# Introduction

From the time it was founded, the THK Group has conducted its business operations with the aim of contributing to society through its core business, based on a corporate philosophy devoted to "providing innovative products to the world and generating new trends to contribute to the creation of an affluent society." Conducting business on the basis of this philosophy means honoring the THK Group's corporate social responsibility (CSR).

This Fiscal year, THK is publishing a *CSR Report* illustrating ideas for incorporating CSR activities into business operations for the first time. The report considers THK's activities at home and abroad from social and environmental perspectives and examines ways in which THK's products and business operations contribute to society and industry and benefit its customers, shareholders, and other stakeholders. Active disclosure of this information will enable stakeholders to understand how THK honors its social responsibilities while conducting its business activities. THK intends to intensify such efforts. The *CSR Report* is regarded as a communication tool—with feedback from you, the readers, THK hopes to further improve the quality of its business activities.



#### Reporting period

In principle, this report focuses on activities from April 1, 2006, through March 31, 2007, although activities occurring before and after this period are also discussed.

#### Scope

This report is based on information provided by THK Co., Ltd., and its consolidated subsidiaries and affiliated companies. The aggregate scope of the data reported in the environmental section comprises THK's five manufacturing plants in Japan (YAMAGATA, KOFU, GIFU, MIE, and YAMAGUCHI).

#### Target readership

This report is addressed to a broad range of stakeholders, including customers, shareholders, investors, partner businesses (cooperating companies and suppliers), employees, government administrators, and people in local communities.

#### Guidelines cited

This report includes references to the Global Reporting Initiative's *Sustainability Reporting Guidelines 2006* and the Ministry of the Environment's *Environmental Reporting Guidelines 2007*.

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#### Contents

Introduction ······2
Contents 3
Message from the top 4
The THK Group 8
Feature section: CSR at THK
A revolution brought about by LM Guide 10
Japanese monotsukuri 12
Applications throughout society 15
Developing and popularizing seismic isolation devices 16
Contributing to the future 18
Management system 20
Corporate governance 21
Compliance and risk management 22
Information security23
Involvement in society24
Together with our customers 25
Together with our partner businesses 28
Together with our shareholders 29
Together with our employees
Together with local communities
Harmony with the environment 36
Promoting environmental management 37
Environmental impact: The big picture
Energy conservation 40
Material conservation and zero emissions 42
Environment - friendly products and services
Management of hazardous substances
Third-party opinion 46

Postscript ······

• 47

# Raising corporate value through core business activities results in contributions to society.



THK's development of the world's first Linear Motion Guide (LM Guide) has helped advance monotsukuri not only in Japan but on a global scale, providing a variety of energy-related and environmental benefits. LM Guides are also expected to have applications in areas that closely affect daily life: the environment, safety, and human welfare. THK President and CEO, Akihiro Teramachi recently spoke with Professor Masumi Shiraishi of the Kansai University Faculty of Policy Studies, a scholar with detailed knowledge about the declining birthrate, aging population, and local community welfare in Japan, regarding THK's observance of its corporate social responsibilities.

The conversation took place on October 31, 2007, at THK Co.. Ltd.'s headquarters.

#### Rolling helps conserve energy

Shiraishi: To begin with, why did you decide to publish this first CSR Report?

Teramachi: Year after year, people have become increasingly aware of corporate social responsibilities. We've decided to publish this report so that all the stakeholders who support THK can see the efforts we're making, and also to foster an awareness of our social contributions and social responsibilities, especially inside the company.

Shiraishi: THK products are used at manufacturing facilities that rely heavily on machine tools, and they're also used at facilities that help sustain public safety and a sense of security. How are your business activities related to CSR?

Teramachi: THK's LM Guide is revolutionary in that its linearmotion component converts sliding motion into rolling motion. To get linear motion with the old sliding guides, it required a force of 10 to 20 kg to move a 100 kg object. Switching to a rolling guide made it possible to move the same object with only 1 to 2 kg of force. In other words, you use less energy to move things. We've also developed second-generation products that use one-hundredth of the amount of lubricant that previous products used, helping to achieve further reductions in energy consumption. This type of core business results in contributions to society, and we'd like to ensure that this continues.

Shiraishi: So switching from sliding to rolling results in major reductions in the amount of energy consumed and the amount of lubricant used. That could contribute to the effort to create a cleaner environment.

