



Our Precision, Your Advantage

Environmental/Social Report

2009

2008.4 ~ 2009.3



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, Gifu East

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

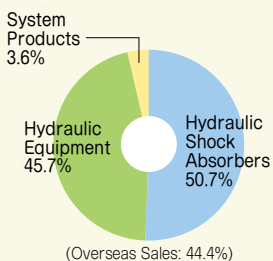
System Products

Special-purpose vehicles · Concrete mixer trucks, granule carriers, pruned branches shredder trucks, special function vehicles

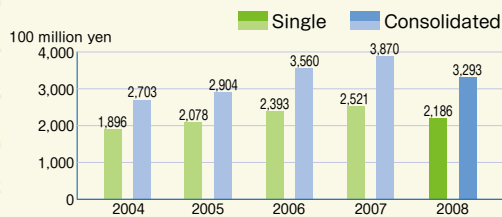
Devices · Simulators, hydraulic systems, stage mechanisms, hydraulic systems for mines, tunnel boring machines, marine equipment

Sales by Product

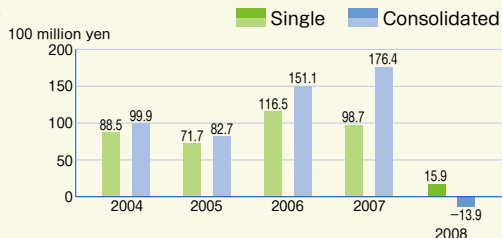
(Fiscal 2008) [Consolidated]



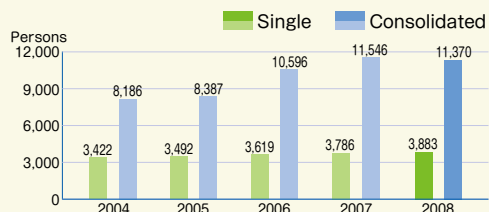
Shift in Sales



Shift in Working Profit



Shift in Number of Personnel



About the Cover Design

Earth, Green and Families

The KYB spirit challenging new types of energy and environmental technologies for families to live on this beautiful planet that is rich in nature and full of peace is expressed using patterns.

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Corporate Spirit

To Our Stakeholders

Aiming for a company that is aware of its social responsibilities by maintaining kindness and sincerity, loving nature, and cherishing the environment.

Since last year, we have been facing a global economic crisis and harsh management environment of inflating and fluctuating resource and energy prices. Even from a mid-and-long-term view, rocketing of resource and energy prices along with the depletion of resources and development of emerging nations seems inevitable.

In order to shift to a sustainable society with “environment” as the axis while overcoming the global economic crisis, we must constructively shift Monozukuri using completely new views and ideas.

The major increase in production volume by the KYB Group has accumulated much waste, including the wasteful usage of resources and energy. Currently at KYB, all group companies and employees are fully dedicated in energy saving and resource saving activities in all spectrums as eco 10 (waste elimination activities) for the development of physical strength capable of corresponding to the current economic environment and to promote local and global environmental preservation activities.

Fulfillment of social responsibilities will be a prerequisite in maximizing corporate values and creating profit as an ideal company in the future.

As a manufacturer with hydraulic devices as core products, the group is aware of the degree of impact on the environment compared to other industries. To cope with this problem, future company activities will focus on reducing environmental impact.

Newly constructed plants will be installed with photovoltaic generators, rainwater circulation devices and solar lighting under the theme of co-existing with nature and local community.

We are looking forward to hearing your honest opinions concerning the environmental and social activities of the KYB Group.

We are looking forward to hearing your opinions and advice concerning our stance towards social contributions.

We at KYB have been striving as a good corporate citizen to become a manufacturer that “provides high-quality products and services using superior technologies to gain safety, satisfaction and trust of our customers.” In order to realize this goal, we must gain the trust of our customers through unique engineering and development power and strong work site power proficient in Monozukuri. We also believe that corporate activities that take into consideration the society and environment are important. In particular, prevention of global warming, reduction of CO₂ and total reduction of energy consumption are the highest priorities.

Following the rapid changes in the economic environment, methods for reducing CO₂ and energy have also diversified. In particular, we have started a new activity with the slogan of “eco 10 activity” for Monozukuri to correspond to the changes in production formats of plants. This is a company-wide activity in addition to the other activities carried on from the past for waste-free and loss-free Monozukuri by investigating again production processes within plants and usage conditions of energy outside production. The wisdom of each department will be gathered for an environmental friendly manufacturing.

We would like the “KYB Group” to remain trusted by the society as a good corporate citizen by harmonizing with the regional society.

This 2009 report summarizes the activities of fiscal 2008 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.



Satoru Yamamoto,
President



Ken Mizumukai,
Managing Director
Executive Officer for Environment & Safety



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.

Corporate Spirit

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

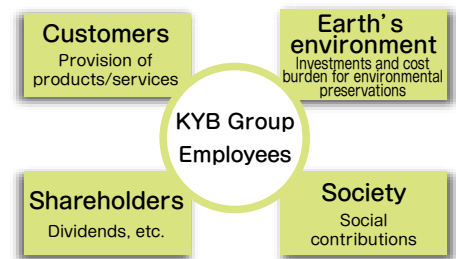


Corporate Spirit

By serving technologies and products that make people's life safe and comfortable, KYB group dedicates to the society.

