A.  
Main products: hydraulic device parts



### 15. KYB do Brasil Fabricante de Autopecas Ltda.

Location: Parana, Brazil  
Main products: shock absorbers, etc.

## Acquisition status of ISO 14001 certification

Plant	Registered in
KSS (Spain)	Jun 2001
KYBSE (Spain)	Dec 2001
KMT (Taiwan)	Aug 2001
KYBT (Thailand)	Dec 2001
KMNA (U.S.A.)	May 2002
KST (Thailand)	Aug 2003
P.T. KYBI (Indonesia)	Feb 2004
KMSB (Malaysia)	Sep 2004





*Our Precision, Your Advantage*



**About the Cover Design**

A beautiful earth for our children.  
The KYB Spirit of fully making efforts for the preservation of the earth's environment and realization of a recyclable society is expressed using 3 "Wa" (circles) symbolizing environment/society, cycle/union and kindness to people/peace enclosed by the infinity symbol of the KYB color.



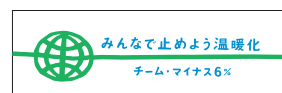
[www.kyb.co.jp](http://www.kyb.co.jp)

Visit our website for more information including the Environmental/Social Report.

Please direct inquiries regarding our "involvements concerning the environment" to the Environment & Safety Control Department.

**KYB Corporation** TEL (03) 3435-6465 FAX (03) 3436-6759

World Trade Center Bldg. 11F, 2-4-1 Hamamatsu-cho, Minato-ku, Tokyo 105-6111, Japan



KYB is a participant of Team Minus 6%.