## YKK GROUP Environmental and Social Report 2004

Seeking harmonization between abundant and healthy lives for all humankind and the environment

## Message

The environmental problems that we face today, including global warming and the creation of waste and harmful substances, are the results of increased economic activity. The worsening of various aspects of the environment is the impact of our individual lifestyles and normal business activities. If we want to solve these environmental problems on a global scale, we must build a sustainable social and economic system that has low impact on the environment.

The YKK Group recognizes that our business activities have an impact on the environment at a global level. For this reason, we have made dealing with environmental problems one of our top management priorities and we are promoting environmental management at a global level.

In addition to the Cycle of Goodness philosophy that no one prospers unless he renders benefit to others as the foundation of YKK Group activities, we also follow the management principle of seeking corporate value of higher significance as we pursue our fastening, architectural products and other business activities in Japan and 65 other countries around the world.

The YKK Group maintains a unique identity through all of its global business, endeavoring to raise the value of the enterprise and maintain the image of a company that is fair and inspires trust, is truly international, and has the skills and technology to create new value.

I believe that manufacturing, while focusing on the satisfaction of individuals and making contributions to society, must develop a unified system that organically connects all aspects of our skills and technology. In concrete terms, these aspects are: production that links directly to manufacturing, materials, finishing, consideration of the impacts of manufacturing and products on the environment, function that concerns product realization and marketability, design, and implementation that includes satisfaction during use and consideration for recycling. The YKK Group takes responsibility for the entire lifecycle of its products from conception, development and manufacture to use and disposal. We are working actively on all kinds of issues, from appropriate use of resources to protection of the natural environment and formation of a sustainable society, in order to assist all of you in the creation of a more abundant society.

In this report, we include information on one of the YKK Group's important management issues, sustainable environmental protection reform efforts on a global level, as well as subjects related to the new social responsibility of enterprises. We will endeavor to keep raising the value of the enterprise and gain increased confidence from the public.

I would be delighted to hear your frank thoughts and suggestions.

July 2004



YKK Group

Tadhir ynhil

Tadahiro Yoshida

## YKK Group management principles

### **OYKK** philosophy

#### "No one prospers unless he renders benefit to others"

An enterprise is an important member of society, and as such, it must coexist with the other elements of society. Its value will be recognized by the benefits it shares with society. Tadao Yoshida, YKK's founder, carefully considered this need for mutual prosperity as he planned his business endeavors. He determined that contributions to society could best be achieved by the continual creation of value through innovative ideas and inventions. The resulting business expansion would bring prosperity to consumers and trading partners, thus benefiting all society.

Tadao Yoshida called this the "Cycle of Goodness", and he made this idea his fundamental philosophy of business. We retain this concept as the ongoing business philosophy of YKK.



## ◎ YKK management principle "YKK seeks corporate value of higher significance"

The YKK Group has followed the management principle of seeking corporate value of higher significance for its management mission, direction and emphasis and we have made equity the foundation of all our business activities. We will work to increase our status as a company that is fair and inspires trust, by continuing to pursue equity in our relations with society. We also seek to be recognized as a truly international company.

As a company that has the skills and technology to create new value, we will use all of our abilities to connect our ideals with product development in our efforts to become a specialized maker that provides the most suitable processes and products. We believe that our value and the source of our creativity is our ability to stay ahead of the demands of society.

Seeking corporate value of higher significance, YKK will pursue innovative quality in the following seven areas:



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#### Preventing global warming

- (Energy conservation and transportation measures) Zero emissions
  - (Waste reduction and recycling)
- Chemical substance risk reduction
  - **⊘PRTR**
  - ♦ Chemical substance measures (VOC, PCB)
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#### About this report

This report was prepared in accordance with guidelines prepared by the Ministry of the Environment, the Ministry of Economy, Trade and Industry, and the Global Reporting Initiative (GRI) and details corporate activities for the period from April 1, 2003 to March 31, 2004 as well as outlines future objectives.

The report is comprised of environmental, social and site data sections that detail specific efforts we are making in Japan and abroad in accordance with the YKK Group's four midterm environmental management guiding principles.

The YKK Group published its first Environmental Report in 2000, making this the fifth such report.

We would like your guidance to improve our future environmental protection activities and environmental reports, so we have included a questionnaire at the end of the report. We would be pleased to receive your candid opinions. The next publication is scheduled for July 2005.

#### YKK Group enterprises covered by this report

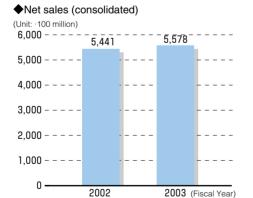
- · YKK Corporation manufacturing, development and management
- · YKK AP Inc. manufacturing, development and management
- $\cdot$  Other domestic group companies
- Main overseas production sites
- (Plants that have already obtained ISO 14001 certification)

## **YKK Group outline**

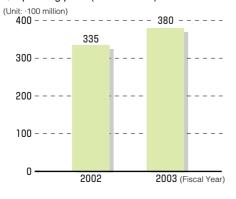
#### [YKK Corporation]

	-
Established	January 1, 1934
Capital	11,922,717,000 yen
Employees	3,523 as of the end of December 2003
Manufactured Products	Fastening products, precision machinery, equipment and molds
Head Office	1, Kandaizumi-cho, Chiyoda-ku, Tokyo, 101-8642, Japan
	Tel +81 (3) 3864 2000
Plants	Kurobe Plant, Kurobe Makino Plant
[YKK AP Inc.]	
Established	July 22, 1957
Capital	10,000,000,000 yen
Employees	12,359 as of the end of December 2003
Manufactured Products	Architectural products
Head Office	1, Kandaizumi-cho, Chiyoda-ku, Tokyo, 101-8642, Japan
	Tel +81 (3) 3864 2200
Plants	Tohoku Manufacturing Plant, Kurobe Materials Manufacturing Plant,
	Kurobe Ekko Manufacturing Plant, Kurobe Ogyu Manufacturing Plant,
	Namerikawa Manufacturing Plant, Shikoku Manufacturing Plant,
	Kyushu Manufacturing Plant
[YKK Group]	
Group Companies	122 companies in 66 countries

Group Companies	122 companies in 66 countries				
	1) YKK Corporation and other group companies (19)				
	2) YKK AP Group companies (6)				
	3) Overseas corporations: 97 companies in 65 countries (250 facilities including 85 plants)				
Employees	36,501 (17,790 in Japan, 18,711 abroad)				
	*as of the end of December 2003				



#### Operating profit (consolidated)



#### Fastening products



In addition to the manufacture and sales of fasteners, buttons, tape and other materials used in products such as clothing and bags, we also develop products in response to the market, including fasteners for spacesuits, fixed netting, and artificial turf, as well as biodegradable fasteners.

#### Machinery and engineering

As the division responsible for development and manufacture of equipment for the production of the fastening and architectural products businesses, we provide equipment and machinery, high precision molds, production line control systems and image processing systems to the YKK Group worldwide.

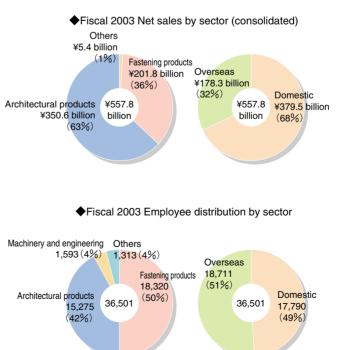


We manufacture and sell architectural materials for housing such as doors and sashes, interior doors, flooring and other interior products, walls, roofing and other exterior materials, and gardening and exterior additions, including gates, fences, sunrooms and carports. We also develop and sell all kinds of architectural materials based on the needs of the housing industry and characteristics of our clients.

#### **Building architectural**

**Residential architectural** 

We provide extensive know-how along with our architectural products for remodeling that include very sophisticated parts for skyscrapers and super-skyscrapers, materials for normal buildings, materials with new functionality that provide even greater comfort and energy savings, and materials for shop facades and public spaces.



## Environment

Relationship of YKK Group business with the environment
 Fundamental environmental management directives and policies
 Responding and contributing to the green market/Environmental impact reduction management/Global environmental management system

Since we established the YKK Group Environmental Charter in September 1994, the YKK Group as a whole has been working to protect the environment. This Environmental Charter expresses our fundamental philosophy, which includes our desire to create harmony between the environment and the healthy and abundant lifestyles of people and our commitment to work to protect and improve the environment in all of our business activities.

## **YKK Group Environmental Pledge**

 $\sim$  Our fundamental understanding of the global environmental issue  $\sim$ 

It is recognized today as being a most important duty for all humankind that we preserve the abundantly endowed global environment and that we transfer it to the next generation in sound condition.

Striving to be an earth friendly company, YKK Group proclaims that we will address and promote "harmony with the environment" as the highest priority of our business activity.

> September 20, 1994 Tadahiro Yoshida, YKK Group

## **Relationship of YKK Group business with the environment**

#### Responding promptly to customer needs, and environmental issues with a global perspective

In order to provide customers with the highest quality, and to guarantee that quality, the YKK Group maintains a comprehensive production system from handling of raw materials to manufacturing. We develop our own metal, resin, ceramic and other new materials and produce all kinds of parts. We also design and produce our own manufacturing equipment that we use during all stages of the production process and have also created our own production management systems. Through our comprehensive production efforts, the YKK Group has achieved uniform quality around the world.

The world needs to develop a sustainable economy and society. For this reason, the YKK Group has established contribution to the creation of a sustainable society as our midterm environmental management guiding principle and we are promoting efforts to achieve concrete objectives based on the following 4 fundamental environmental management policies.

#### 1. Responding and contributing to the green market

We are entering an age when enterprises that cannot respond to the demands for sustainability from international society will be rejected from the global supply chain. In order to mitigate environmental problems at a global level, in addition to raising the quality of environmental management of the Group as a whole, we are also working to strengthen cooperation on these issues with our client businesses. We have also chosen three themes for our product development vision — high environmental function, safety and security, and comfortable lifestyle. By conducting environmental product assessment 3 times during the process from design and prototyping to manufacture, we develop products that not only have lower impacts themselves, but that also contribute to lower environmental impact in use.

#### 2. Making environmental impact reduction management even more thorough

We are undertaking a variety of activities to achieve greater environmental impact reduction and developing systems to reform work processes so that they can handle highly energy efficient equipment and production fluctuation. We are also working to recycle byproducts and achieve zero emissions, as well as manage chemical substances appropriately.

#### 3. Building and using a global environmental management system

The environmental problems of modern society are borderless, and the need to unify the environmental directives and actions of the whole group has grown. By instituting internal environmental audits and an environmental database, we can grasp the environmental issues facing each region and work toward solutions. Simultaneously, we can develop global standards by getting feedback on measures from all areas, which will increase the whole group's ability to handle environmental issues.

#### 4. Promotion of environmental communication

In addition to promoting accurate, truthful and continuous accountability to society, we will also actively take the opinions of customers and the public into account.



YKK Group Chairman, Environmental Policy Committee Director, YKK Corp. Yoshiaki Watanabe

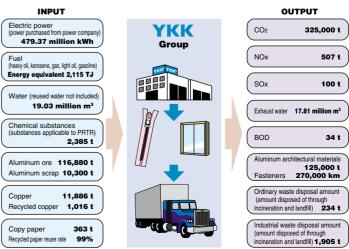
#### Environmental impacts of our enterprises

Manufacture of fastening and architectural products requires large amounts of energy and chemical substances and produces CO<sub>2</sub> and waste materials.

In addition to proactively incorporating the most advanced energy efficient equipment, switching to fuels with reduced CO<sub>2</sub>, NOx and SOx emissions, and using substitutes for harmful chemical substances, the YKK Group is promoting appropriate use of resources and the achievement of zero emissions (no landfill disposal).

Furthermore, LCA<sup> $\star$ </sup> has revealed that for architectural materials the potential contribution to environmental impact reduction is greatest at time of use, but that the environmental impact of the raw materials is also high.

We are working to reduce the environmental impact of raw materials by increasing use of internally-produced scraps, aluminum foil, sash scraps, sawdust, recycled chips, recycled copper and other recycled materials from the marketplace.