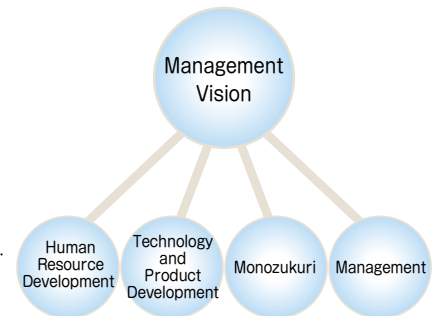
1. We shall build a corporate culture full of vitality, and hold high goals.
2. We shall value sincerity, cherish nature, care for the environment.
3. We shall constantly pursue creativity, contribute to the prosperity of customers, shareholders, suppliers and society.

Relationship between KYB Group and stakeholders



Management Vision

1. **Human Resource Development**
To develop human resources who have a thorough understanding of our policies and strategies and can accomplish our goals with passion.
2. **Technology and Product Development**
To provide products that gain the admiration, comfort and full satisfaction from our customers throughout the world.
3. **Monozukuri (Japanese manufacturing expertise)**
To operate plans filled with the creative inspiration of committed Monozukuri, energy and joy of creating products that satisfy our customers.
4. **Management**
To be always self-aware of our corporate social responsibilities and to pursue 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.

Establishment of an Internal Control System

We have positioned the internal control system as an important platform for functioning corporate governance. Through the establishment of internal control, we will heighten the transparency of businesses and maintain availability, efficiency and reliability.

In April 2006, we have resolved the "internal control system basic policy" based on the company act at the board of directors' meeting and have promoted measures such as the establishment of risk management organization, group management organization, etc. In fiscal 2008, we have also established and assessed "internal control concerning financial reports" based on the Financial Instruments and Exchange Law for appropriate disclosure of information.

Important issues

- Provision of helpful technologies and products
—Provision of true richness to the people of the world
- Preservation and coexistence of earth's environment
—Creating a sustainable society
- Contribution to society and earth
—What we can do for the advancement of society
- Implementation of a healthy working environment
—Creating a safe workplace and a company where employees are happy to work

Environmental Management

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 2008>

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

Activity items		Fiscal 2008 goals	Fiscal 2008 activity results	Activity plan Fiscal 2010 goals
Prevention of global warming	CO ₂ emission volume	95,711 tons-CO ₂ /year or less (4.7% decrease compared to 2007)	87,492 tons-CO ₂ /year (12.8% decrease compared to 2007)	7% decrease of discharge (1990 comparison)
	Energy saving	Energy usage volume (basic unit)	206.9 ℓ/million yen or less (1% decrease compared to 2007)	213.9 ℓ/million yen (2.3% increase compared to 2007)
Improvement of recycling and recycling rate	Recycling	85% or higher recycling rate	86.4 % recycling rate (1.8% increase compared to 2007)	Improvement of recycling and recycling rate
	Zero emission	3% or less landfilled waste	4.4% landfilled waste	3% or less landfilled waste
Reduction of waste	General waste (excluding wood waste)	736 tons/year or less (4.1% decrease compared to 2007)	639 tons/year (16.7% decrease compared to 2007)	Reduction of discharge by 11% (2007 comparison)
	Industrial waste (including wood waste)	4,935 tons/year or less (19.6% decrease compared to 2007)	4,621 tons/year (24.8% decrease compared to 2007)	Reduction of discharge by 33% (2007 comparison)
	Metal scraps	25,265 tons/year or less (less than 2007)	20,654 tons/year (18.3% decrease compared to 2007)	Reduction of discharge to level of 2007 or less



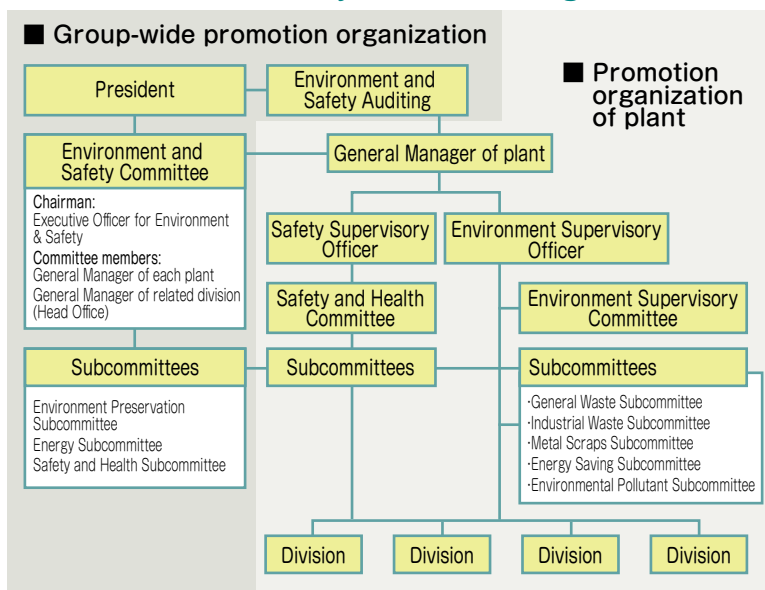
- Note:**
- Discharge generated from our production activities are treated as wastes and categorized into general wastes, industrial wastes and metal scraps.
 - The waste disposal and treatment ordinance was partially revised such that effective April 2008, wood pallets are treated as industrial wastes (formerly general wastes). Hence, the category of wood wastes was changed and the values revised.
 - For energy, crude oil equivalent is calculated for electricity and fuel and the total value is displayed as total energy.
 - Basic unit is calculated based on the production shipment.