Teramachi: That's right. THK products are mostly used on factory production lines, and they help create a cleaner work environment. We're also looking at ways in which they can be used in the home and in people's immediate environment. Home automation is progressing, and the declining birthrate and aging population are making it necessary to create barrier-free conditions and lessen the burden of nursing care. This, in turn, will make it necessary to have computerized devices in the immediate environment, which is where we think THK products will be indispensable. And incorporating our products in automobiles will help make them safer, faster, and lighter, and reduce energy consumption.

Shiraishi: You're also working on seismic isolation in buildings, right? Japan is a very earthquake-prone country, so I think THK's technology must be very important for protecting people's lives and property.

Teramachi: Seismic isolation is a countermeasure against earthquakes that's fundamentally different from quake-resistance and vibration-damping measures, in that it separates the building itself from the land surface, so that earthquake tremors aren't directly transmitted to the building. THK's seismic isolation technology can handle various types of vibrations very effectively. Naturally, it protects houses from the danger posed by an earthquake, and it can also protect the residents from falling furniture and appliances. We're going to work on getting the word out so that everyone out there will understand how effective seismic isolation is.

Shiraishi: Is it true you're also developing humanoid robots?

Teramachi: We believe the day is coming when human beings



Professor Masumi Shiraishi Faculty of Policy Studies, Kansai University

Professor Shiraishi has a master's degree from the Kansai University Graduate School. Following employment with Seibu Department Stores and work as a senior researcher at the NLI Research Institute, she became an assistant professor in the Department of Social Economic Systems of Toyo University in 2002. She became a professor in 2006 and assumed her current position in 2007. Professor Shiraishi specializes in the study of efforts to create a barrier-free society, the declining birthrate and aging of the population, and local community systems.

and robots will coexist in society. Based on that assumption, we're working with various research institutions and university professors to produce safer, more compact, and more functional devices. One such item is the robot hand. We're also working on surgical robots and osteopathic robots. There are many operations that can be performed more accurately through mechanization, which will also enable doctors to perform surgery by remote control, making it possible, for example, to operate on a patient located on a distant island.

## Originality and contributions to societya virtuous cycle

Shiraishi: THK has come up with an excellent corporate philosophy: "Providing innovative products to the world and generating new trends to contribute to the creation of an affluent society." Having to continually change and come up with new products while focusing on potential needs and business opportunities at the same time-that would appear to be a very difficult proposition.

Teramachi: THK has made great contributions to society by introducing original products that the world had never seen before. In essence, that's the proposition we're pursuing. We don't deal in copies, we go for originality. That's when a company acquires value, I think, when it can do something creative.

Shiraishi: It seems as though you're aiming to become number one. To do that, it's essential to be finely attuned to societal trends and constantly identify needs that lie hidden below the surface.

Teramachi: Actually, originality isn't really necessary to address society's immediate needs. THK is looking five or ten years ahead; we're committed to product development in such a way that our vision isn't restricted to what lies immediately ahead. For that reason, we consider ideas that address society from a variety of different perspectives, and we intend to continue to help create a prosperous society. When a company provides the world with something that it didn't have before, the society recognizes that, and it enables the society to advance. The company's participation in this cycle is what gives meaning to its existence.

Shiraishi: Support for the environment is an extension of your core business, and that's meaningful in terms of CSR. What about efforts to address environmental issues in the perfor-

#### mance of business duties?

Teramachi: All of our plants in Japan have acquired ISO14001 certification, and our overseas production bases are in the process of becoming certified. We're making efforts to reduce waste products and harmful materials. Needless to say, it's essential that we satisfy these kinds of standards, but we have to keep in mind that the ultimate aim is to leave the planet in better shape for future generations. Acquiring certification isn't the goal, and carrying out a lot of activities won't necessarily make everything all right. We warn our employees not to confuse the ends with the means.

#### Being customer-oriented: The worldwide standard

Shiraishi: THK has expanded globally and has set up companies in various countries. What kinds of efforts are you making to localize these businesses and address diversity?