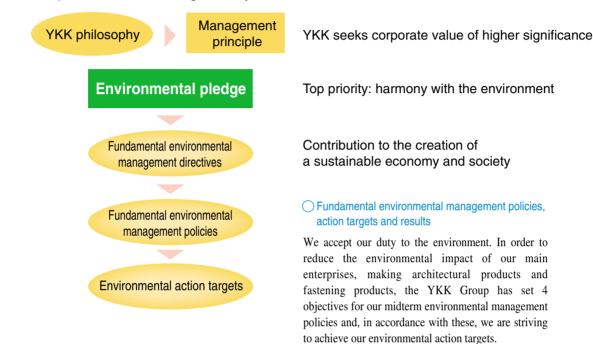
Environmental impact mass-balance of YKK Group domestic plants/offices

LCA = Life Cycle Assessment

## **Fundamental environmental management directives and policies**

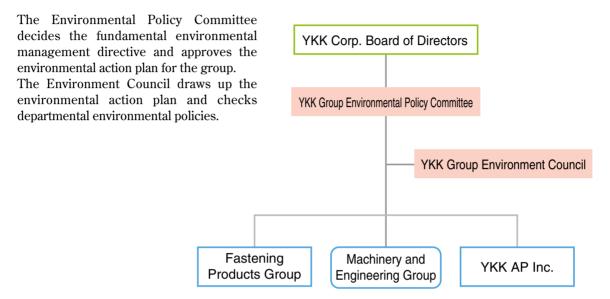
## Action targets and achievements

(YKK Group environmental management system)



Fundamental environmental management policies	Environmental action targets						
	<ol> <li>Development and provision of eco products and services for the green market</li> </ol>	Promotion of development and provision of eco products     Reevaluation of voluntary environmentally friendly standards; product assessment rate increase     LCA execution					
Responding and contributing to the green market	2) Use of environmental label	Preparation of catalog of environmentally friendly products					
	3) Promotion of green procurement (Promotion with business partners)	<ul> <li>Procurement of environmentally friendly materials manufactured at plants with low environmental impact</li> <li>Promote with business partners</li> </ul>					
	<ol> <li>Reduction of volume and facilitation of recycling of wrapping and packaging materials</li> </ol>	Reduction of packaging materials use (volume reduction, size decrease, reuse)     Promotion of recycling collection of wrapping and packaging materials					
	<ol> <li>Countermeasures against global warming (greenhouse gas reduction, total energy use decrease, transportation efficiency improvement)</li> </ol>	<ul> <li>Continuous reduction of total CO2 emissions by 1% annually at all main production sites</li> <li>Introduction of clean energy</li> <li>Transportation efficiency improvement; modal shift promotion</li> <li>Promotion of use of regional ports</li> </ul>					
Making environmental impact reduction	<ol> <li>Promotion of the 3Rs (reduce, reuse, recycle) and reuse of resources between different types of business with the goal of achieving zero emissions</li> </ol>	Aim to achieve zero emissions at main production sites worldwide by end of fiscal 2005					
management even more thorough	3) Chemical substance risk reduction	<ul> <li>Continuous promotion of use reduction and appropriate management of harmful substances at all main production sites worldwide HCFC-225 for washing (use discontinued by end of fiscal 2010) HCFC-22 for refrigerant (promotion of recovery of refrigerant when air conditioners upgraded or removed) Promotion of chemical substance reduction plan by use of PRTR system</li> </ul>					
	4) Reduction of environmental impact of Group assets	Pollution evaluation of YKK properties					
Building and using	1) Development of global environmental activities	Implementation of YKK Group environmental audits at main production sites worldwide					
a global environmental	2) Acquisition and utilization of ISO 14001 certification	Acquisition of ISO 14001 certification completed at main production sites worldwide by end of fiscal 2003					
management system	3) Utilization of environmental accounting system	Application and utilization of environmental accounting system					
	1) Hold global group environmental conference	Management of global environmental data sources					
Promotion of environmental communication	2) Publication of environmental data	Continued publication of environmental report     Entry in environmental exhibitions     Preparation of environmental education system     Diffusion of eco products information					
	3) Symbiotic relationship with global society	Promotion of social activities					

#### (Organizational chart for YKK Group Environmental Policy Committee)



(Evaluation of results:○ Target achieved △ Target partially achieved × Target not					
Fiscal 2003 targets	Fiscal 2003 achievements	Evaluation	Page		
Preparation of voluntary environmentally friendly product standards     Increase rate of product assessment     Implement LCA system	Preparation of environmentally friendly product standards and environmental labeling standards     Product assessment rate of 90%     LCA system preparatory investigations completed	0	P10-13		
<ul> <li>Preparation of environmentally friendly products catalog for architectural products business (Eco Clover)</li> </ul>	<ul> <li>Publication of Eco Products Introduction (Nov. 2003) pamphlet on Eco Clover architectural materials</li> <li>Eco Message 2004 published (Feb. 2004)</li> </ul>	0	P10 P37		
Procurement of environmentally friendly products manufactured at plants with low environmental impact     Promotion with business partners	Implementation of questionnaire to some business partners		P15		
<ul> <li>Continuously promote reduction of packaging materials use at main domestic plants</li> <li>Expand recycling collection area of wrapping and packaging materials</li> </ul>	0.2% reduction of previous year level; 27% reduction of 1998 level     Investigation of wide area recycling system		P16		
<ul> <li>Reduce CO2 emissions at main domestic plants by 1% from previous year</li> <li>Improvement of truck loading efficiency for transport to customers</li> <li>Install speed-limiting devices on large trucks and make diesel truck NOx restriction compliant</li> </ul>	<ul> <li>0.3% reduction of previous year level; 21.6% reduction of 1990 level</li> <li>Transport truck loading efficiency improved 3%</li> <li>Speed-limiting devices installed on large trucks (Sept. 2003)</li> <li>Diesel trucks made NOx restriction compliant (Oct. 2003)</li> </ul>	Δ	P17-18		
Raise recycling rates of industrial wastes at main domestic plants to 85%	Recycling rate of 86% (9% increase over previous year)	0	P19-20		
<ul> <li>CFC-11 for refrigerant (use discontinued by end of fiscal 2003)</li> <li>HCFC-141b for foaming (use discontinued by end of fiscal 2003)</li> <li>Implement chemical risk communication</li> </ul>	<ul> <li>Elimination of CFC-11 for refrigerant use</li> <li>Elimination of HCFC-141b for foaming use</li> <li>Initiation of research on chemical risk communication</li> </ul>	0	P21-22		
Comply with Soil Contamination Countermeasures Law	Begin soil contamination inspection of company properties	0	P23		
Implement Group environmental audits	Group environmental audits implemented (Indonesia, Taiwan, Thailand, India)	0	P26		
Complete acquisition of ISO 14001 certification at main production sites worldwide	Certification acquired by 1 domestic Group company site     Certification acquired by 8 main production sites abroad (Certification acquired by 50 main production sites worldwide)	0	P25		
Application and utilization of environmental accounting system	Utilized as segment accounting	0	P27-28		
Hold first global environmental conference     Create global environmental database	Global environmental conference held for each type of business (Sept. and Dec. 2003)     Global environmental database built	0	P39-40		
<ul> <li>Publication of environmental report</li> <li>Entry in environmental exhibitions</li> <li>Educational tools and system prepared</li> </ul>	<ul> <li>Publication of YKK Group Environmental Report 2003 (Jul. 2003)</li> <li>Items entered in Eco Products 2003 (Dec. 2003) and Toyama Fair (Oct. 2003)</li> <li>Environmental education for provisionally accepted new employees implemented and Environmental Action 25 (for the workplace + one) created</li> </ul>	0	P37		
Promotion of social activities	Volunteer environmental activities in every region     Environmental education events held	0	P35-37		

Evaluation of results:  $\bigcirc$  Target achieved riangle Target partially achieved imes Target not achieved)

## **Responding and contributing to the green market**

## Development and provision of environmentally friendly products and services

We have established a vision to provide environmentally friendly eco products and are seeking to support the comfortable lifestyles of our customers with safety and security products that have high environmental function. With 4 fundamental concepts behind our eco products development - save energy, save resources, recycle, and ecosystem-friendly - we are creating eco products that have reduced environmental impact throughout their lifecycles, from production and distribution to use and disposal.

## Environmental action targets

Promotion of development and provision of eco products
 Reevaluation of voluntary environmentally friendly standards; product assessment rate increase
 LCA execution

### $\bigcirc$ Eco products vision

 $\sim$  The YKK Group contributes to the creation of a sustainable society through our products.  $\sim$ 



## We provide products to support comfortable living for every kind of lifestyle.

- Universal design
- •Easy daily maintenance
- •Reform
- •Appropriate for the lifestyles of the users

#### Four concepts for eco products development

Save energy (CO <sub>2</sub> reduction)	We are promoting energy conservation through products with excellent insulation and heat blocking qualities that increase the effectiveness of room air conditioning, and the development of clean energy products that use natural energy.
Save resources (Effective use of materials)	We are examining how to reduce loss and increase the effective use of materials throughout the stages of product development and production. Furthermore, we seek the reduction of raw material use by cutting down the amount of materials used in products and their wrapping and packing. We also reduce the amount of resource depletion through the use of recycled materials.
Recycle (Reduction of waste)	We are seeking to reduce the creation of waste materials by improving durability to give products as long of lives as possible. In order to make our products easy to recycle, we also design them to be as easy as possible to remove and dismantle.
Ecosystem-friendly (Beneficial for people)	Along with endeavoring to reduce the production of harmful materials, we are considering universal design to support healthy and comfortable living.

#### Tools for promoting the development of eco products in our architectural materials business (YKK AP)

#### Environmental product assessment

In 2001 the YKK Group made obligatory an evaluation of all architectural material products using the Environmental Product Assessment Checklist for design review (DR) at the stages of design, product and mass production.

In April of 2003, we published the Environmental Assessment Manual in order to further raise the precision of evaluations, and since then we have conducted multi-faceted environmental impact assessment of all stages of the lifecycles of products from production and transportation to use and disposal.

## ◇Life Cycle Assessment (LCA)

By conducting precise analysis of environmental impacts, we seek to provide products that are appropriate for their uses and also have low environmental impacts.

In fiscal 2003, we made progress in creating a foundation for conducting thorough LCA, by collecting and analyzing the inventory data for 35 types of materials that are used in the production processes for our main housing products, including APSWORD 70, PLAMADO III, VENATO, La Foresta and ANHELO.

As an example of assessment from the data gathered, the chart to the right shows a comparison of the CO<sub>2</sub> emissions from the stages of material preparation to manufacturing caused by the PLAMADO III sliding window (resin window) and the APSWORD 70 sliding window (aluminum and resin window).

CO<sub>2</sub> emissions can be seen to mostly come from the materials and the glass that make the window. Among these, aluminum materials have high environmental impact. Compared to the APSWORD 70, the PLAMADO III uses much more resin and less aluminum, thus reducing the overall environmental impact up through the production stage.

This method allows for feedback that can be used for manufacturing process reform and materials development by identifying the specific nature of the environmental impacts of each item in the production stage.

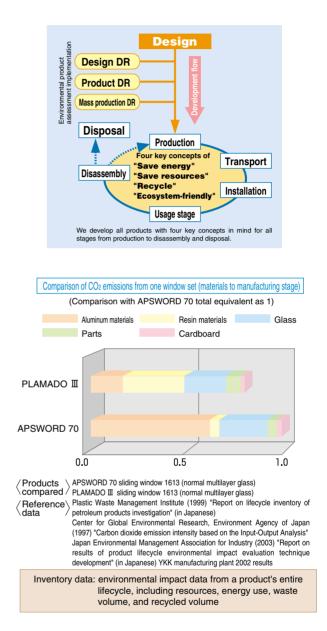
In the future we intend to expand the use of high quality data in life cycle assessment and, in order to provide product with low environmental impacts, we will build an LCA system that incorporates impact evaluation methods.

### $\odot$ Eco Clover environmental label

In accordance with self-declared environmental label standards (ISO 14021), we created a lucky four-leaf clover mark that represents the four concepts that go into our development of environmentally friendly products: save energy, save resources, recycle and ecosystem-friendly.

From 2003, we adopted standards that are stricter than our existing internal standards for environmentally friendly products, and started the Eco Clover certification system. In order to conduct transparent and trustworthy certification evaluations, we also give priority to the opinions of external experts and consumers.

With this system, we plan on continuously developing high level eco products and regularly presenting new products that meet these standards.





### ◇ Environmentally friendly products



#### High environmental function

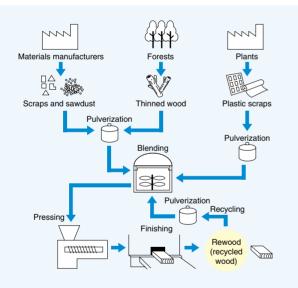
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#### Rewood - a new material that is easy on the environment

Rewood (recycled wood) is a nonformaldehyde product made by combining wood powder with polypropylene that is easy on the Earth and people.

This new material, made exclusively by YKK AP, has the feel of natural wood and is strong, durable and considerate of human health and the environment.

#### Rewood production flow





For everyone who has ever thought, "I want to enjoy a garden with real wood materials, but I just don't have the time to take care of a real wood deck or fence," we offer Rewood, an easy-maintenance and easy on the global environment material with the warmth of wood.