Environmental Management Organization

Despite the fact that the 21st century is said to be the "century of the environment", the earth's environment is growing steadily including global warming and desertification. 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 and Safety Committee" in October 2001 to include safety and health activities. "Environment and Safety Committee meetings" and "environment and safety auditing" 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



ISO14001 certification acquisition status

For the systematic development of environmental preservation activities, we have promoted the structuring of an environmental management system. Furthermore, we have been involved in the acquisition of ISO14001 international standard certification to improve the transparency to the outside and to gain trust.

Plant name	Certification years	Certification range	2008 judgment
Gifu South Plant	2000.2	Products Technology R&D Center, KYB Kawabe, KYB Kabuchi	Renewal screening ○
Kumagaya Plant	2000.12		Periodic screening ○
Sagami Plant	2000.12	Basic Technology R&D Center	Periodic screening ○
Gifu North Plant	2001.2	KYB Kanayama	Periodic screening ○
KYB System Machinery	2000.12		Periodic screening ○
Yanagisawa Seiki MFG	2004.4		Periodic screening ○
Takako Industries (Shiga Plant)	2003.2		Periodic screening ○

See about inhouse plants for KYB Kanayama, KYB Kawabe and KYB Kabuchi

Environmental Accounting

In order to quantitatively assess the involvements regarding environmental preservation, environmental costs have been calculated since 2000.

■ Environmental preservation cost

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.

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	77.4	307.0
	② Earth's environment preservation cost	162.5	22.3
	③ Resource circulation cost	75.6	240.8
(2) Cost for suppressing environmental impact generated at upstream or downstream from main business activities (upstream/downstream cost)	○Use of urethane mats instead of cardboard	0	1.0
(3) Environmental preservation cost for management activities (management activity cost)	○Maintenance and periodic screening of ISO14001 ○Environmental training	3.0	67.8
(4) Environmental preservation cost for research and development activities (R&D cost)	○Products that are lighter and with less harmful chemical substances ○Development of environment-friendly products	202.0	152.4
(5) Environmental preservation cost for social activities (social activity cost)	○Afforestation and maintenance of scenery surrounding plant ○Issuing of environmental/social report	0	11.4
(6) Cost for handling environmental damage (environmental remediation cost)	○Monitoring and measurement of surrounding underground water	0	0.1
	Total	520.5	802.7
	Grand total		1,323.2

Compilation range: Sagami Plant, Kumagaya Plant, Gifu North Plant, Gifu South Plant Target period: April 1, 2008 - March 31, 2009



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.

Environmental Report

Reduction of Environmental Impact

Global Warming Prevention Activities

1. Effective usage of energy is being promoted as an activity participated by all personnel.
2. Enlightenment activities such as the promotion of energy saving is being continuously implemented.
3. Other than the promotion of the development of methods with better energy saving, the consumptions of energy by currently invested facilities are being fully assessed.
4. Heat retention/insulation is implemented for facilities to prevent diffusion of energy.
5. Contract demand is being reduced as efforts to equalize energy use.

Reduction target for CO2 emissions

7% reduction by the end of fiscal 2010 from fiscal 1990 levels

Reduction target for energy consumption

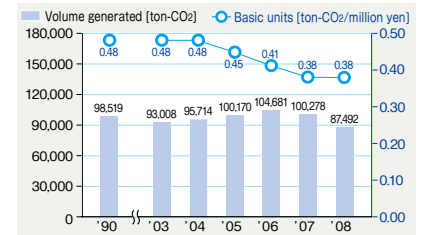
6% reduction of total energy usage volume (basic unit) by the end of fiscal 2010 from fiscal 2004 levels

The annual target for CO2 emissions (4.7% reduction) was achieved as the amount of in fiscal 2008 was 12.8% less than in fiscal 2007. The annual target for unit energy consumption (1% reduction) could not be achieved as the amount was 2.3% more than in fiscal 2007. We will continue to decrease the amount of CO2 emissions through steady efforts such as change from the use of fossil fuel to city gas, installation of energy-saving devices, improvement of air-leakage, etc.

[Main activities of fiscal 2008]

- Shift from use of fossil fuel to city gas
- Renewal of aged transformers to amorphous transformers
- Promotion of inverter/intermittent operation
- Reduction of air pressure and repair of air leaks
- Renewal to high-efficiency lighting
- Installation of photovoltaic generation facilities
- Shift to Ecocute hot-water supply
- Promotion of Team Minus 6% activities

CO2 emissions

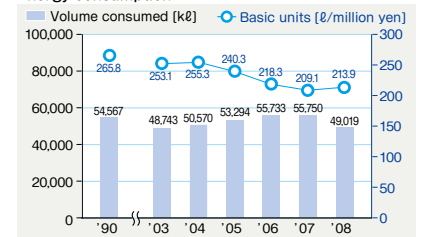


Conversion factor using for calculating CO2 emission

Power	0.3817kg-CO2/kwh	Bunker A	2.7000kg-CO2/ℓ
Kerosene oil	2.5308kg-CO2/ℓ	LPG	3.0094kg-CO2/ℓ
Diesel oil	2.6468kg-CO2/ℓ	City gas	2.3576kg-CO2/m ³

※Source of CO2 emission conversion factor: Japan Automobile Manufacturers Association, Inc.

Energy consumption



※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)

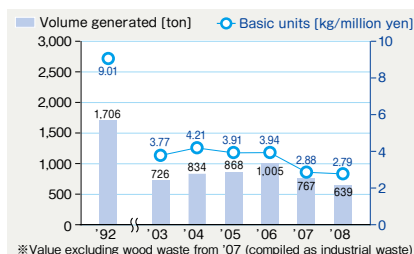
Waste Reduction Activities

1. Energy saving (reduce, reuse and recycle) is promoted in all stages of design, manufacturing, sales and distribution to reduce waste. Paperless conferences are also promoted in offices to drastically reduce paper wastes.
2. Rules have been established for segregating wastes to improve recycling efficiency.
3. Activities toward zero emission are being carried forward.