Teramachi: We want the employees at our overseas subsidiaries to fully understand THK's corporate philosophy, our reason for existence. We want to cultivate human resources<sup>1</sup> who can approach the issue of local expansion based on that philosophy. People say the traditional Japanese approach doesn't work overseas, but customers want the same things no matter what country they're in. We try to drive home the message that our people should always do their jobs while keeping the customer's point of view in mind.

Shiraishi: If each employee performs his or her job with the customer's point of view in mind, it must lead the employees to think about the jobs they're doing in a whole new light. Where are THK's CSR activities headed in the future?

Teramachi: Our work is useful to society, so advancing our core business is the first priority. The key to this is cultivating personnel who know the difference between the ends and the means. I'd like to make a concerted effort to cultivate people who know the world, know themselves, and never stop trying to improve themselves.

Shiraishi: People like that will produce a lot of ideas and creative products, and your company will thereby contribute to society. I look forward to THK's future progress.

1 THK uses the term "human resources" instead of "human materials"(see P.30.)

## Message from the top: CSR at THK



Akihiro Teramachi President and CEO

# The THK Group

#### Profile

THK is a pioneering manufacturer and developer of the world's first Linear Motion Guide, and is the world's largest LM Guide producer. Since the company was established in 1971, its LM Guides and other products have been used in machine tools, production robots, and semiconductor production equipment. THK products are essential components in these devices, enhancing precision, increasing speed, and reducing labor, and have contributed to industrial development. In recent years, applications for THK products have expanded to include CT scanners, MRI devices and other advanced medical instruments; high-performance, Environment-friendly automobiles and railway cars; and seismic isolation and vibration-damping devices, which protect human lives and property.

In 2000, just prior to the thirtieth anniversary of its founding, THK set forth its long-term business objectives in a



Corporate name: THK Co., Ltd. Date established: April 10, 1971 Address: 3-11-6 Nishi-Gotanda, Shinagawa-ku, Tokyo 141-8503 Capital: 33.916 billion yen (as of March 31, 2007) Settlement term: March Employees, consolidated: 5,563 (as of March 31, 2007) Employees, non-consolidated : 2,961 (as of March 31, 2007)

### Main products

LM Guides, Actuators, Ball Screws, Ball Splines, Link Balls, Cross Roller Rings



statement entitled "Fiscal 2010 Vision." Fiscal 2010 Vision

calls for the achievement of consolidated sales of ¥300 billion

by 2010, through full-scale globalization and development of

new business areas. Full-scale globalization, based on the

idea that the site of demand is the optimal site for produc-

tion, is an effort to strengthen the unified producer-retailer

system in four territories: Japan, the Americas, Europe, and

Asia. The initiative devoted to development of new business

areas is an effort to expand the range of product applications

into consumer fields through the establishment of specialized

THK contributes extensively to society as a creative, de-

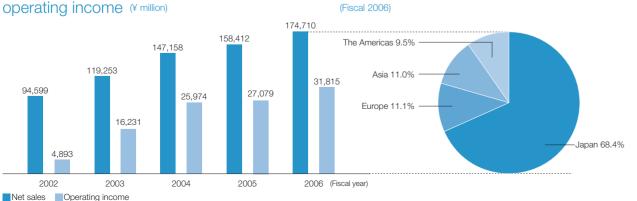
velopment-oriented company making the best possible use

of original ideas and technologies, and will continue to do so

departments.

in the future.

Trends in consolidated net sales and operating income (¥ million)

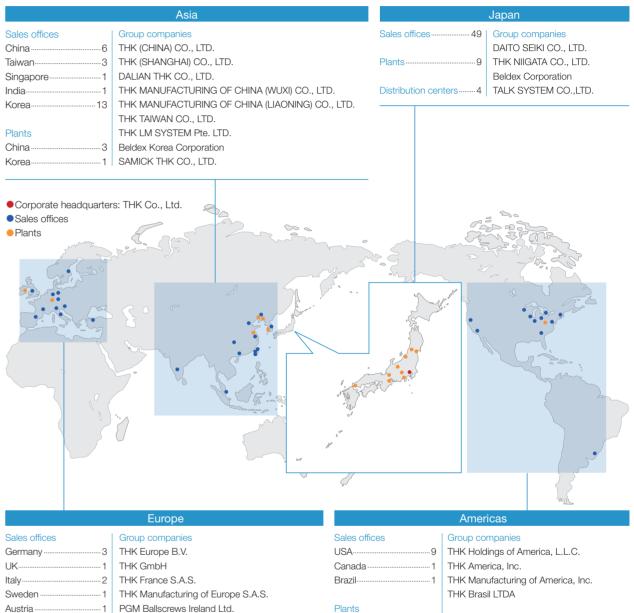


Net sales by region

#### THK Group Principal Business Centers

THK is striving to strengthen its unified producer-retailer system in the four territories, Japan, the Americas, Europe, and Asia, with the aim of realizing Fiscal 2010 Vision.