The raw materials for Rewood are waste products from materials manufacturers and waste plastic from plants. At time of disposal, Rewood products can be pulverized and recycled to make new Rewood materials.

Since the manufacturing process uses melted material pressed in a mold, no glue is used, and thus no harmful formaldehyde is used. Furthermore, the high density of Rewood makes it resistant against scratches, cracking from sunlight exposure and day-night temperature changes, and warping and rotting from water absorption.

In addition, Rewood includes wood scraps and sawdust that give it the warm feel of wood.

## YKK<sup>®</sup>

#### ONATULON<sup>®</sup> recycled materials fastener

We are working to realize a sustainable society by developing products that are made of single materials or easy to disassemble and, thus, easy to recycle.

NATULON<sup>®</sup> is a polyester fastener made primarily of recycled material that is easy to recycle and easy on the Earth.



Safety and security

## 

#### ⊖Sick house countermeasure: F☆☆☆☆

In July 2003, sick house measures were added to the Building Standard Law of Japan and use of building materials that could emit formaldehyde were restricted. At the same time, new JIS Standards and JAS Standards added F $\Rightarrow$ 

Under the Reformed Building Standard Law, all La Foresta products in the YKK AP interior architectural materials line are now rated  $F \ddagger \ddagger for their extremely low formaldehyde emissions.$ 



## YKK<sup>®</sup>

When nickel and other metal substances contact the skin, sweat and other moisture can cause them to dissolve, which can cause rashes and other allergic reactions. We have developed a fastener that looks the same as metal, but that is nickel-free and easy on the skin.

We developed fastener element materials with a new metal that does not contain nickel, but through the finishing process, is stabilized to maintain the same unique white metal color.

#### OElectricity-abating fastener

In seasons when the air is dry, touching objects such as doorknobs, car doors and stair rails often causes static electricity.

Our electricity-abating fastener has a static electricity preventative mixed into the pull-tab. By touching it before touching doorknobs and other sources of static electricity, disconcerting shocks can be reduced.

#### igoplus Architectural materials formaldehyde emission classifications and codes

Architectural materials formaldehyde emission	Codes used ar other orga	านี้	Formaldehyde emission amount	Interior use restrictions (for an air circulation	
classifications	New code	Old code	(average value)	rate of 50%/hour)	
Unrestricted	F☆☆☆☆	_	Less than 0.3 mg/l	No restrictions	
Class 3	F☆☆☆	E0•Fc0	Less than 0.5 mg/l	Surface area amount restricted	
Class 2	F☆☆	E1•Fc1	Less than 1.5 mg/l	Surface area amount restricted	
Class 1		E2•Fc2	Less than 5.0 mg/l	Interior use prohibited	

The top classification is new.

(The number of stars indicates level with F☆☆☆☆ being the highest.)

 Ministry of Health, Labor and Welfare chemical substance interior use concentration indicators and La Foresta products compliance

Chemical substance	Indicators *	Compliance status
[1] Formaldehyde	0.08 ppm	F☆☆☆☆
[2] Acetaldehyde	0.03 ppm	Not used
[3] Toluene	0.07 ppm	Not used
[4] Xylene	0.20 ppm	Not used
[5] Ethylbenzene	0.88 ppm	Not used
[6] Styrene	0.05 ppm	Not used
[7] Paradichlorobenzene	0.04 ppm	Not used
[8] Tetradecane	0.04 ppm	Not used
[9] Chlorpyrifos	0.07 ppb	Not used
[10] Fenobucarb	3.8 ppb	Not used
[11] Diazinon	0.02 ppb	Not used
[12] Di-n-butyl phthalate	0.02 ppm	Not used
[13] Di-2-ethylhexyl phthalate	7.6 ppb	Not used

Substances [1] and [9] are covered by the Building Standard Law Concentrations of substances [1] to [6] are measured under the Housing Performance Indication System

\* At 25°C; ppm means parts per million and ppb means parts per billion







#### Comfortable lifestyles

#### ○What is universal design?

The philosophy of universal design is to make things easy to understand and use regardless of a person's age, gender, physical traits, or language abilities. The goal is not to give certain people special treatment, but rather to create a living environment that is comfortable for everyone.

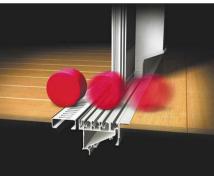
#### 7 Principles of universal design

- 1. Anyone can use the design
- 2. The design allows for flexible use
- 3. Use of the design is simple and easy to understand
- 4. The design communicates necessary information effectively
- 5. The design minimizes danger from accidental or unintended actions
- 6. The design can be used easily and without strength or taking difficult positions
- 7. Appropriate size and space is provided

#### OProduct development philosophy

The YKK AP Design Center conducts research and development of new products based on ergonomics, the practice of thinking about industrial products from the perspective of ease-of-use considering human physical

#### R's70FL



Flat floors realize the ideals of universal design.

and psychological characteristics. By making products with forms that are easy to use, we hope to reduce feelings of stress and fatigue in people's lives.

#### R's Window support handle



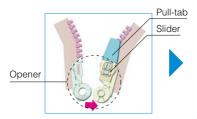
With this support handle, roughly half the strength is needed to open a window compared with typical handles.

## YKK®

#### ○ SnapTrak Fastener (easy one-handed operation universal design)

Easy operation is possible because of the large opener and snap, making it useful for the elderly, children and other people who have trouble opening typical fasteners.

#### Operation



 Connect the opener Connect the parts of the opener at an angle of less than 45i. (Hold the pulltab up when connecting.)



 Make sure that the slider is all the way down, and then rotate the opener until it closes.



pull-tab and close the

fastener.

Opener:	the very bottom part of
	the fastener that allows it
	to open
Slider:	the part that opens and
	closes the fastener chain
Pull-tab:	the part attached to the

slider that is used for pulling

### ◇ Development of environmentally friendly technologies

Experimental building designed in response to the Reformed Building Standard Law and the Housing Performance Indication System



Completed experimental building



Air quality measurement

YKK AP built an experimental building in response to the enactment in July 2003 of the sick house countermeasures of the Reformed Building Standard Law and implementation of the Performance Indication System.

This experimental building conforms to the Housing Quality Assurance Law Housing Performance Indication System. House Plus conducted site inspection, and explained the specific points at the time of inspection of each process. The participants evaluated the process highly, saying that it was easier to understand



Architectural evaluation



Production waste measurement baskets

the specific details of the building assessment.

Through verification during the building process, we were able to collect valuable data, including weighing of production and other wastes and measurement of interior air pollution data.

We will continue conducting post-construction inspections (interior air pollution, ventilation, air circulation, condensation, etc.) so that this project will continue to contribute to housebuilding.

#### OExperimental building inspection items

During construction	After construction
<ul> <li>Construction process management (proposal of most suitable processes)</li> <li>Architectural materials input amounts and the creation of scrap</li> <li>Housing Performance Indication System (new building)</li> <li>Examination of piecework payment system</li> <li>Methods for finishing apertures and other exterior parts</li> <li>Air tightness and air guality measurements</li> </ul>	<ul> <li>Interior environment measurements (formaldehyde, VOC, etc.)</li> <li>Ventilation, air circulation and heat insulation inspection</li> <li>Housing Performance Indication System (existing building)</li> <li>Inspection of effectiveness of floor and other heating systems</li> <li>Aperture reform implementation</li> <li>Deconstruction waste examination</li> </ul>

### **Green purchasing**

By purchasing environmentally friendly materials and parts from companies that share our concern for the environment and take proactive stances toward protecting it, we can strive to reduce the environmental impact of all of our business activities, promote the development and production of recyclable products, and contribute to the creation of a sustainable society.

Environmental
 Procurement of environmentally friendly materials manufactured at plants with low environmental impact
 Promote with business partners

#### ○ Promotion of green purchasing

With the cooperation of our suppliers, the YKK Group is able to realize the reduction of environmental impacts and avoid environmental risks. In addition, we have also established Green Purchasing Guidelines that will stimulate the development of environmentally friendly products.

Based on these guidelines, we conducted a questionnaire of some of our suppliers to learn about the state of their handling of chemical substances that require management in products and their environmental management system development.

In the future, we plan to survey even more suppliers and make a database of the information. This database will help us reduce the use of products that contain harmful chemical substances and choose materials and parts that have low environmental impacts at the development and design stages.

#### Fastening product receives Oeko-Tex Standard 100 certification

Our fastening business has worked closely with suppliers to purchase as often as possible parts with low environmental impacts in order to provide products that are environmentally friendly and do not contain substances harmful to people.

The Oeko-Tex Standard 100, the leading global eco-label for textile products, is a certification standard of the International Oeko-Tex Association (headquarters in Zurich, Switzerland), comprised of the textile inspection groups of 19 countries in Europe and around the world.

In order to meet the demands of our global accounts, YKK has attained Class I (for products for infants, the strictest class among classes from I to IV) certification for our fastening products.

Along with all our European companies, our Asian companies that send significant exports to Europe have also received certification for their fastening products. The YKK Group is working to build a green supply chain for our customers.









## **Reducing packaging materials**

Promoting reduction and reuse of wrapping and packaging materials while maintaining product quality

Environmental action targets

Reduction of packaging materials use (volume reduction, size decrease, reuse)
 Promotion of recycling collection of wrapping and packaging materials

#### O Achievements of the 2003 fiscal year

YKK AP created Wrapping and Packaging Design Process Management Standards and has implemented them for use with our architectural products. The standards cover reduction of size and amounts of wrapping, use of recycled materials, simplified scrap volume reduction disposal, and prohibited and restricted wrapping materials.

In accordance with these standards, we reevaluated the appropriate use of packaging materials and the distribution methods for each product.

#### Elimination of wrapping and packaging materials for product delivery to house-makers

YKK AP is promoting the elimination of waste by implementing a packaging-free product delivery system for house-makers. Elimination of packaging began with sash frames and now includes special windows, doors and other housing items. We are expanding our efforts to reduce wrapping waste at our businesses throughout Japan.

Packaging material purchase record Cardboard, paper, and wood materials PE, PP, Expanded polystyrene materials (%) 120 100 100 91 01 3 80 60 **4**0 20 Ω 1999 1998 2000 2001 2002 2003 (Fiscal year)

#### Packaging-free door distribution (YKK AP Shikoku Manufacturing Plant)

#### Former packaging materials



We eliminated the use of cardboard, plastic bags and tape, and other wrapping and packaging materials that become waste.

#### After packaging reform





Padding material and pallets are collected and reused.



## **Environmental impact reduction management**

## Preventing global warming (Energy conservation and transportation measures)

We are actively pursuing energy conservation measures, including the incorporation of high efficiency equipment in new and reformed plant facilities, reform of industrial processes in order to deal with energy consumption due to production fluctuations, and preparation of new management standards to promote efficient facility operation. By improving transportation efficiency, we are also striving to achieve earth friendly transportation and delivery.

Environmental action targets

Continuous reduction of total CO<sub>2</sub> emissions by 1% annually at all main production sites
 Introduction of clean energy Transportation efficiency improvement
 Modal shift promotion Promotion of use of regional ports

#### OAchievements of the 2003 fiscal year

In fiscal 2003 YKK AP became a separate company, so it is impossible to continue comparing energy consumption by sales volume. In addition, COP3 goals are for total emissions, so we changed the overall group goal to suppression of CO<sub>2</sub> emission amounts. We consulted the greenhouse gas emissions calculation guidelines for businesses prepared by the Ministry of the Environment's Global Environment Bureau to make our CO<sub>2</sub> calculations.

Our efforts to prevent global warming by reducing energy consumption per sales volume have been integrated with our ISO system energy conservation efforts. With production volume in mind, each workplace is endeavoring to manage its energy consumption, raise energy use efficiency and control CO<sub>2</sub> emissions.

Our production increased in fiscal 2003, but we achieved reduced CO<sub>2</sub> emissions through transition from oil to greater use of LPG and electricity, as well as through energy conservation efforts.

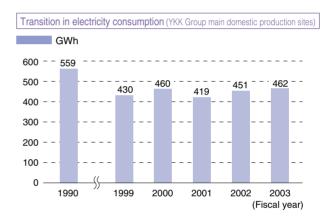
For transportation, by changing from joint route delivery to consolidated transportation contracts, we were able to improve our delivery efficiency by 3%. In order to avoid overlapping distribution routes we also opened some terminal points, but we still have not reached full development of this system. Our modal shift efforts were set back some, as we have switched some deliveries that need to arrive within 4 days of receiving the order from JR train containers to truck.