Reduction target for general waste

Reduction of discharge by 11% compared to 2007 by the end of fiscal 2010

The annual target for the amount of waste discharged (4.1% decrease) was achieved as the amount generated in fiscal 2008 was 639 tons, 16.8% less than in fiscal 2007.



※Value excluding wood waste from '07 (compiled as industrial waste)
Note: The waste disposal and treatment ordinance was partially revised such that effective April 2008, wood pallets are treated as industrial wastes (formerly general wastes). Hence, the category of wood wastes was changed and the values revised.

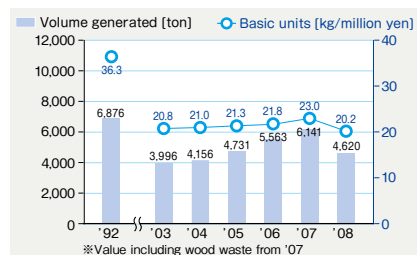
[Main activities of fiscal 2008]

- Paperless operations by expanded usage of office automation equipment
- Reduction of paper by paperless conferences
- Use of returnable boxes for delivery of cardboard boxes and plastic bags
- Full observation of scaled-down and double-sided copies
- Recycling by shredding confidential documents
- Reduction of discharge using raw garbage processors
- Recycling of safety shoes

Reduction target for industrial waste

Reduction of discharge by 33% compared to 2007 by the end of fiscal 2010

The annual target for the amount of waste discharged (19.6% decrease) was achieved as the amount generated in fiscal 2008 was 4,621 tons, 24.8% less than in fiscal 2007. The amount of discharge is being reduced by focusing especially on the increased in the volume of alkaline fluid wastes.



[Main activities of fiscal 2008]

- Concentration/reduction of alkaline fluid wastes by cogeneration waste-heat management
- Extended service life of alkaline fluids
- Expanded reuse of waste paint thinner
- Reuse of cutting oil and operating oil
- Reduction of waste from paint booth using microorganisms
- Reduction of oil sludge using oil-sludge concentration device



In order to reduce alkaline wastes that dominate about 65% of the industrial waste discharged in fiscal 2007, a device (CD dryer) that reduces the volume through evaporation of liquid within the fluid was installed. Although operation meeting the weight and quality of fluid waste could not be made and the matter was consulted on a number of occasions to a specialist, we can now manage and maintain wastes with confidence.

The device allowed reduction of about 1,000 tons of alkaline waste discharge in fiscal 2008. As activities of 2009, we will engage in the acceptance of unprocessed alkaline fluid wastes that are discharged and the effective utilization of resources by improving the segregation accuracy.

Gifu South Plant Environment & Antidaster Control Sect.
Norihisa Fukuoka

A cleaning solvent collection device was installed in the part cleaning process. This device allows about 20% of the solvents vaporized into the atmosphere to be collected for reuse. This device is expected to have major effect on the VOC discharge problem. Information concerning the installation of this device has been transmitted to the Production Engineering Division of each plant for a company-wide involvement in the problem concerning VOC discharge. We would like to continuously make efforts by establishing manufacturing processes and installing equipment that are kind to the environment.



Gifu North Plant (SEALS CENTER)
Production Engineering Sect.
Junko Minematsu

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

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

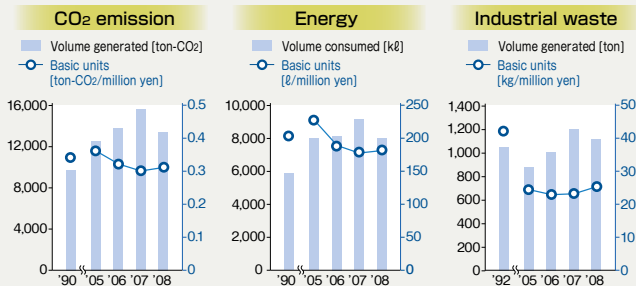
ISO14001
JQA-EM1171

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: 53,951m²
- Main products: hydraulic equipment (pumps, motors, valves), railroad equipment (semi-active/passive dampers), aircraft parts (wheels, brakes), electronic devices (car-mounted controllers)

2008 Topics & Environmental Preservation Activities

- ① Photovoltaic generation facility (capacity: 30KW) was installed on the rooftop of the new wing for CO₂ reduction of about 14 tons/year.
- ② Oil separator was installed to process alkaline fluid wastes. The device will reduce industrial wastes by about 78 tons/year.
- ③ Exhaust heat from gas engine power generation is also used for plant air conditioning for a pleasant working environment.
- ④ Asbestos was removed from high-voltage transformer stations and adjacent wings.