	Asia
Sales offices	Group companies
China6	THK (CHINA) CO., LTD.
Taiwan3	THK (SHANGHAI) CO., LTD.
Singapore1	DALIAN THK CO., LTD.
India1	THK MANUFACTURING OF CHINA (WUXI) CO., LT
Korea13	THK MANUFACTURING OF CHINA (LIAONING) CC
	THK TAIWAN CO., LTD.
Plants	THK LM SYSTEM Pte. LTD.
China3	Beldex Korea Corporation
Korea1	SAMICK THK CO., LTD.



1	THK GmbH
2	THK France S.A.S.
1	THK Manufacturing of Europe
1	PGM Ballscrews Ireland Ltd.
1	

## Plants Ireland-France

Spain

France Turkev

Distribution centers The Netherlands .....



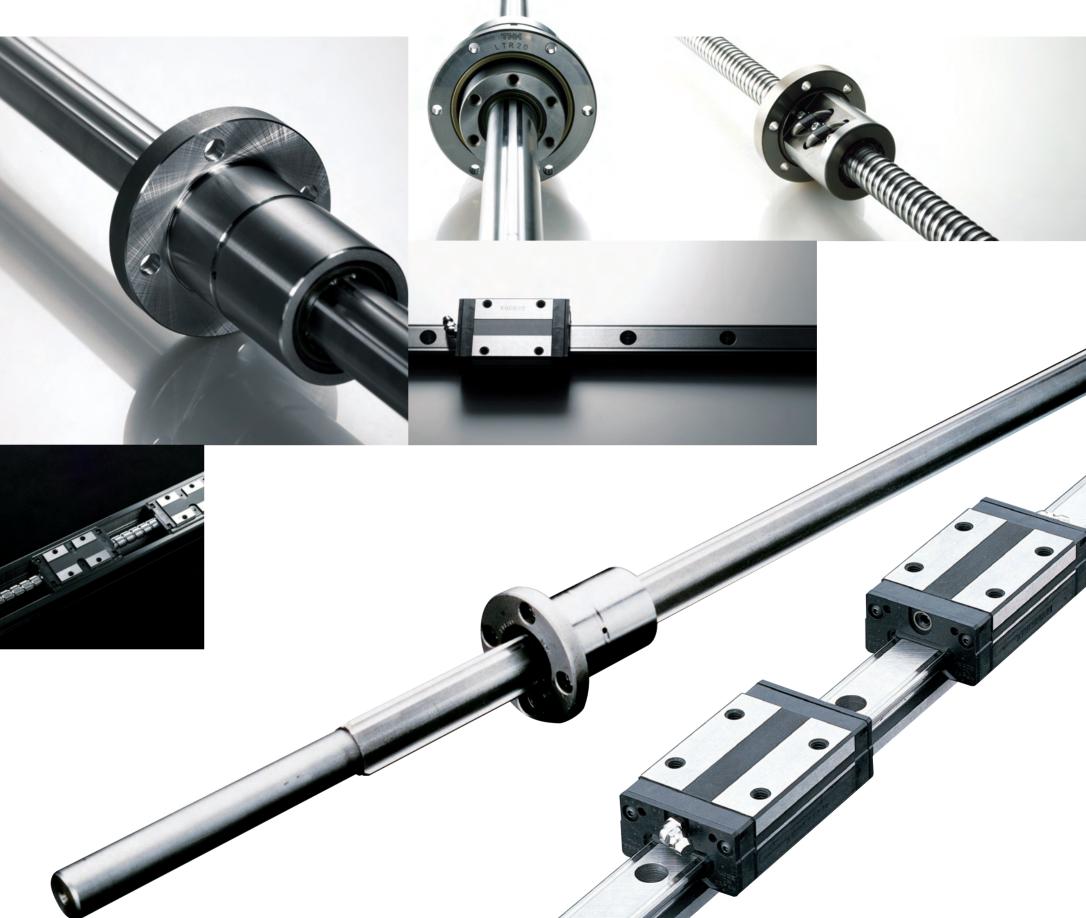
Plants USA.