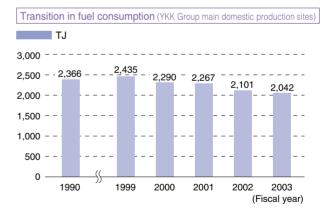
Implementation of speed-limiters in large trucks in September and NOx restriction compliance in diesel trucks in October went smoothly, and contributed to reduced environmental impact of our transportation.

#### Ocontinuing efforts

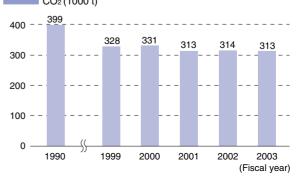
In addition to promoting reduced energy use through ISO energy conservation and other efforts, we are promoting the use of natural energy sources.

We are also planning to reduce the number of trucks by using transportation company terminal point facilities to convey product orders on shared transportation with other companies. This will reduce route overlap and allow the use of large vehicles on trunk distribution routes. In 2003, we switched some transport from JR containers to trucks, but we are investigating the possibility of reverting to JR use.





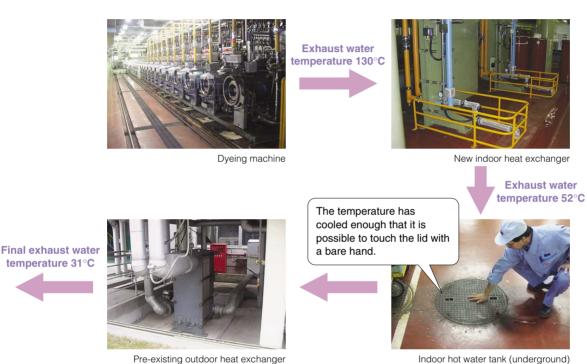




#### OImproving the heat collection from dyeing machine exhaust water

In the past, the dyeing machines (10 K small lot dyeing line) used by the main plant of our fastening business used an outdoor heat exchanger to collect heat from the 130°C exhaust water from dyeing, which was then expelled at a temperature of 60°C. We installed 4 plate-type heat exchangers inside that raise the efficiency of heat collection. First, heat collection reduces the exhaust water temperature to 52°C, sends it to exhaust water

tanks on site, and then returns it to the old heat exchangers for more heat collection, finally reducing the temperature to 31°C. As a result, we reduced steam exchange by 90.5 tons per month. Furthermore, heat radiation from hot exhaust water tanks inside was reduced, improving the work environment and increasing air-cooling efficiency.



Pre-existing outdoor heat exchanger

### OCO2 reduction with small high-efficiency LPG-burning once-through boilers

The parts manufacturing division of the main plant of the fastening business replaced its large, type A heavy oil burning water tube boilers with small high-efficiency oncethrough boilers, achieving energy reduction because of fewer units and CO<sub>2</sub> reduction of 1,391 tons per year.

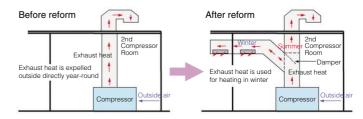
In addition, by switching from heavy oil A to LPG as the fuel, gas emissions became cleaner, thus, also reducing our pollution impact surcharges. By installing super-low NOx boilers, we also reduced photochemical oxidants.

Small high-efficiency LPG-burning once-through boilers (6)

#### OYKK Canada makes good use of compressor heat

YKK Canada has reduced its use of natural gas in heaters by 9.7% by using compressor heat conducted through ducts to warm the plant in winter.

We plan to use the heat from the 1st Compressor and 1st Boiler in the same way and anticipate even more effect.



Environment

## Zero emissions (Waste reduction and recycling)

Striving to achieve a zero emissions rate by turning waste materials back into resources.

Environmental action targets

Aim to achieve zero emissions\* at main production sites worldwide by end of fiscal 2005 \*YKK Group zero emissions definition: eliminate disposal in landfills of waste generated by YKK business activities

#### Ostriving for zero emissions

The YKK Group has made zero emissions, the elimination of disposal in landfills of waste generated by business activities, a fundamental directive. We are continuing to actively work toward achieving this goal by the end of fiscal 2005 at our main production sites for not only industrial wastes with large environmental impacts, but also for normal garbage such as food wastes.

3 of 10 of our main domestic production sites have achieved zero emissions for industrial wastes and 8 have achieved it for normal wastes.

We are working steadily to separate wastes thoroughly and arrange collection points at each facility, as well as to develop new recycling routes. At the same time the Group is working as a whole to achieve zero emissions, by taking actions such as creating recycling centers at business places to collect items accumulated in small amounts for efficient recycling.

#### OAchievements of the 2003 fiscal year

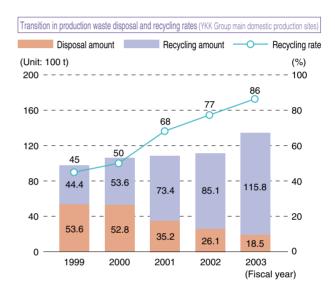
Our main domestic production sites produced a total of 13,426 tons of industrial wastes, 21% more than the previous year. The main causes for this are increased production of wood architectural products and multi-layer glass, leading to more wood and glass scraps, and the disposal of plating sludge from fastener surface treatment exhaust water that had accumulated over many years.

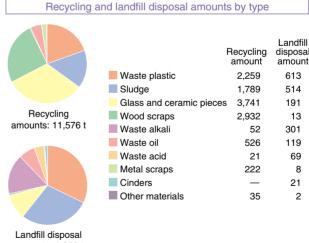
The recycling rate, meanwhile, was 86%, a 9% increase over the previous year. In the past, sludge was reused as a material in cement, but as cement production decreased, at one point it stopped being accepted, so for a while it could not be recycled. We were able to find new recipients that could make good use of it and increase recycling through other existing routes. As a result of these efforts, we were able to create new recycling routes to raise overall recycling rates.

We were also able to turn the ash from MDF incinerators into cement ingredients and recycle the glass scraps from our glass finishing business.

#### Ocontinuing efforts

If we examine the breakdown of our total industrial waste amount, the top 4 types — waste plastic, sludge, glass and ceramic pieces, and wood scraps — make up 80%. In addition, waste plastic, sludge and alkali make up most of the disposal amount, so their handling will require special attention to achieve zero emissions. In order to make progress toward the minimization of





amounts: 1,850 t

environmental impacts, in addition to achieving zero emissions, reduction of the creation of waste products themselves is indispensable. We are investigating ways to do this and setting reduction goals. From now until the end of fiscal 2005 we will promote the reduction of waste production along with seeking to fulfill our zero emissions goal.

#### OMaterial recycling of waste plastic

In January 2003 the Shikoku Manufacturing Plant achieved zero emissions of industrial waste and ordinary garbage. In efforts to increase our implementation of the 3 R's, we reduced screen-door netting waste by making more precise cuts and separating that waste. We intend to switch from



Screen-door netting separation and recycling



disposal costs.

Crushing and making pellets



thermal recycling to material recycling, which will also reduce

We also plan to increase material recycling rates while trying



Use as raw plastic material

#### **OYKK AP Kyushu wins the 3R Promotion Committee President's Prize**

The 3R (Reduce, Reuse, Recycle) Promotion Committee awarded YKK AP Kyushu the 3R Promotion Committee President's Prize for the company's 3R efforts in 2003.

In order to promote increased efforts and awareness of the 3R's, this award is given to individuals and groups who have a distinguished record of taking the initiative and undertaking sustained 3R activities, as well as to businesses that have shown outstanding contributions to 3R efforts. YKK AP Kyushu achieved zero emissions of industrial wastes in August 2000 and has maintained this level since, while creating a recycling system for wrapping and packaging materials. We received the prize in recognition of these efforts.

#### ORecycling of product waste at Shanghai YKK Zipper

Shanghai YKK Zipper's zero emissions efforts include having established environmental regulations for every stage from materials purchasing and manufacture to discarding, collection and recycling.

In fiscal 2003, we achieved a 97.4% recycling rate with thorough separation and recycling of defective fasteners.

In addition to continuing to raise the level of our environmental management, we are working to employ the latest environmental information and disposal methods to achieve zero emissions.



#### Metal fastener scraps



Metal and tape are separated and each material is recycled

Injection fastener scraps



Injection fastener teeth (polyacetal), tape (polyester) are separated and reused

**Resin fastener scraps** 



Resin fastener scraps are put through an extruder and reused as pellets



## **Chemical substance risk reduction**

Along with proper management of the use and disposal conditions of chemical substances, we are endeavoring to reduce the use of harmful chemicals by developing technologies and methods of using substitutes.

Continuous promotion of use reduction and appropriate management of **Environmental** action targets harmful substances at all main production sites worldwide

## ◇PRTR

#### OAchievements of the 2003 fiscal year

The chart below shows the use and disposal of substances covered by the Pollution Release and Transfer Register Law (PRTR) in fiscal 2003. The amounts of substances handled increased in 2003 along with our overall production.

We replaced HCFC-141b with a substitute and eliminated its use in fiscal 2003.

#### Ocontinuing efforts

We will continue to promote proper management of chemical substances to provide products that can be used safely and with a sense of security. We are also continuing to research chemical substance risk evaluation and communication.

Breakdown for substances applicable to PRTR (limited to YKK Group main domestic plants)

Brea	Breakdown for substances applicable to PRTR (limited to YKK Group main domestic plants)								s:mg-TEQ)		
Substance number	CAS No.	Substance Volume handled Air Water Soil Sewerage system Consumption			Disposal	Transport volume	Recycle volume				
1		Water soluble compounds of heavy lead	3.6	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
9	103-23-1	Adipic acid bis (2-ethylhexyl)	17.5	0.0	0.0	0.0	0.0	14.7	0.0	2.8	0.0
40	100-41-4	Ethylbenzene	4.4	3.4	0.0	0.0	0.0	0.4	0.6	0.0	0.0
43	107-21-1	Ethylene glycol	10.3	1.2	1.0	0.0	0.0	7.2	0.1	0.8	0.0
63	1330-20-7	Xylene	249.3	72.3	0.0	0.0	0.0	2.3	160.7	0.0	14.0
68		Chromium and trichromium compounds	26.1	0.2	0.0	0.0	0.0	23.5	0.0	0.0	2.4
100		Cobalt and cobalt compounds	13.3	0.0	2.8	0.0	0.0	6.5	0.0	2.4	1.6
108		Inorganic cyanide compounds (not including complex salts and cyanide complex salts)	25.5	0.1	0.0	0.0	0.0	0.0	23.4	2.0	0.0
132	1717-00-6	1,1-Dichloro-1-fluoroethane	11.0	0.0	0.0	0.0	0.0	5.4	0.0	5.6	0.0
145	75-09-2	Dichloromethane	76.3	67.8	0.0	0.0	0.0	0.0	0.0	8.5	0.0
172	68-12-2	N, N-dimethylformamide	12.1	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179		Dioxins (mg-TEQ)	-	43.5	0.0	0.0	0.0	0.0	0.0	9.3	0.0
227	108-88-3	Toluene	115.9	76.5	0.0	0.0	0.0	0.2	6.6	0.0	32.6
230		Lead and lead compounds	54.5	0.0	0.0	0.0	0.0	46.3	0.0	8.2	0.0
231	7440-02-0	Nickel	138.4	0.4	0.1	0.0	0.0	133.9	0.0	1.1	2.9
232		Nickel compounds	38.0	0.0	2.5	0.0	0.0	20.6	0.0	9.0	5.9
270	84-74-2	Di-n-butyl phthalate	13.1	0.0	0.0	0.0	0.0	12.9	0.0	0.2	0.0
272	117-81-7	Bis-2-ethylhexyl phthalate	987.2	0.0	0.0	0.0	0.0	945.6	0.4	0.3	40.9
273		Benzyl n-butyl phthalate	7.5	0.0	0.0	0.0	0.0	6.3	0.0	1.2	0.0
294		Beryllium and its compounds	1.8	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.1
304		Boron and boron compounds	15.7	0.0	10.6	0.0	0.0	0.9	0.0	3.3	0.9
309	9016-45-9	Poly (oxyethelene) = nonylphenol ether	4.3	0.0	3.9	0.0	0.0	0.0	0.4	0.0	0.0
311		Manganese and manganese compounds	86.4	0.1	0.0	0.0	0.0	79.6	0.0	0.4	6.3
2-78	101-68-8	Methylenebis (4,1-phenylene) = diisocyanate	465.7	0.0	0.0	0.0	0.0	249.0	0.0	216.7	0.0

\* Data is given for substances handled in volume of 1 ton or more per year.

## $\diamondsuit$ Chemical substance measures (VOC, PCB)

#### **OVOC** measures

Volatile organic compounds (VOC) are chemical substances found in solvents and fuels and are considered to be one cause of photochemical oxidant air pollution and sick-house syndrome.