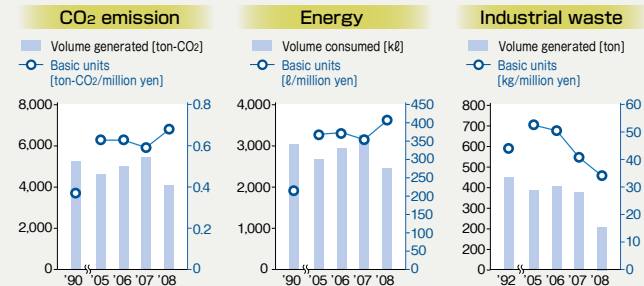
Kumagaya Plant

ISO14001
JQA-EM1152

- Location: 2050 Nagazaik, Fukaya-shi, Saitama 369-1193 TEL 048-583-2341
- Beginning of operation: January 1971 ● Floor surface area: 68,118m²
- Main products: special-purpose vehicle (concrete mixers, granule carriers, pruned branches shredder truck), hydraulic equipment (gear pumps, large-size valves, reduction gears)

2008 Topics & Environmental Preservation Activities

- ① The heavy oil boiler as the hot-water supply source of lavatories and kitchen was changed to Ecocute (industrial heat-storage flexibility contract for power) for reduction of CO₂ and utility expenses.
- ② The conventional aggregation drainage treatment method was changed to a chemical treatment method that separates industrial wastewater.
- ③ Concrete walls as property lines changed to fence to reduce risk of collapse during an earthquake.



Gifu North Plant

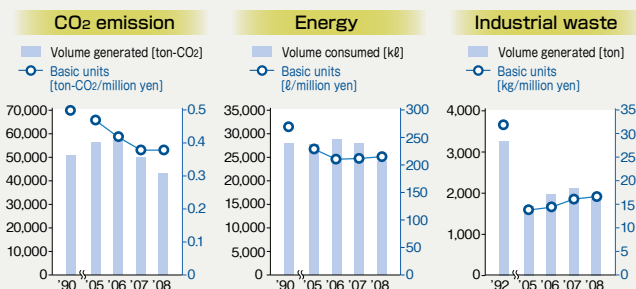
ISO14001
JQA-EM1288

OSHMS
TS04-21-01

- Location: 2548 Dota, Kani-shi, Gifu 509-0298 TEL 0574-26-5111
- Beginning of operation: April 1968 ● Floor surface area: 156,817m²
- Main products: shock absorbers for automobiles, hydraulic equipment for automobiles

2008 Topics & Environmental Preservation Activities

- ① Fuel of once-through boilers, air-conditioners and paint during furnaces was changed to city gas for reduction of CO₂ emission.
- ② Continuous power-saving activities by installing energy-saving equipment (hybrid injection molding machine) and expanding energy-saving holidays.
- ③ Pipe-end materials generated in the manufacturing process were made available for reuse as casting materials by related companies and activity for reducing discharging metal scraps outside the KYB Group was started.
- ④ Earthquake-proof construction work for the plant building is in progress as earthquake-proof measures. In addition, evacuation training that responds to emergency earthquake flash reports was conducted.



Gifu South Plant

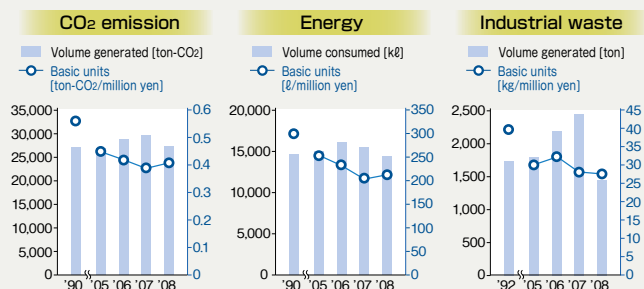
ISO14001
JQA-EM0700

OSHMS
TS06-21-4

- Location: 505 Dota, Kani-shi, Gifu 509-0297 TEL 0574-26-1111
- Beginning of operation: July 1943 ● Floor surface area: 108,010m²
- Main products: front forks for motorcycles, hydraulic equipment (cylinders, valves)

2008 Topics & Environmental Preservation Activities

- In order to increase the usage amount of heated water generated from cogeneration equipment with LNG as fuel, the following efforts were made to reduce energy:
- ① Heat supply to CD dryer was started from June '08.
 - ② Air-conditioning system utilizing heated-water was started from Aug. '08.
- Further improvements will be made in the future to increase the operation efficiency.



Environmental Report

Environmentally Friendly Product Development

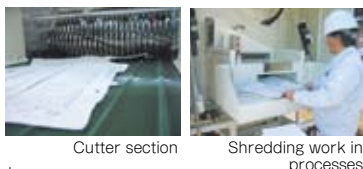
We are devoted in tackling issues to reduce environmental impact along with products that are safe and worry-free by considering the product cycle and stages where products are used at the time of development/design.

Technologies that Support Recycling

Saidan (Confidential document dispatch shredder vehicle)

Companies lose major trust when personal information or confidential information is leaked to the outside. The confidential document dispatch shredder vehicle can be dispatched to the actual site for processing confidential documents with the attendance of the customer.

Past collection methods required the collection vehicle to go to an incineration facility and incinerate documents with the presence of the customer. Much trouble is required even when processing documents using inhouse shredders, etc. On the other hand, confidential document dispatch shredder vehicle allows the customer to attend and visually see the disposal.



Shredded paper can be recycled as recycled waste-paper for contributing to energy-saving and environmental measures.



Energy Saving

E-MIXER (electronically controlled concrete mixer truck)

E-MIXER is an environmentally friendly mixer truck that incorporates electronic control technologies and hydraulic technologies such as hydraulic pump/motor, etc.

Utilization of electronic control allows high-speed rotation of the drum even at low engine rotation. A vehicle kind to the environment with low noise and low gas emission was realized. 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.



History of mixer trucks



Technologies that Support Riding Comfort and High Efficiency

Electronically controlled power steering system

This is a steering system equipped with an electronically-controlled assist motor instead of a hydraulic actuator to reduce needed steering power.