9

## CSR at THK

eature

THK contributes to society through its products and technology.



## From sliding to rolling: A revolution brought about by LM Guide

If the frictional resistance of a moving object can be reduced, more work can be performed with less energy, which conserves power and improves positioning accuracy. A machine incorporates a combination of rotary motion and linear motion. The ball bearing is the signature mechanism that converts rotary motion to rolling motion; the ball bearing has been around for over 100 years. Serious technological obstacles had to be overcome to enable linear motion to be converted to rolling motion, however, and it took quite a long time before the high-quality finished products available today could be produced. Linear motion could be converted to rolling motion by the Linear Bush, a device that had already been popularized, but it could only handle small loads and therefore had a very limited range of use. For this reason, sliding guide systems, which generate high friction resistance, were used in machine tools and other machines that rely heavily on linear motion.

With THK's establishment as a company, it became possible to convert sliding linear motion action to rolling motion. THK's first commercial product, the Ball Spline, offered a dramatic improvement over the Linear Bush, making it possible to accurately position a load 13 times greater than the Linear Bush could handle. The world's first linear motion system-the LM Guide-was introduced one year later. The LM Guide's function in converting linear motion to rolling motion has aided a broad range of industrial advances, including advances in machine tools. The LM Guide has become a product that the world cannot do without.



## Feature section CSR at THK -Japanese *monotsukuri* at a turning point

#### Improved performance with one-tenth the energy consumption

The early 1970s, when THK was founded, marked a significant turning point in Japan's economy, as the country's postwar boom began to slow down. At that time the vast majority of machine tools relied on linear motion, for which slide guide systems were used. In slide guide systems, the sliding surface requires a "scraper" process, which is performed manually by skilled technicians. This process relied on human skill, however, so machine tools couldn't be used for mass production, and there were limits on the degree of positioning accuracy that could be obtained. Japanese monotsukuri had to advance to the next level in terms of cost reduction, high precision, and high performance, and this required technology that would surpass the slide guide system.

The invention of the LM Guide produced many advantages for the machine tool industry. LM Guides require only one-tenth of the motive force needed for slide guide systems,

An early LM Guide (LSR type)

and this meant a reduction in energy consumption to onetenth of the previous level. To retain lubricity a slide guide system has to be continually supplied with a lubricant, but an LM Guide requires only one-seventeenth the amount of lubricant needed for a slide guide system. This not only means a dramatic reduction in the amount of lubricant used, it has also made it possible to use smaller lubricant feed pumps and motors, which has, in turn, led to smaller machine tools and greater energy efficiency. In addition, the LM Guide structure makes it easy to deliver high-precision linear motion simply by bolting the guide to the mounting surface. This eliminates the need for manual precision processing, assembling, and adjustments, which relied on mastery of scraper skills. Consequently, the LM Guide has provided a major boost to mass-production efforts.



High-guality products, manufactured in mass guantities in the shortest possible time, at minimum cost. Having weathered an oil crisis, Japanese industry became the world's leader in monotsukuri. Productivity increased with the introduction of new machines including NC machine tools,1 which were capable of high-speed, high-precision, micron-level<sup>2</sup> machining; machining centers;<sup>3</sup> and industrial robots, which enabled rapid assembly and extended working hours. The secret behind Japanese manufacturers' rise to worldwide prominence in the automobile and consumer electronics industries in the 1980s was the LM Guide and the rest of the THK product lineup.

From the second half of the 1980s and into the 1990s, amid the rapid appreciation of the yen and gains made by newly advancing economies, such as those of Taiwan and Korea, it became necessary to further reduce costs, provide greater added value, and offer higher performance. As integration progressed in the semiconductor field, upon which information technology relies, new technology was required to enable higher-precision processing and micro-inspection. As Japanese manufacturers moved overseas in pursuit of



Computer and consumer electronics industries flourish and semiconductor production equipment industry expands

- 1991 YAMAGATA Plant completed
- 1996 DALIAN THK established (China) Caged Ball LM Guide
- 1997 TMA established (USA)

1979 Precision Ball Screw

KOFU Plant completed

1971 THK established

Link Ball

1972 LM Guide

Ball Spline

1970s

1977

The completed KOFU Plant

THE REAL PROPERTY AND INCOME.