By burning the gas emitted in the process of painting products at a plant of the Fastening Products Group, we are able to reduce the amounts of toluene, xylene and other VOCs released from the paints into the atmosphere.

We are also pursuing a switch to paints that do not contain VOCs.



Combustion furnace for paint gas emissions at the Fastening Products Group plant

### OManagement of small quantities of PCBs

PCBs (Polychlorinated biphenyl) are stable, difficult to burn, and provide excellent insulation, so they have been used for heat transfer mediums and insulation oil for electric devices. However, their production is now prohibited because they are recognized to be harmful to human health. In addition, in 2001 the Law Concerning Special Measures against PCB Waste was established, requiring businesses that still have PCBs to dispose of them.

In order to deal with pieces of machinery that are tainted with PCBs, the YKK Group has established and begun implementing its own Directive for Handling Machinery Containing Small Amounts of PCBs. In order to prevent environmental pollution from such machinery through leakage, discharge or loss, we are inspecting the machinery and maintaining, storing and disposing of it appropriately.

We also post information on company bulletin boards to make all employees aware of the PCB-tainted equipment. Furthermore, we are taking part in disposal plans prepared by local governments and making efforts toward realizing suitable disposal of PCB-containing machinery that is currently in our possession.

### $\bigcirc$ Protection of the ozone layer

In fiscal 2003, we completely eliminated the use of CFC-11 and HCFC-141b.

We are also planning to eliminate the use of HCFC-225 for washing by the end of fiscal 2010.

#### OComplete elimination of HCFC-141b for foaming

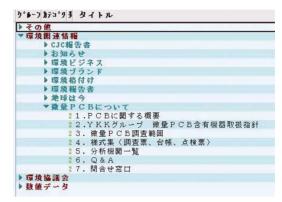
Our architectural materials business provides highly effective insulation products that improve the efficiency of interior heating and cooling.

We sought to eliminate the use of HCFC-141b for insulation foam in products in fiscal 2003. We replaced the small amount of HCFC-141b used in an insulating door with a CFC-free insulation material and achieved complete elimination of this substance.

#### OComplete elimination of CFC-11 for refrigerant

Among fluorocarbons, CFCs are substances that have extremely high impacts on ozone layer damage and global warming.

Among our domestic plants, some were using freezers that used CFC-11 as a refrigerant, but the YKK Group made a unified decision to switch to freezers that use HFC-134a instead. As a result, we have eliminated the use of CFC-11 in our production processes.

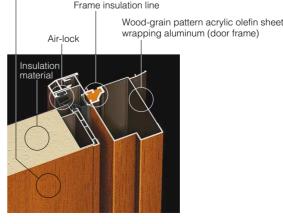


Posting of information about YKK Group handling of small amounts of PCBs



Wood-grain pattern polyester coated steel sheet

CFC-free insulating product



0.1

### **Soil conservation**

We believe that soil conservation is important for risk management in terms of both regional environmental protection and land capital value.

**Environmental** action targets

#### Pollution evaluation of YKK properties

### $\Diamond$ Soil inspections

On February 15, 2003, the Soil Contamination Countermeasures Law went into effect. YKK had voluntarily conducted groundwater inspections since fiscal 1999 and we have added soil contamination inspections in accordance with the standards of this law.

In fiscal 2003, after completing an overview inspection and researching the land use history, we created a Soil Inspection Plan for sites requiring soil analysis. We are now conducting soil analysis based on this plan.



Collecting a soil sample

#### 

Depending on regional characteristics, some YKK Group plants use groundwater for both daily life and industrial purposes. These plants continuously conduct inspections to prevent soil and groundwater pollution. Among substances inspected for are some that are no longer used, but were used Inspection methods





Soil analysis

in the past. In fiscal 2003, we expanded our inspection items in accordance with the Soil Contamination Countermeasures Law. All values of these tested substances have been below the environmental standard.

			* Environmental			
	Substance	Unit	standard	Fiscal 2001	Fiscal 2002	Fiscal 2003
spu	Dichloromethane	mg/l	≤ 0.02	< 0.002	< 0.002	< 0.002
Volatile organic compounds	Carbon tetrachloride	mg/l	≤ 0.002			< 0.0002
com	1,1-Dichloroethylene	mg/l	≤ 0.02			< 0.002
anic	Cis-1,2-Dichloroethylene	mg/l	≤ 0.04			< 0.004
e org	1,1,1-Trichloroethane	mg/l	≤ 1	< 0.001	< 0.001	< 0.001
olatile	Trichloroethylene	mg/l	≤ 0.03	< 0.001	< 0.001	< 0.001
Ş	Tetrachloroethylene	mg/l	≤ 0.01	< 0.001	< 0.001	< 0.001
	Cadmium	mg/l	≤ 0.01			< 0.001
SIE	Cyanide	mg/l	No trace	< 0.01	< 0.01	< 0.01
metals	Lead	mg/l	≤ 0.01			< 0.005
	Hexavalent chromium	mg/l	≤ 0.05	< 0.02	< 0.02	< 0.02
Heavy	Selenium	nium mg/l <u>≤0.0</u>		< 0.001	< 0.001	< 0.001
Т	Fluorine	mg/l	≤ 0.8			< 0.5
	Boron	mg/l	≤1			0.04

\* Environmental standard: keeping the amount less than this standard is desirable for preservation of human health and protection of the human environment. \* Measurement result numbers with the symbol < indicate that the amount is below the limits of the ability to measure for it. In other words, there was no detectable trace of the substance

## **Environmental protection**

We control SOx and NOx in gas, exhaust water and other emissions from our plants and other facilities with voluntary management standards that are stricter than laws and agreements.

Environmental action targets

Further environmental impact reduction

### $\bigcirc$ Preventing air and water pollution

Strict adherence to the law is the most fundamental indispensable activity for protecting the environment.

The YKK Group has implemented voluntary management standards that are stricter than legal and local regulatory requirements for exhaust water and gas emissions from our plants to reduce environmental impacts while complying with the law.

For plant exhaust water, in addition to analysis by measurement specialists, we conduct regular in-house analysis to confirm the values.

In fiscal 2003, we conducted all legally required tests and confirmed that all values were within the standards.

#### OPromotion of water reuse at Dalian YKK Zipper

Dalian experiences water shortages chronically and water use is so strictly regulated that at the beginning of each year the local water bureau requires submission of a water use plan.

In response to this situation, Dalian YKK Zipper has made raising the rate of water reuse one of our ISO 14001 environmental protection goals and is promoting water reuse throughout the company.

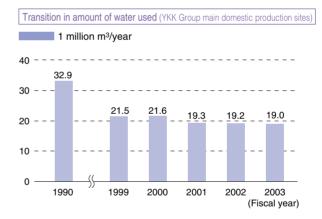
For example, the monofilament process requires large amounts of water for cooling. We installed equipment to circulate the coolant water for reuse, and put it into regular operation in 2001.

As a result of implementing the same measures for other industrial processes, we were able to reuse  $94,000 \text{ m}^3$  of water throughout the plant in fiscal 2003.

#### $\diamondsuit$ Effective water use

Recognizing that water is an important resource, we are striving to use cooling water efficiently in our manufacturing processes and reduce our water use.

We also actively contribute to regional groundwater preservation by letting rainwater percolate into the ground.





Circulatory cooling equipment

## Acquisition and utilization of ISO 14001 certification

ISO 14001 (Environmental Management System) certification is indispensable as an international enterprise. We are promoting the acquisition of this certification for all of our businesses as a means to achieving goals and assuring the implementation of environmental reforms.

**Environmental** action targets Acquisition of ISO 14001 certification completed at main production sites worldwide by the end of fiscal 2003

#### ○ Achievements of fiscal 2003

In fiscal 2003, one domestic facility and eight facilities abroad achieved certification, while already certified facilities increased the scope of their certifications. Now all of the main facilities of the YKK Group worldwide, a total of 50 locations, have completed certification.

Of additional note, YKK AP received certification for expanding its environmental management system implementation to include its 205 business offices throughout Japan.

#### Ocontinuing efforts

In fiscal 2004, we plan to acquire certification for 17 sites abroad, focusing on newly established bases. In addition to acquiring certification for uncertified smaller businesses, we also intend to combine the certifications at facilities where plants, business offices and other parts of the operations have separate certifications in order to make possible unified environmental management that covers every aspect of the business from development to sales.

### YKK AP Sales Group acquires ISO 14001 certification

At the Architectural Materials Group Meeting in February 2003, the Sales Group declared the intention to get ISO 14001 certification. With the cooperation of committees from each division, we were able to devise thoroughly ways to raise awareness and implement an environmental management system involving every employee from northernmost Hokkaido to the southern islands of Okinawa. Although we only had half a year to prepare, we were able to receive certification in September.

Certification, however, is not our final goal. We believe that this is just an obligation that companies have to society and that all enterprises have a duty to acquire it.

By fulfilling our main environmental activity of providing environmentally friendly products to society, the YKK AP Sales Group will help society realize reduced environmental impacts. Furthermore, we will work to conserve more energy and resources by taking responsibility for the products we provide society when it is time to collect and recycle them.

Environmental efforts have no end. We will continue to contribute to society environmentally by actively employing and sustaining the environmental management systems that we created.



#### < Certification overview >

- 1. Extent of system YKK AP Inc.
- 2. Related businesses YKK AP Exterior Inc. Pros, Inc.
  - YKK AP Okinawa
- 3. Number of facilities and employees covered 205 business places approximately 4,400 people
- 4. System Chief Director Sadao Hagino
- 5. System Manager Environmental Division Head Fumio Yamaguchi
- 6. Certifying Agency Japan Quality Assurance Organization (JQA)
- 7. Registration number JQA-EM1128
- 8. Certification date September 19, 2003
- Specific policies for environmental directives
   Design, develop and sell environmentally friendly products
- Pursue efforts to conserve resources and energy
   Implement appropriate disposal and recycling for waste products

## **YKK Group environmental audits**

Company experts implement group environmental audits, strengthen legal compliance systems, and offer advice, consulting and support to raise the entire group's environmental performance, including environmental risk management.

**Environmental** Implementation of YKK Group environmental audits at main production sites worldwide

#### ○ Achievements of fiscal 2003

Every plant and business office conducts voluntary internal environmental audits based on their environmental management systems. In addition, the YKK Group Environment Council conducts group internal environmental audits.

These audits are an important part of the entire Group's environmental management efforts as a form of oversight.

YKK Group environmental audits have been conducted since 1994, with the YKK Group Environment Policy Committee Chairman acting as the head of an auditing team that confirms that the environmental efforts of each part of the business conforms to the YKK Group's fundamental environmental management directives and policies and that they are managing environmental risk appropriately.

Furthermore, the environmental divisions of our businesses abroad are leading the implementation of audits based on the YKK Group environmental audit checklist. In fiscal 2003, they were conducted in four countries.

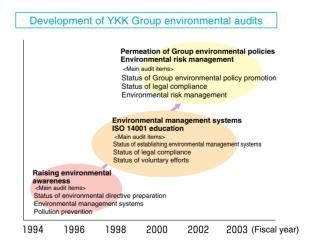
#### $\bigcirc$ Continuing efforts

Until now our Group environmental audits were conducted with our manufacturing function as the main object. Now, all of our main business sites have ISO 14001 certification, and we have prepared a tool that will allow us to further enhance our environmental efforts by covering all business functions, from design to sales.

From now on, in order to fulfill our duties to society as a business, we will conduct audits with the goal of raising the levels of all aspects of the Group's environmental efforts and risk management, as well our environmental management.

Furthermore, we will strengthen our environmental auditing efforts for our foreign bases and fulfill our duties to society as a global enterprise.

YKK Group environmental audits
YKK Group Environmental Policy Committee
Report
YKK Group Environment Council
Group environmental audits
Fastening products Machinery and engineering Architectural products
Internal audits implemented by each plant and business office





YKK Group environmental audit (YKK Indonesia)

### **Environmental accounting**

Along with clarifying money invested in environmental activities and utilizing it for environmental management decision in order to conduct environmental investment more efficiently and effectively, we publish environmental accounting data as material that reveals our corporate posture to the public.

#### **Environmental** action targets • Application and utilization of environmental accounting system

#### OAchievements of fiscal 2003

We calculated the money spent on environmental equipment, environmental protection investment and their immediate effects. For our environmental accounting standards, we conformed to the Ministry of the Environment's Guidelines for the Implementation of Environmental Accounting Systems (MfE: March 2002 edition).

The amount invested in equipment for the prevention of pollution has decreased as such equipment becomes fully

#### deployed.

Likewise, the amount invested on equipment for zero emissions efforts has also decreased as we have reduced the use of materials and implemented recycling to nearly the maximum extent possible.