The assist power of the motor is controlled according to the steering power of the driver to realize optimal steering with the needed amount of assistance at the needed time.

There is an increase of electronically controlled power steering with major energy-saving effect adopted in vehicles from the growing concerns of environmental issues, with even a wide-spread to vehicle with large engine displacement.



Electronically controlled power steering system

INSIDE

Contributing to the environment by improving transportation efficiency

We developed a concrete mixer truck that drastically reduces the weight to improve transportation efficiency.

The mixer truck was lightened to the maximum. Utilization of a light-weight low-floor chassis allowed not only lightening of the vehicle weight but allowed the use of a mixer drum that is one-size larger (maximum mixing capacity: 5.0m³) than those on conventional vehicles.

For lightening the vehicle weight, each part was reviewed. While maintaining the basic quality, aluminum was used and parts were thinned wherever possible. By allowing approximately 18% more raw concrete to be loaded than conventional mixer trucks, we were able to cut down the number of trips by about 15%. As a result, a vehicle that contributes to the reduction of CO₂ emission was completed. The vehicle was released in March 2009. I am delighted when I hear customers say that they can now cut-down on CO₂ emission by improving the transportation efficiency, or they would like to contribute to the environment by switching to a light-weight mixer truck. We would like to continue providing concrete mixer trucks to our customers that are easier to use and more environmentally friendly.



Engineering Dept., Special-purpose Vehicle Div. Kumagaya Plant
Takasi Kamijyou

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

Construction oil damper that reduces vibrations of buildings and installations

In recent years, there has been an increase in awareness towards the environment even in the building industry, with a growing ecological conscious of using good buildings for a long time through renewal. However, earthquake protection of old buildings is insufficient against large earthquakes since it is based on the old standard.

Quakeproof retrofit using earthquake resistance technology is the solution to such problem.

Tokyo Station is a cultural asset built by gathering brick building technologies that were available at the beginning of the Taisho period. Quakeproof retrofit construction is currently in progress including the restoration of the 3rd floor section that was burned down by an attack during World War II. In order to suppress shaking of the building by an earthquake, 158 KYB vibration-control oil damper are being used.

In the past, high-rise buildings were said to be safe since they do not respond easily to earthquakes due to the unique cycle of the building. Recently, however, it is becoming clear that such buildings are weak since they resonate to long cycles of ocean-type earthquakes. Although recent high-rise buildings are installed with vibration-control dampers, buildings prior to the Great Hanshin Earthquake are completely vulnerable. Shaking of building can be reduced when later adding oil dampers but there will be major burden on the pillars and beams instead. However, pillars and beams of the old standard cannot tolerate such load. Hence, the displacement-dependent high damper was newly developed to relieve pillars and beams from such load by changing the damping coefficient according to the amplitude of vibration. This vibration-control damper allows earthquake protection of high-rise buildings without the difficult construction of having to strengthen the pillars and beams of the building. The photos shown is the Shinjuku Center Building installed with 288 of these dampers.

Improvement of Riding Comfort on All Cars of the Shinkansen N700

Semi-active system

The high-performance CPU of the semi-active control device now allows fine control and reduced vibrations and internal noise. This system installed in all cars of the N700 provides even more pleasant riding comfort and realizes a safe and worry-free trip. Use of the Tokaido Shinkansen N700 with high transportation efficiency by people seeking pleasant transportation space will also lead to ecological activities.



Semi-active suspension system

This device suppresses horizontal movements by calculating the vibration characters of the car using a computer and changing the damper performance in real time.



N700 Shinkansen



Tokyo Station retrofit (photo provided by the East Japan Railway Company)



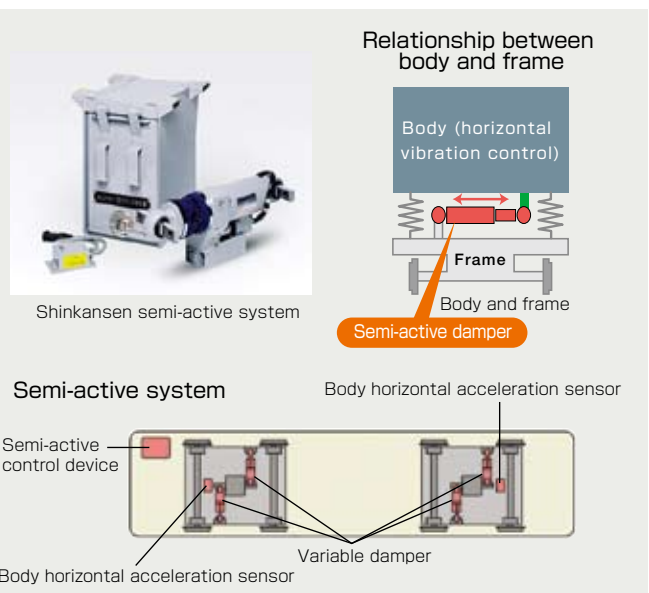
Vibration-control oil damper



Vibration control damper



Shinjuku Center Building



Social Report

Social Support Activities

Vaccines with Ecocap Activities

Collect caps of PET bottles and deliver vaccines to children of developing countries! Caps are small but nevertheless resources when segregated. 800 caps is equivalent to a polio vaccine for a single person. 800 caps will save the life of a child.

The KYB Social Contribution Team has been participating since September 2008. As of March 31, 2009, we have collected 22,115 caps, which is equivalent to 27 polio vaccines. We were able to donate vaccines for 5 children per month. Thank you for your help and your continuous cooperation in the future.



- Currently, collection boxes are available at the Gifu North Plant, Gifu South Plant and Head Office.