Start of a revolution in linear-motion components

THK America Inc.



#### Transition to NC machine tools and FA development

Cross Boller Bing (BB type)

- THK America established (USA) 1981
- 1982 Cross Roller Ring THK Europe established (Germany)
- 1984 GIFU Plant completed
- 1985 MIE Plant completed

1980

YAMAGUCHI Plant completed 1989 OTC registration

- lower production costs, demand increased for THK products used in NC machine tools and production robots, which do not require specialized skills, and in high-precision semiconductor production equipment and other devices. In 1996 THK introduced the Caged Ball LM Guide, the culmination of decade of development. In a Caged Ball LM Guide the balls are held between chain-shaped resin retainers, so noise and friction are reduced and lubrication is not required for extended periods. It was a groundbreaking product-virtually silent, highly durable, and maintenance-free. As semiconductor manufacturing progressed from the micron level to the nano<sup>4</sup> level, even greater precision and clean manufacturing environments were required. The Caged Ball LM Guide, which generates very little oil mist and fine metal dust, was perfectly suited to these needs. With the introduction of the Caged Ball Screw, developed in 2002, it became possible to use cageembedded technology to suppress torque<sup>5</sup> fluctuation.
- 1 NC machine tool: Numerically controlled machine tool
- 2 Micron: 1/1.000 of a millimeter
- 3 Machining center: machine tool that automatically replaces processing tools and performs machining by computerized numerical control
- 4 Nano: 1 millionth of a millimeter
- 5 Torque: turning force

Sign in Shanghai (China)



Mobile	phones and digital consumer electronics abound
2000	TME established (France)
2001	Caged Roller LM Guide
	THK's debut on the first section of the TSE
2003	THK Shanghai established (China)
2004	THK Wuxi established (China)
2005	THK Liaoning established (China)
2006	THK LM SYSTEM established (Singapore)

We talked to Yoshihiro Hashimoto, special counselor to Fanuc Limited, about social responsibility in business.



## Together assuming social responsibilities that support world monotsukuri

Yoshihiro Hashimoto Special Counselo Senior Development Engineer and General Manager Robomachine Research Joint Div. Fanuc Ltd

Fanuc Ltd. Fanuc commands the largest share by far of the global market for computerized numerical cor trol (CNC) systems, which form the heart of the so-called mother machines, or machine tools that process components for industrial products, and for servo motors, which provide the muscle. On the company's spacious grounds located in Oshino-mura, Yamanashi Prefecture at the foot of Mt. Fuji near Lake Yamanaka company policy dictates that "not so much as one tree is felled." The grounds are home to an abundance of wild birds, small animals, and wild grasses, all in their natural state.

#### Tell us about Fanuc's social responsibilities.

Our company provides CNC systems and servo motors to machine tool manufacturers in Japan and around the world. Machine tools, so-called mother machines, mass-produce all kinds of machine components with consistent quality 24 hours a day, 365 days a year. If a stoppage occurs, the user incurs considerable losses, and it can also have a serious impact on industries waiting for parts. For this reason, to keep our clients' machines from stopping, we've put a lot of effort into monotsukuri, with product quality and reliability as the primary considerations. It's difficult to quickly replace malfunctioning machine tools, so we consider our

most important social responsibility to be preventing them from stopping. To do this, it's essential that our products be of the highest quality and reliability, so we have to ensure that our production system and methods are thoroughly sound. And to ensure that our production system is sound, product design and development are extremely important. From the very beginning our company has been committed to maintaining consistent quality at all times and striving for high reliability, to enable our products to withstand severe usage conditions for prolonged periods.