For energy conservation measures, which will continue to be effective over the long term, we are spending about the same amount on equipment annually.

(Unit: ¥1 million/year)

#### OResults of environmental accounting for fiscal 2003

Fiscal 2003 environmental protection cost (limited to domestic YKK Group)

Item Contents of main initiatives Equipment investment Cost Prevention of pollution Soil pollution inspection, diesel truck NOx reduction 71 681 Cost within Conservation of the global environment Introduction of equipment in accord with energy conservation measures and fuel changeover 418 526 business area Recycling of resources Waste reduction, zero emissions efforts 626 8 Business area internal cost total 497 1.833 Upstream/downstream cost Returnable wrapping, packaging and container use implementation 32 42 Management activities cost ISO 14001 maintenance/management cost, environmental exhibition, environmental report, environmental analysis, tree planting 4 521 R&D cost Development of environmentally friendly products 543 5 Social activities cost Cooperative volunteer activities with local communities 0 33 Environmental damage cost 0 0 Other costs Inspection and management of fire extinguishing equipment 28 Total 540 3.002 Fiscal 2002 568 2,802 Fiscal 2001 592 3,317 Fiscal 2000 1.345 4,030

	Environme	ntal equipment i	investment	Environme	ntal costs	Sales	Total equipment	
Fiscal year	(Unit: ¥100 million)	Sales ratio (%)	Equipment investment ratio (%)	(Unit: ¥100 million)	Sales ratio (%)	(Unit: ¥100 million)	investment (Unit: ¥100 million)	
Fiscal 2003	5.4	0.1	2.1	30.0	0.8	3,795	254	
Fiscal 2002	5.7	0.1	3.6	28.0	0.7	3,857	156	
Fiscal 2001	5.9	0.2	2.7	33.2	0.9	3,852	218	
Fiscal 2000	13.5	0.3	4.4	40.3	1.0	4,056	307	

#### Ocontinuing efforts

Environmental accounting is used internally to achieve the best cost-performance when acquiring new equipment. Segment accounting allows, for example when renewing equipment, the calculation of the environmental impact reduction effectiveness for one project.

In addition, we are investigating the internal management methods of environmental accounting at each location. We will investigate and consider items that could be put to use by the company and apply them to our environmental management in the future.

## O Example of segment environmental accounting for one measure at the Metal Materials Manufacturing Division

The Metal Materials Manufacturing Division of the Fastening Products Group reevaluated the copper melting process. The high-frequency wave inductive melting furnace that we had used until then had poor energy efficiency and durability,

so we investigated the possibility of replacing it with new equipment with better efficiency and durability. As a result, we chose a low-frequency melting furnace and

built a system that cuts, and automatically weighs and inserts electrical copper. We expect that not only will this reduce CO<sub>2</sub> emissions through energy conservation, but that it will also reduce firebrick waste.

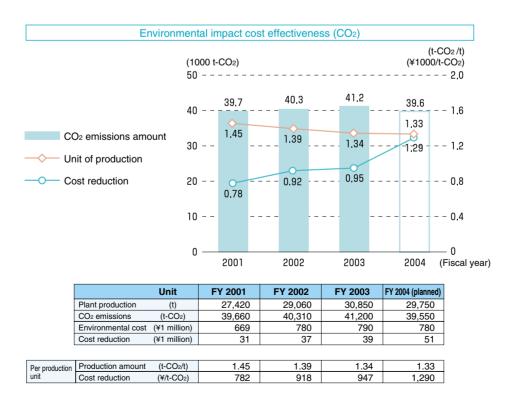
Equipment investment (¥1,000)	(¥1,000) (¥1,000/year) (years)		Environmental protection effect (t-CO <sub>2</sub> /year)	Environmental improvement efficiency (t-CO <sub>2</sub> /¥100 million)
42,000	48,755	1	929	2,213

Round low-frequency melting furnace

## C Example of the use of environmental accounting management indices at the YKK AP Kyushu Manufacturing Plant

In fiscal 2003, the YKK AP Kyushu Manufacturing Plant made environmental verification through the use of environmental accounting indices as a main point of their environmental activity and developed policies accordingly. By expressing the amount invested on the environment and the results as a cost index and making the environmental management cost effectiveness clear, they sought compatibility of business activity (enterprise management) and environmental protection. environmental costs and emission amounts of a substance with environmental impacts. The blue line graph shows the transition in the amount of cost reduction per ton of CO<sub>2</sub> emissions. Per unit of production, there is an environmental impact reduction effect. The issue from now on is how to connect environmental costs and cost reduction with changes in fuel and other ways to reduce the overall CO<sub>2</sub> emissions amount. At present, we are also working to apply this kind of management indices to chemical substances to reduce their environmental impact.

Below is a graph that shows the relationship between



## Working for society

Customer relations
 Employee relations
 Relations with society

Our Cycle of Goodness philosophy that - no one prospers unless he renders benefit to others - runs through the core of YKK Group corporate activities.

Since we first expanded our activities overseas in 1959, we have kept this philosophy in mind as we have pursued business activities as a member of local society by thoroughly adopting local methods for employment, materials procurement, product sales and profits distribution.

Throughout our history of global business expansion, we have built customer trust and confidence by consistently providing high quality products at stable prices.

Furthermore, we have taken a lead in many activities for the benefit of society, including efforts to energize local communities, improve education, and promote international exchange.

In order for the YKK Group to continue to be an enterprise that is highly regarded by people, communities and society as a whole, we will steadily pursue activities that contribute to the creation of a new and better culture.

## **Customer relations**

The YKK Group endeavors to be an enterprise that listens to the voices of our customers as it continues to develop high quality products. With our unique creativity and recognized technology, we try to provide the most advanced amenities for individuals and society.

### $\bigcirc$ How we think about our customers

We consider our consumers and product users to be our most important appraisers. We sincerely listen to customer opinions because we always put their satisfaction first.

Customer opinions provide indispensable contributions to product development, quality improvement, and other aspects of our business activities.

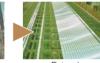


#### $\bigcirc$ How we think about quality

In order to provide customers with the highest quality and guarantee that quality, the YKK Group operates a comprehensive production system that includes all steps from material acquisition to manufacturing.

In addition, we are always striving to improve our products and services so that our customers will continue to use and hold high opinions of them.  Comprehensive production system for architectural materials (manufacturing process stages from melting raw aluminum to assembly)





Billet casting

Extrusion and heat treatment





### OUnified global quality standards

In order to provide our customers with products worthy of the YKK brand name, the YKK Group has implemented unified quality and quality evaluation standards. We are also following ISO 9001 methods in conducting kaizen, continuous reform, while providing products of the same stable quality in every part of the world.

We develop our own high precision machinery within the company and provide it to YKK Group members in order to achieve these objectives.

### **OProduct Liability**

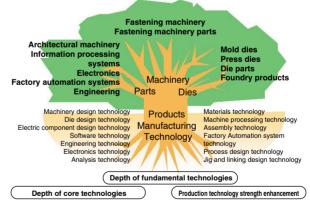
In accord with the duty that the YKK Group has to society as an enterprise, our fundamental directive is to provide consumers and users with safe products. The YKK Group Product Liability Committee was established to promote comprehensive policies for this purpose.

Within the Product Liability Committee, sub-committees have also been created for every business area - fastening, machinery and architectural products - that undertake proactive product liability efforts in close cooperation with our companies abroad.

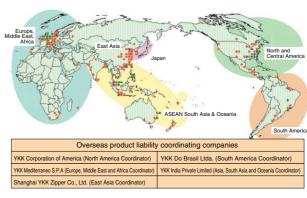
For YKK Group employees, product liability is . . .

Contributing to society through work as one employee by providing products that customers can use safely and with a sense of security.

#### Machinery development division technology tree



#### YKK Group global extent



## **Employee relations**

### **Personnel affairs**

#### OPersonnel affairs philosophy

The YKK Group espouses a personnel affairs philosophy of autonomy and symbiosis. We seek to be a company where employees work autonomously, but share mutual respect and help each other, forming a strong organization that continuously provides new value to customers and contributes to society.

#### O Personnel system

With the philosophy of autonomy and symbiosis at its foundation, our personnel system is a support tool for creating new value. The system contributes to our strategic direction by increasing the ability of every individual to respond quickly and effectively in the rapidly changing business environment.

In fiscal 2000, we introduced a merit-based system for all employees with measurable goals for results and competency. Achievement of these goals can be measured through communication between superiors and their staff. A highly transparent structure is used in order to make evaluations fair and acceptable. Evaluation results also allow some degree of variation from a standard according to position in order to base rewards fairly on the work. Individuals who continuously achieve results are recognized for their ability, and even talented employees in their 30s can achieve high positions and make use their abilities in roles such as that of operating officers.

#### Personal business plan (management evaluation system)

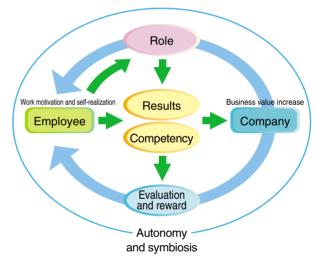
Founded on the personnel affairs philosophy of autonomy and symbiosis, we use a system of personal business plans to encourage employees to set high goals independently and evaluate them fairly.

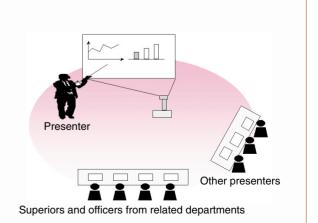
After accepting the roles that they are expected to fill, managers develop and present their business plans, explaining what their strategies, goals and implement methods are for the year.

Immediate superiors, officers from related departments and coworkers attend each presentation and evaluate whether or not strategies and methods are well matched and the plan is well developed. Evaluation presentations are also done in a fair and open manner with input from multiple perspectives. Other presenters are also able to evaluate their own levels in comparison and gain confidence in the evaluation system.



Personnel affairs system overview





### ○ Employee education

From the time of our establishment, we have allowed our employees to grow in a corporate environment that respects personal drive and gives people responsibility from early in their careers. Even today, on-the-job training is still the most important form of education, but, in recognition of the need for off-the-job training too, we also have established a full system of educational programs and human resources development.



YKK Value Creation School

#### O Diversity and equal opportunity

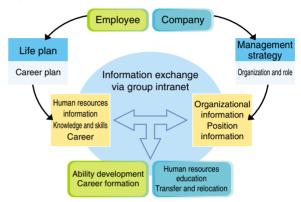
We are promoting equal employee treatment, offering work opportunities and evaluation according to each individual's motivations and abilities, regardless of nationality, age or gender. In particular, we are actively working to correct the slow promotion of women that resulted from past customs. Based on proposals from a committee lead by women, we have implemented a program for promotion and undertaken



Female leadership workplace study group

#### YKK Value Creation School group leader education program

- Challenge Training themed electives
- Compliance education through e-learning
- Career development goals reporting system
- Internal recruitment system
- Internal IT use to publicize human resources and position information
- Internal IT system for publicizing human resources and position information



working environment reforms. The rate of women being promoted to workplace leadership positions and given other important jobs, such as foreign postings has also increased. Furthermore, the YKK Group as a whole is actively promoting the hiring of the disabled, and in 1999 we established YKK Rokko Corporation, a special case subsidiary company of printing business, as a symbol of our commitment.



YKK Rokko Corporation

#### Creating an environment where it is easy to work

In order to create an environment where it is easy to work, we have established a Secretariat for Comfortable Work Promotion that monitors labor conditions, listens to employee concerns, and plans workplace reforms. We also have counseling services handled by outside specialists to deal with issues such as health, personal concerns and sexual harassment. In addition, we have created an environment where it is easy for employees to use systems such as our parental and caregiver leaves of absence. Every year, approximately 140 employees use our parental leave system.

#### O Development as a global company

Throughout YKK's growth as a global enterprise, our personnel system has always been designed to suit national, local and working environment expectations, but the concept of fairness has always been at the base.

In addition to this concept of fairness, we are seeking to create working environments globally where employees work proudly and with self-reliance, in accordance with the company philosophy of autonomy and symbiosis. Employee relations

## Safety, hygiene and health

The YKK Group follows a management principle of respecting people and seeks to support the mental and physical well-being of every individual. We believe that safety and production should go hand in hand, and make strenuous efforts to prevent any kind of work accident. Guaranteeing the health and safety of our employees is our fundamental philosophy, and we try to make our work places healthy, safe and comfortable.

#### YKK Group Safety and Hygiene Pledge

We are currently endeavoring to raise our corporate quality level and our ability to respond to rapid changes in social conditions in all of our business activities.

We at the YKK Group pledge to promote the elimination of all sources of danger and harm in the workplace, the maintenance of the mental and physical health of our workers, and the creation of work environments that are easy to work in and appropriate for the modern age. We are working toward the actualization of

these goals with the cooperation of all of our employees.