Donating to Orphans Indonesia

P.T.KYBI conducts various activities such as infectious disease prevention activities and donations every year. In 2008, donations were made to orphans.

In Indonesia, it is customary to donate regardless of religion. P.T.KYBI gave gifts such as stationary goods along with donation money to about 100 orphans in the neighborhood of the facility and child welfare facilities on September 17, in time with Ramadan, with the attendance of about 550 persons including our employees, executives and union at the chapel within the plant. We hope that Indonesia will further develop as a country for a bright future of these children.



Local Elementary School Students Visit the Mie Plant

On August 6th, we held the "Exciting Industrial Workshop of Tsu". This is an activity held with the cooperation of major firms within Tsu to help heighten the interest of children concerning Monozukuri. Local elementary school students also visited the KSM Mie Plant last year with overwhelming results. This year, 40 elementary school students within Tsu were invited to the Mie Plant. The day was so hot that sweat ran from the securely fitted helmets but the students were focused on the various products introduced with much interest. The main feature of the tour was the earthquake simulation vehicle. They excitedly took turns experiencing tremors and were in uproar of sharing among each other the experience they just had. During the explanation of the motorcycle road simulator, they listened carefully as if they were racers themselves.



The earthquake simulation vehicle was a smash hit

Earthquake simulation vehicle experience

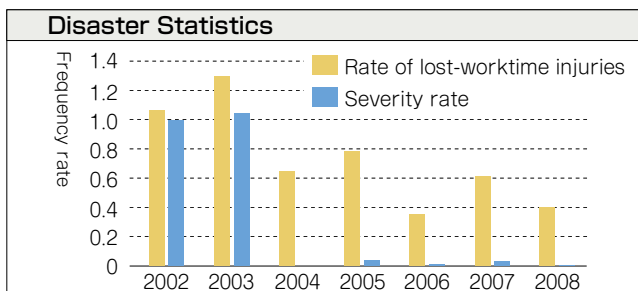
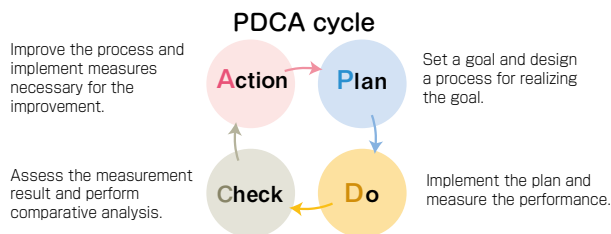


This is a simulator that places an entire motorcycle on a servo cylinder to create an atmosphere of actually running a test course.

Safety and Health Activities

Occupational Safety & Health Management System (OSHMS)

We have started a company-wide implementation of OSHMS from 2003 to prevent occupational accidents and to improve the occupational safety and health standards. OSHMS reduces risks at the workplace by repeatedly implementing the PDCA cycle based on the assessment of factors that are dangerous or harmful. In other words, we aim to improve the safety and health standards of the workplace by reducing risks. This management method to further reduce risks from the conventional safety management is being actively practiced by many offices.



*Rate of lost-worktime injuries = number involved in work-related accident (lost-worktime)/ work delay hours × 1,000,000
 *Severity rate = work-days lost/work delay hours × 1,000

Safety Experience Dojo

The safety experience dojo is held at each plant for safety and health training.

The Gifu North Plant provides various facilities to experience danger such as getting hands caught in something, falling of heavy objects and getting caught in rotational bands. Many employees participate in the dojo.



Gifu North Plant



Sagami Plant

P.T.KYBI (Indonesia) Safety and Health Patrol

In addition to the daily patrol of the Safety and Health Committee that was started in 2007, we also started a safety and health patrol that involves related departments starting 2008.

Twice a week (Friday), the workplace is checked by the Section Managers of EHS (Environment, Health and Safety), Manufacturing, Manufacturing Technologies, Parts Inventory and Quality Control forming teams. In order to completely and efficiently check the workplace, important check items (5S, facilities, disaster risk, usage status of protective gear, etc.) are determined each time and issues are shared among departments to eliminate work-related accidents and fire.



View of safety and health patrol

Recognized as an outstanding company regarding safety by Jiangsu and Zhenjiang New Zone of China.

KYB Hydraulics Industry (Zhenjiang) Ltd. <KHIZ> was recognized as an outstanding company loyal to safety in fiscal 2008 (fiscal year in China is the calendar year) by Jiangsu and as an advanced company of safe production by Zhenjiang New Zone. Many of the companies commemorated this year were related to chemical engineering and administrative institutions and organizations. We were the only the company in the machinery industry as well as in Dingmao Development Park, making the commendation very honorable.

At KHIZ, there are many young employees including high-school trainees (employment system unique to China). Due to the lack of training and experience, there was an increase in the number of injuries such as cut wounds from cutting dust at one time.

For this reason, safety training of new employees lead by the Safety and Health Committee with Production Engineering Dept. Manager Qiu as office is being implemented while also engaging in HIYARI-HAT (close calls/near misses) proposal activities and risk assessment activities that are still rarely seen in China. In addition, a improvement proposal system was newly started for improvement of especially items related to safety.



Production Engineering Dept. Manager Qiu (left in photo) and Plant General Manager Miyamoto (right in photo) recognized as outstanding company regarding safety.