#### What's your opinion of THK?

I've known about THK from the days when Mr. Teramachi, the founder, would come to visit our company's president, Mr. Inaba (Honorary Chairman Seiemon Inaba). While our CNC systems play the role of the brain in machine tools, THK's products are the basic parts that relay the electronic commands to the sliding parts with micron-level accuracy. Machine tool manufacturers give their business to both of us, and we bear a serious social responsibility. If a THK product were to cause a machine to stop, the client would incur serious losses, just as it would if one of our products caused a stoppage. I understand that THK has a 70% share of the LM Guide market in Japan and a 50% share of the overseas market, and the corporate responsibility is proportional to these shares. Over 60% of all our products are sold overseas. If you add in the CNC systems sold to customers in Japan and exported machines that incorporate our servo motors, then even more of our products are used overseas. The commitment to never, ever causing

problems for the customer, which includes maintenance and service systems, on the theory that machines could stop operating overseas, is the ultimate social responsibility for both our companies.

Using the CNC systems and servo motors that constitute our basic technology, Fanuc deals with machines such as the Roboshot electric injection molding machine: the Robocut high-speed, high-precision wire-cut electric discharge machine; and the Robodrill, a high-speed versatile CNC drill; and we use large numbers of THK LM Guides and Ball Screws in the sliding parts of these machines. THK is a pioneer in linear motion systems. At the same time, THK is very reliable with regard to quality and the ability to respond when needed, because they know the first priority is social responsibility. We'll continue to support THK and hope THK continues to meet the expectations of its many customers.

## Feature section CSR at THK -From industry to daily life Applications throughout society

#### Where there's motion, THK's technology is alive.

Movement exists in the form of rotary motion and linear motion. By combining these motions, you can create almost any kind of movement. THK products are used in industrial machines, of course, but they are also used extensively in consumer products and other items encountered in daily life, such as automatic doors in buildings and train station platform doors, which protect people from falling onto the tracks. The use of LM Guides in all types of sliding parts reduces noise and increases durability. At home, they are used in refrigerator drawers and the drawers of induction ranges, making life more convenient. They are used in arcade-style crane games and cart games, and they are also used in connection with natural energy sources, such as in the drive units of windpower and wave-power generators. THK products are used in all sorts of inconspicuous places, delivering the power that supports daily lives and the infrastructure of society.

THK products also play an active role in improving the safety and energy efficiency of vehicles. For example, Link Balls, made from die-cast aluminum, are used in connecting sections of stabilizers and suspensions, to improve running stability, and in height sensors that adjust headlight angles, in approximately 40 types of vehicles all over the world. They are also used in motorcycle gear couplings, agricultural equipment, and construction machinery. In the railroad industry, THK's R Guide is used in a car-stability system employed in many high-speed trains. The system tilts the car as it approaches a curve at high speed, enabling it to pass through the curve faster. This makes the ride more comfortable and results in greater running stability and shorter running times. R Guides are also used in the automatic switchgears in the couplings at both ends of the train carriages, in sliding doors on bullet train cars, and the first normal conductivity maglev train "Linimo" Aichi Rapid Transit Co., Ltd. in Japan which began operating at the EXPO 2005 AICHI JAPAN. They are also used in ultrasonic equipment used for checking damage to the fuselages of large aircraft composed entirely of curved surfaces, and in rivet-hole boring machines used in aircraft manufacturing.

At medical and nursing facilities, THK products are indispensable. High-quality medical care requires great accuracy of motion with medical instruments, and noise and vibration must be minimized so as not to cause the patient stress. THK's LM Guide Actuators are used in CT scanners. The Xray source and filter drive units rotate at high speed around the patient's body while cross-sections are being filmed. This creates a strong centrifugal force in the drive unit, but the use

#### of LM Guide Actuators enables smooth movement.

In addition, LM Guides and Ball Screws are used in the moving parts of machines used for diagnosing patients, thereby contributing to high-precision analyses. Smooth movement achieved with little force is a requirement for universal-design equipment and equipment for welfare purpose. THK products are also used in system kitchens in which heights can be freely adjusted, and in drive units for reclining mechanisms in electric-powered wheelchairs.

There are many objects in society that require smooth, silent, precise movement with minimal resistance. More uses for THK products are expected to be found in a variety of fields.