February 1994 Tadahiro Yoshida, YKK Group

#### Efforts to eliminate labor accidents

The YKK Group is promoting the creation of safe, healthy workplaces that are also pleasant and enjoyable through people (safety and hygiene education), things (safer equipment), and management (labor safety and hygiene

#### Osafety and hygiene education

Safety and hygiene education is very important and must be continuously undertaken as a motivation and reminder to employees to pursue safe and hygienic practices.

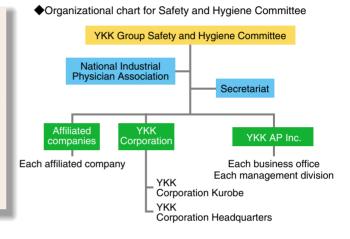
Company instructors conduct most of the various education and training programs.

$\langle$ Safety and hygiene education details $ angle$							
[1] Legal education	New employee education     Foreman education						
[2] Government required education	Computer deskwork						
[3] Specialized skills education	<ul> <li>Organic solvents work</li> <li>Sling work</li> </ul>						
[4] General safety and hygiene education	<ul> <li>Floor crane operation</li> <li>Hazard prevention training</li> <li>Maintenance staff education</li> </ul>						

#### Work safety and hygiene management system receives certification

Our work safety and hygiene management system was founded on a directive from top management to promote planned, systematic and continuous efforts to eliminate and reduce sources of danger in the workplace through the cooperation of each concerned individual.

In May 2003, the Japan Occupational Safety and Health Association, which is a foundation certified by the Ministry of Health, Labor and Welfare, evaluated and certified the work safety and hygiene management system of the YKK Kurobe Manufacturing Center Fastening Products Group in a first certification inspection. They awarded it the JISHA Occupational Safety and Health Management Systems (OSHMS) certification, making it the 9th YKK company to receive first certification.



management system).

The YKK Group Safety and Hygiene Committee leads our efforts to eliminate labor accidents, and every company and workplace promotes autonomous safety and hygiene efforts.



Hazard prevention training



OSHMS certification

Through accident prevention efforts, including our Safety and Hygiene Pledge, risk assessment implementation, work safety and hygiene management system, other production site efforts and employee education, we have realized a reduction in the rate of work accidents.

## $\bigcirc$ Efforts to maintain and promote health

We believe that the maintenance of the physical and mental health of every employee is an indispensable element for every individual's satisfying work life. In order to preserve employee health, for example, we implement additional tests beyond those required by law for physical examinations.

When people need additional treatment, including follow up tests, advanced tests, and progress observation, our occupational medical and health staff follow up and try to discover illnesses as early as possible.

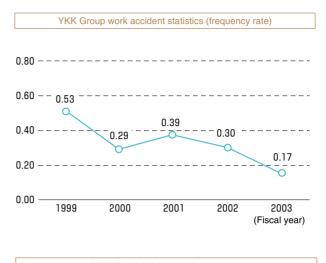
#### OPolicies for prevention of health problems and mental health care

The first item of the Ministry of Health, Labor and Welfare's 10th Labor Accident Prevention Plan is a comprehensive policy to prevent damage to health through overwork.

The YKK Group is actively promoting the reduction of overtime work and appropriate management of working hours. At the same time, for employees who work long hours, we conduct fatigue and mental health surveys, as well as meetings with occupational health physicians.

### OHealth promotion efforts

With the goal of providing our employees with a healthy work life, the YKK Group with the help of the YKK Health Insurance Cooperative, is actively pursuing health maintenance and promotion efforts. Among them, our Walking Campaign to walk 10,000 steps each day and a walking club to promote this exercise that is very effective in preventing lifestyle diseases and that anyone can do.





In addition, recognizing that mental health is an important aspect of safety and hygiene, we have made progress in establishing a mental health care system. We are placing emphasis on mental health education for our employees and managers with the cooperation of our occupational health staff, our human affairs officers and our safety and hygiene staff.



Walking club

Employee relations

## **Relations with society**

The YKK Group provides employees with opportunities to participate actively in environmental protection and volunteer efforts. In order to make our activities known, we publicize them widely and value feedback from society.

#### Efforts for society

#### OSupporting international exchange with YKK's water-resistant zipper

Since being founded in 1998, the Kuroshio Monogatari Cheerful Children Association, Genkinakonokai, (Representative: Ippei Kobayashi, Head office: Fujisawa-shi, Kanagawa Prefecture) has promoted increased exchange and friendship among children through the release of messages in bottles onto the Kuroshio Pacific Ocean current.

YKK supports the Cheerful Children Association's vision of fostering the power of children's hearts to dream by releasing messages in bottles, by providing bottles with water-resistant zippers for this purpose. These 1-meter long, 20 cm diameter message bottles use YKK water-resistant zippers to keep water out and air in, so that they do not sink and are able to complete their long journeys.

#### Kuroshio Monogatari:

Kuroshio Monogatari was a 1986 movie based on a true story in which children living on Tanegashima develop a warm relationship with children in Tomakomai, Hokkaido through a single message bottle released on the Kuroshio Current.



Letters received from children of a town in northeast New Zealand

## OSupporting agriculture in Brazil

YKK Do Brasil is cooperating with the Cerrado Plan, a largescale farm development program supported by the Brazilian government. Efforts to improve the soil and implement modern farming techniques have turned bare desertified land into farm land where coffee, beef cattle, rice and other foods are cultivated, thus improving the lives of many people.

Learning from these successes, many farmers are learning YKK techniques and starting Cerrado agriculture. (Details are described in a textbook by Sao Paolo State University of Campinas Professor Santinatto.)

The conversion of Cerrado land also reduces the pressure to develop the Amazon watershed, thus reducing the loss of rainforest.

#### Cerrado:

A broad plain of about 200 million hectares between the Amazon River and the capital, Brasilia. Covered with a red soil called Mattsol, people used to say that nothing could be grown there because the soil is so poor.



Water being applied to YKK Do Brasil farmland

#### Ovolunteer tree-planting by all employees of YKK Egypt

95% of the country of Egypt is desert. With a population of 70 million people, most of whom live within the Nile River watershed, the government is seeking to increase food production and greater population dispersal by planting trees in the desert.

In December 2003, every employee of YKK Egypt joined in a tree-planting project, which we intend to continue to contribute to it in the future.



Desert tree-planting project cooperation

#### Inviting neighboring junior and senior high school students for plant tours and lectures on environmental issues by an ISO officer at YKK India

India has over 4,000 years of history, which has produced a multitude of World Heritages and a diversity of religions and peoples, as well as a broad territory with beautiful natural landscapes with abundant vegetation and water. In recent years, however, along with rapid economic development and population growth, air and water pollution have become serious social problems. With the goal of reaching out to local society as one aspect of their environmental efforts, YKK India has invited students from local schools to make a plant visit.

An ISO officer gave a lecture on the causes and effects of global environmental problems, including global warming, ozone layer depletion, acid rain, and deforestation. The students listened to the lecture intently, taking many notes.

Next the students were taken on a tour of the plant and were given easy-to-understand explanations of YKK India's environmental efforts, including waste separation, 5S cleaning and organization efforts, and exhaust water disposal techniques.

This was the first plant tour for junior and senior high school students, but not only was it valuable for them, but their teachers also gave the program high praise. In the future, along with raising employee environmental awareness, we intend to develop a program of plant tours further.

## ○YKK India occupational physicians provide health checks to residents near plants

YKK India has offered health checks to neighboring residents since its foundation 7 years ago. About 900 village residents have received free check-ups during the twice-weekly exam hours, and received free medicine as necessary. In addition, an ophthalmologist offers eye exams. Medical records are kept and used in follow-up visits.

Along with medical exams, lectures on health during pregnancy, AIDS prevention and weight management are given.



Lecture on environmental issues



Tour of plant environmental facilities



Health checks by occupational physician

### OParticipation in local cleaning efforts by YKK Zipper Shenzhen

Employees participated in cleaning of the Maysa Shore sponsored by the Shenzhen Council for International Investment with the theme of "humanity, environment, and health action."

At the time of this action, because SARS was in the headlines, the goals of the cleaning efforts included both increasing hygiene awareness and the importance of the environment.

## OParticipation in tree-planting by YKK Zipper Shenzhen

We participated in tree planting in Shenzhen "Yuan bo yuan" that was sponsored by the Shenzhen City Administration Bureau and the Shenzhen Green Fund with the theme of "I am also taking part in environmental protection by planting trees in "Yuan bo yuan".

115 groups, including government agencies and universities participated in this effort, planting more than 4,000 trees and an area of about 10,000 square meters.



Cleaning the Maysa Shore



"Yuan bo yuan" tree planting

## **Information sharing**

#### OParticipation in exhibitions

We exhibited environmentally friendly products that are useful to society and individual lifestyles at the Eco Products 2003 Exhibition as an introduction to the YKK Group Eco Products Vision.

We also explained how the use of our eco products reduces environmental impacts in a tour format to K-12 school children.

#### Eco Products Exhibition:

This exhibition has been held annually since 1999 to promote the development, promotion, and sales of eco products (environmentally friendly products) as well as educate consumers about their use.



## OPublication of an information bulletin about eco products

In February 2004, the YKK Group published Eco Message 2004 with detailed information about our environmentally friendly architectural products in order to make them more widely known.

In November 2003, we also published a pamphlet about our Eco Clover products entitled, "Eco Products Introduction."



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## Data section

We are creating a database of all of our policies and information related to the environment and plan to use it to integrate our environmental efforts, including those of our group companies abroad. Along with this, by gathering and sharing data from our overseas plants, we are preparing plans for overall group environmental reform.

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## **Site environmental impact information**

#### YKK Group main domestic plants and plants abroad that have received ISO 14001 certification

		Property area (1000 m <sup>2</sup> )	Total floor area of building (1000 m <sup>2</sup> )	Types of business	Number of employees
	YKK Corporation Kurobe Plant	718	551	Fasteners, T&P manufacture, precision machinery and die manufacture	3,123
	YKK Corporation Kurobe Makino Plant	104	53	Fastener metal materials manufacture	207
	YKK AP Inc. Kurobe Materials Manufacturing Plant	299	263	Architectural aluminum frame materials manufacture	1,110
	YKK AP Inc. Kurobe Ekko Manufacturing Plant	221	154	Architectural parts manufacture	654
Japan	YKK AP Inc. Kurobe Ogyu Manufacturing Plant	337	126	Architectural products finishing and assembly	699
·	YKK AP Inc. Namerikawa Manufacturing Plant	667	116	Architectural products finishing and assembly	900
	YKK AP Inc. Tohoku Manufacturing Plant	729	324	Architectural products manufacture	1,390
	YKK AP Inc. Shikoku Manufacturing Plant	330	180	Architectural products manufacture	892
	YKK AP Inc. Kyushu Manufacturing Plant	342	205	Architectural products manufacture	918
<b>N</b> I I	YKK (U.S.A.) Inc.	1,226	223	Fasteners, S&B, T&P manufacture	797
North and	YKK Canada Inc.	57	29	Fasteners, S&B manufacture	170
Central America	YKK AP America Inc.	809	72	Aluminum architectural materials manufacture	351
South America	YKK Do Brazil Ltda.	247	51	Fasteners, S&B, T&P manufacture	433
	Shanghai YKK Zipper Co., Ltd.	104	45	Fasteners manufacture	842
	YKK Hong Kong Ltd.	14	143	Fasteners manufacture	626
	Dalian YKK Zipper Co., Ltd.	148	101	Fasteners manufacture	825
<b>-</b>	YKK Taiwan Co., Ltd. (Fastening Products Division)	79	122	Fasteners manufacture	811
East Asia	YKK Korea Co., Ltd.	43	48	Fasteners manufacture	271
	YKK Zipper Shenzhen Co., Ltd.	105	104	Fasteners manufacture	1,144
	Dalian YKK AP Co., Ltd.	60	34	Resin architectural materials manufacture	215
	YKK Taiwan Co., Ltd. (Architectural Products Division)	12	7	Aluminum architectural materials manufacture	79
	P.T. YKK Zipper Indonesia	84	33	Fasteners, S&B, T&P manufacture	1,418
	P.T. YKK Zipper Indonesia Cibitung PPD plant	15	15	Fabric material for fasteners manufacture	121
	P.T. Zipco Indonesia	159	76	Fasteners and fastener parts manufacture	751
ASEAN	YKK Singapore Pte. Ltd.	14	12	Fasteners manufacture	218
South Asia &	YKK (Thailand) Co., Ltd.	146	28	Fasteners, S&B manufacture	450
Oceania	YKK Zipper Philippines Inc.	60	12	Fasteners manufacture	229
Oceania	YKK Vietnam Co., Ltd.	58	17	Fasteners manufacture	248
	YKK India Pvt. Ltd.	105	29	Fasteners manufacture	332
	P.T. YKK AP Indonesia	182	74	Aluminum architectural materials manufacture	829
	YKK (U.K.) Ltd.	74	38	Fasteners manufacture	202
	YKK Stocko Fasteners GmbH.	49	23	S&B manufacture	265
	Dvnat Verschlusstechnik GmbH.	_	2	Fasteners manufacture	28
	YKK Deutschland GmbH.	56	20	Fasteners manufacture	185
	YKK France SARL	62	26	Fasteners manufacture	250
Europe,	YKK Italia S.p.A.	137	42	Fasteners manufacture	258
Middle East.	YKK España S.A.	65	40	Fasteners manufacture	264
Africa	YKK Hellas A.E.B.E	30	3	Fasteners manufacture	36
Amud	YKK Metal ve Plastik Urunleri Sanayi ve Ticaret A.S.	67	23	Fasteners. S&B manufacture	391
	YKK Egypt S.A.E	17	6	Fasteners manufacture	100
	YKK Southern Africa (Pty) Ltd.	33	18	Fasteners, S&B manufacture	204
	YKK Portugal-Acessorios Para Vestuario, Lda.	20	5	Fasteners manufacture	62
	YKK Belgium NV.	20	5	Fasteners manufacture	34