Interview of all employees regarding mental health

In 2008, interview of all employees regarding mental health was newly started for the entire company. A schedule was created with the help of the workplace since 1,112 employees had to be interviewed by 2 hygienists and without dropping the productivity of the plant. Interviews were completed in year while making various efforts such as the notification method. The aim of the interview is not only the early discovery of emotional disorder but for each employee to be aware of his/her own stress. I hope that they will be able to efficiently control their stress by knowing their tendencies.

Gifu Human Resources Dept. (residence at Gifu South Plant) Hygienist Mayumi Takano

INSIDE



Overseas Report

Environmental Preservation and Safety Activities of Overseas

Overseas sites are also actively involved in the acquisition of ISO14001 certification, environmental preservation, waste reduction and safety measures just like the plants in Japan.

Reducing risks with gas-compression coolers, etc. KSS (Spain)

At KSS, there is a facility that discharges harmful substances from the sub-assembly washing machine into the atmosphere. Since this facility did not meet the European Normative, there was a need to change the cleaning method. In order to meet the regulations, a washing machine using carbon hydride was installed. The facility has been in use since June 2008 without any problems. Furthermore, there was a risk of Legionella bacteria contained in the water for the system for cooling water (Fig. 01) used at the plant and the system had to be updated. The new system (Fig. 02) cools water using gas compression rather than a fan. This update eliminated discharge of harmful substances into the atmosphere and reduced the risk of Legionella bacteria.



(Fig.01)



(Fig.02)



Ernesto Huarte
Manufacturing Engineering Manager

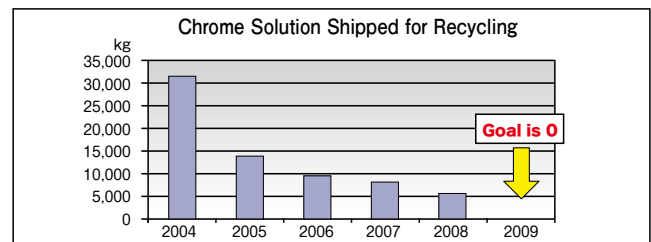
purifies the chrome solution by removing contaminants such as iron and copper. The chrome solution in each plater is now cleaner which reduces the need to clean and the plating quality was also improved. In 2008, constant reuse of dirty chrome solution became possible with the purification system, allowing gradual decrease of the need to send solution waste to treatment companies for processing. The goal of 2009 is zero waste by reusing all chrome solution.



Photo of chrome purification system



Chris Korte
Chemical Engineer



Reduction of chrome solution waste

KMNA (U.S.A.)

Chrome solution used in the piston-rod plating process gets dirty from metals such as iron and copper dissolving in the solution for every production, lowering the purity. In 2007, we installed a system for raising the purity of chrome solution through electro dialysis on plating lines. This system

Merits created by the development of new paint KYBSE (Spain)

KYBSE is currently making efforts to reduce the emission of VOC (Volatile Organic Components) into the atmosphere by 55% to achieve the limit of emission as indicated in the European Normative. Last year, a new paint was developed



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.



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.

Production Plants

and applied to one of the electrostatic lines to achieve the limit of emission and to respond to the quality demands of customers. The new paint was approved by the customer after development. There is still the need to apply the paint in 2 more lines. Line No. 3 was changed in August. This year, the paint will be applied to Line No. 2. Lastly, another line will be applied by 2010.

This activity is schedule to create many merits.

1. Reduced: air pollution, risk of fire within company, amount of residue, consumption of paint
2. Improved: safety and health of workplace, quality of products



Control panel

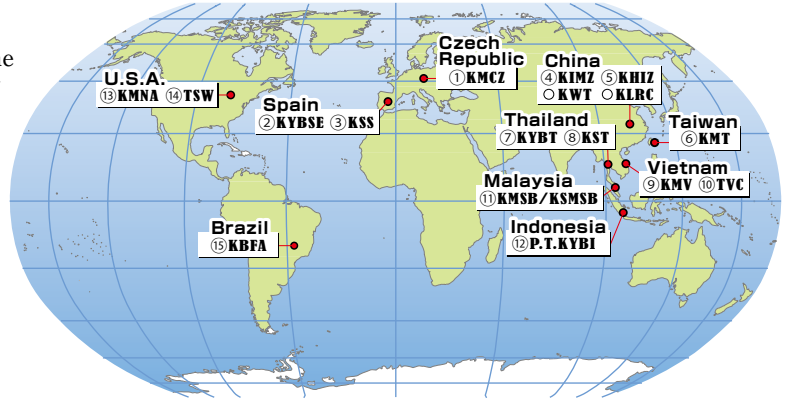


Line using new paint

Removing mud with environmentally-friendly chemical

KMCZ (Czeck Republic)

KMCZ is making efforts not only in Manufacturing Dept. but in environmental area as well. We are focusing on the segregation of wastes to keep nature clean. The fluidic device inside the pretreatment system of the painting line was clogged by mud created while phosphating. We had to clean the clog by using a dangerous chemical called aqua



fortis. Then, the chemical had to be sent to an outside company for disposal. We are currently testing a particular chemical called "Biodet". This chemical is nontoxic and non-volatile, and does not have a foul smell. Furthermore, this chemical can be processed through our waste water treatment station.

The chemical is kind to the nature and safe for use by workers. The chemical also allows reduction of cost related outside the company as well as maintenance time of workers.



Jaroslav Vala
Painting GL



Fluidic device cleaned using "Biodet", a chemical kind to nature



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: Cikarang Barat, Indonesia
Main products: front forks, rear cushions, shock absorbers



13. KYB Manufacturing North America Inc.

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



14. TSW products Inc.

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



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
KBFA (Brazil)	Mar 2007



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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 Section.

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