S&B manufacture: snaps, buttons, rivets and other metal parts manufacture

T&P manufacture: Hook and Loop Fasteners, fabric tape, buckles and other resin products manufacture

(Results of fiscal 2003)

Power (1000 kWh)	Fuel (GJ)	CO <sub>2</sub> (t)	Amount recycled (t)	Amount disposed of (t)	Recycling rate (%)	Amount of paper used (t)	Water consumption (1000 m <sup>3</sup> )	Exhaust water discharge destination	Leakage/ outflow accidents
106,672	227,801	55,669	2,398	228	91	50.4	2,269	River	None
36,660	31,476	15,924	233	84	74	1.7	827	River	None
90,414	432,047	63,339	453	640	41	18.0	7,381	River	None
30,543	35,930	14,002	157	282	36	10.1	692	Sea	None
13,736	19,735	6,532	329	19	95	23.7	232	River	None
14,792	28,214	7,469	2,171	321	87	19.7	306	River	None
78,785	259,792	47,583	4,717	245	95	25.4	3,580	River	None
35,463	465,453	45,456	311	0	100	17.3	1,500	Sea	None
38,317	522,587	50,228	488	0	100	16.2	2,120	Sea	None
118,827	185,148	54,132	1,292	464	74	16.0	669	Sewerage system	None
8,165	32,581	4,688	162	112	59	3.6	80	Sewerage system	None
24,693	127,780	15,622	1,583	437	78	6.6	237	Sewerage system	None
14,287	54,748	9,297	333	113	75	3.2	277	River	None
16,390	50,181	9,626	821	22	97	23.0	384	Sewerage system	None
14,044	44,202	8,278	322	317	50	14.2	220	Sewerage system	None
14,307	64,827	9,847	304	52	85	10.8	354	Sewerage system	None
59,240	125,055	31,249	391	1,125	26	17.5	1187	River	None
8,902	29,111	5,352	182	345	34	5.8	109	River	None
24,337	58,525	13,173	756	467	62	8.8	472	River	None
4,741	8,082	2,340	186	1	99	3.0	30	Sewerage system	None
461	0	174	22	16	57	0.6	2	River	None
13,890	88,745	10,008	8	120	6	5.8	334	River	None
12,499	249,170	21,771	0	303	0	2.6	102	River	None
32,039	70,091	16,253	0	289	0	5.1	261	River	None
4,956	12,223	2,708	124	75	62	3.0	80	Sewerage system	None
7,738	20,348	4,320	16	76	18	5.2	274	Sea	None
2,831	12,525	1,955	43	102	30	2.0	77	River	None
4,733	18,455	3,063	37	24	61	5.9	135	Sewerage system	None
(7,877)	117,885	8,099	168	113	60	1.9	216	Sewerage system	None
28,070	178,926	19,421	2,418	69	97	7.6	298	River	None
5,390	60,437	6,182	97	330	23	2.1	92	Sewerage system	None
3,944	248,847	14,289	228	106	68	8.7	40	Sewerage system	None
197	0	74	1	9	9	0.2		Sewerage system	None
4,192	33,210	3,221	192	0	100	3.5	91	Sewerage system	None
3,452	35,500	3,055	51	148	26	0.5	54	Sewerage system	None
8,579	119,773	9,151	509	33	94	-	395	River	None
9,688	25,378	4,909	550	95	85	5.9	123	River	None
558	3,866	442	285	119	71		2	Sewerage, underground	None
5,003	29,850	3,369	101	50	67	3.6	252	Sewerage system	None
1,207	7,272	918	9	8	54	1.7	51	Sewerage system	None
3,543	19,798	3,189	28	17	61	2.9	65	Sewerage system	None
798	3,950	496	33	67	33	0.4	22	River, sewerage system	None
166	1,916	195	0	22	0	1.9	1	Sewerage system	None
100	1,310	190	0	22	0	1.9		Gewerage system	None

\* The electric power used by YKK India is all generated by the company itself, so the amount of power generated is noted for reference in the Power column. \* There were no accidents of leakage or outflow outside these plants.

## A third party perspective on YKK efforts for the environment and society

#### ORegarding the fundamental management stance

I found that the YKK Group Cycle of Goodness philosophy, which was adopted when the company was established, continues to have deep influence on company management today. I hear that this philosophy has pervaded the YKK philosophy as business activities have expanded around the world and that this fundamental management stance is the source of the YKK Group's global business success now.

In contrast to many other Japanese companies that develop their corporate social responsibility at home first and then take it abroad, because the YKK Group's business strategy, including human resources and employment practices, is based on a global management foundation, its corporate social responsibility is also regarded at this level. The YKK philosophy has had years to permeate its activities worldwide and the realization of the essence of their corporate social responsibility is highly evaluated. In order to sustain and develop the roots of this kind of management from now on, I expect that the company will continue its efforts to implement further systematic improvements and to achieve greater awareness of the issues among its members.





Interview with Committee Chairman Watanabe

#### ORegarding the Environmental and Social Report 2004

I see from the President's message, that the Cycle of Goodness is the backbone of the company's strong stance toward responsible management for society. Furthermore, the 7 management principles, with fairness at the center, show that the company is committed to benefiting society through its stakeholder-oriented management and business activities.

One problem with the report this year, however, is that the ways that YKK intends to develop each of its efforts for society in line with these fundamental principles is not well defined, so the relationship with performance in regards to customers, society and employees in the later half of the report is unclear. First of all, the report needs to convey how YKK businesses will respond to each stakeholder and what their policies and positions toward them are, as well as the Group stance on accountability. Furthermore, explanation of how the management principles translate into actual activity and how concern for society is expressed through the business itself would make the report more complete.

A new results evaluation column was added to their overall plan and achievement results in the environmental report section, so it was easier to understand overall. In the part on environmental impacts, a main performance item was also added, making it more comprehensive. On the other hand, the YKK Group's global environmental management is unclear as, other than indicating that there is a promotion system, there is not much coverage of performance abroad, so it is hard to evaluate actual environmental efforts at foreign business sites.

As for the environmental friendliness of the products, rather than just reporting on products developed ecologically, I expect that YKK will make efforts to increase the ratio of eco products and promote their use and understanding by consumers.

Finally, I hope that future reports will not only detail internal company efforts for the environment and society, but will also expand the interaction with stakeholders and users, who are members of society too, and consider them in the production of the report.

海野みっえ

So-Tech Consulting, Inc. Chief Executive Officer Mizue Unno

#### **Profile of Mizue Unno**

After graduating from Chiba University Graduate School, she worked at a management consulting company until she founded So-Tech Consulting, Inc. in 1996.

Hosei University Graduate School of Environmental Management Guest Lecturer University of Tokyo Graduate School of Frontier Sciences Special Lecturer Environmental Planning Society of Japan Director

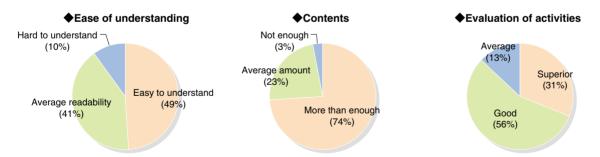
## History of environmental conservation efforts/ Results of questionnaire

## History of environmental conservation efforts

197	'0 ሳ	Pollution Council established	2000	Environmental report published (continued in following years)
199	)1 🖕	Environmental department established		Architectural Products Environmental Committee established
199	)2 🖕	Environmental Charter enacted		Product assessment carried out
		7 working groups of Environmental Council formed		Environmental label established
199	)3 🖕	YKK Group Environmental Facilities Committee established		Environmental accounting system devised and implemented
199	)4 🤞	YKK Group Environment Council established		ISO 14001 certification acquired
		YKK Corporation internal environmental audit started		(4 domestic bases, 1 range expansion base, 1 overseas base)
		YKK Group Environmental Pledge (group charter established)	2001	LCA assessment carried out
		YKK Group environmental action targets set		ISO 14001 certification acquired
199	)6 🔶	Voluntary plan submitted to the Ministry of International		(1 domestic base, 2 range expansion bases, 10 overseas bases)
		Trade and Industry	2002	Architectural Products division publishes "Eco Message 2002" (continued in following years)
199	)7 🖕	Green purchase started		PVC sash material label
199	8 🖕	ISO 14001 certification acquired (2 domestic bases)		ISO 14001 certification acquired (4 domestic bases, 12 overseas bases)
199	9 🖕	Name changed to YKK Group Environmental Policy Committee	2003	Eco Clover environmental label created
		Environmental leaflet published		Publication of "Eco Products Introduction" pamphlet
		Exhibition at Eco Products 1999 (continued in following years)		ISO 14001 certification acquired (1 domestic base, 11 overseas bases)
		ISO 14001 certification acquired (2 domestic bases, 1 overseas base)	2004	ISO 14001 certification acquired (1 domestic base)

## **Results of Environmental Report 2003 Questionnaire**

As of March 2004, we had received 39 responses. We would like to thank everyone who took the time to submit them for their cooperation.



## Main opinions and proposals from respondents

·Implementing concrete action for goals in every aspect of the business

·Steady progress is clear.

- ·I understood the economics and importance for ecosystems of the development of environmentally friendly products.
- ·I did not understand some of the technical terms.
- ·Lack of unity among target levels between pages was noticeable.
- ·I would like to seem more articles like the Site Mini Reports.

◇This year we used less technical terms to make the report easier for more people to understand. We also made efforts provide more examples of our tangible efforts abroad.

The YKK Group considers the attached questionnaire to be an important piece of communication with our readers. We would continue to appreciate it if you send us your frank opinions and proposals.





Contact : YKK Corporation Environment Group 200, Yoshida, Kurobe-city, Toyama, 938-8601, Japan Tel: +81 (765) 54 8160 Fax: +81 (765) 54 8190 Website: http://www.ykk.com/ E-mail: kankyo@ykk.co.jp

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YKK AP Inc. Environmental Facilities Department 1, Kandaizumi-cho, Chiyoda-ku, Tokyo, 101-8642, Japan Tel: +81 (3) 3864 2182 Fax: +81 (3) 3864 2330 Website: http://www.ykkap.co.jp/ E-mail: kankyo@ykkap.co.jp



Please answer the following questions and fax this paper to us at the following number. Environment Group FAX +81(765) 54 8190
Q1 What are your impressions of the environmental & social report?
1)Readability
Easy to understand Average readability Hard to understand Why do you think so?
2)Contents
More than enough       Average amount       Not enough         Why do you think so?
3)What part of the report were you most interested in?
( )Page (Item : )
Why?
4)How do you assess YKK Group activities?
Superior Good Average Below average Complete failure
Why do you think so?
5 Please tell us in your own words what you think about the report and out environmental and social activities.
Write your comments here.
Q2 From what standpoint did you read the environmental & social report?
Customer Supplier Government/administration Environmental NGC
News media Person involved in environmental matters at company Studen
Resident of local community where YKK Group company is located
Finance/investment Other (Please explain : )
Q3 How did you find out about this environmental & social report?
Newspaper/magazine Web site Exhibition YKK salesman Other (Please explain : )
Please fill in the following information. Thank you very much for your cooperation.
o you want us to send you a copy of our Environmental Report 2005? 1.Yes 2.No

Name		Sex	1.Male	2.Female	Age	
Address	Ŧ					
Occupation / business address			epartment / ob title			
Dusiness address		J				