CT scanner filter drive unit and main sliding section

#### "Magic Parts" result in greater fuel efficiency in automobiles.

#### Yoichi Matsushita

Deputy General Manager of FAI<sup>1</sup> Division

Normally, forged iron parts are used in the connecting parts of stabilizers. Switching from these to Link Balls made of die-cast aluminum makes it possible to reduce the weight by 30% to 40% compared to conventional products, and there's the added advantage of being able to recycle the parts. The weight reduction makes cars more fuel-efficient and reduces CO2 emissions. The auto industry ordinarily tries to reduce weight in units of grams, but simply switching to Link Balls in four places on the underbody of a car reduces its overall weight by 1kg, so they're like magic parts.

1 FAI: Future Automotive Industry



## CSR at THK -Protecting lives and property from earthquakes Developing and popularizing seismic isolation devices

#### Lessons from the Great Hanshin-Awaji Earthquake

Japan: Earthquake archipelago. Major earthquakes of seismic intensity 6, the level at which buildings incur extensive damage, have occurred more than 10 times in the past 25 years. Every day an earthquake occurs somewhere in the Japanese archipelago. It's not possible to stop earthquakes from happening, but it is possible to be prepared. In this regard, the seismic isolator is receiving a lot of attention. THK is putting its accumulated linear motion technology to good use by manufacturing and selling seismic isolation devices for all kinds of structures, from high-rise buildings to single-family homes.

The catalyst was the Great Hanshin-Awaji Earthquake of January 1995. Approximately a guarter of a million buildings were either totally or partially destroyed. Many of the people who died were buried under collapsed buildings or trapped under falling household furniture. It was thought that, by using THK's linear motion systems, it might be possible to significantly reduce the vibrations transmitted to buildings in earthquakes and prevent buildings from collapsing. This is how the development of the seismic isolation devices began.

Crossed LM Guides move forward and backward and left to right, in every direction, in response to earthquake vibrations. The damping system, which uses the Ball Screw structure, reduces the motion by prolonging the vibration cycle. The THK seismic isolation devices combines these functions with the use of laminated rubber, for decompression. In 1998, after a three-year development period, the

ACE<sup>1</sup> Division was established to begin selling and promoting the system. The LM Guide was originally designed to move objects smoothly using minimal force, whereas the seismic isolation system supports solid buildings that do not ordinarily move. When a strong earthquake occurs, the system moves smoothly to release the seismic motion, protecting buildings and property and saving lives. The compact model seismic isolation devices, the seismic table, is used to protecting certain vital systems, such as computer network servers and medical equipment, from vibrations.

1 ACE: Amenity Creation Engineering

## Basic components of the seismic isolation system

CLB Linear Rolling Support The crossed LM Guides slide 360°

horizontally in response to earthquake vibrations while supporting the weight of the building

Viscous Damper Absorbs earthquake vibrations using a ball screw to alleviate the impact of sudden movement

**Decompression Rubber** Laminated rubber returns the building to its original position

#### Seismic isolation technology-protecting cultural assets and social infrastructure

In recent years, as seismic isolation has become better understood, more and more structures have been equipped with seismic isolation devices, particularly in major cities and in the Tokai region. These systems are increasingly being used not only to protect daily life from earthquakes but also to protect cultural assets.

The Heijokyu Daigokuden, where restoration of the Nara Imperial Palace is proceeding, is a historically important structure where the Emperor's coronation and welcoming ceremonies for foreign envoys were once conducted. Considering when it was built, it isn't possible for such a structure to conform with contemporary earthquake-resistance standards. By separating the building from its foundations using THK's seismic isolation devices, however, it has become possible to keep structural reinforcements for the main building to a minimum and enable restoration closely adhering to the original form.

The Aichi Prefecture main government building has been designated a national registered cultural asset, and a type of seismic isolation project employing a method called seismic isolation retrofitting is underway there. This is a method whereby the existing building is separated from its foundations and seismic isolators are inserted in between. The main government building is not only a cultural asset but also serves as the disaster-response center when a major earthquake strikes, so it was decided to use seismic isolators there.

In the past THK's seismic isolators have been used either to convert entire buildings into seismically isolated structures or to provide seismic isolation tables for vital objects, and in recent years efforts have been made to develop seismic isolation devices for production equipment and other machinery. Further research will be carried out to protect social infrastructure and cultural assets and to minimize earthquake damage by considering earthquakes from the viewpoint of linear motion.



eismic isolators installed the foundation of the Sekigahara town office Gifu Prefecture)



leijokyu Daigokuden storation scheduled to be completed in 2010) Computer graphic proided by the National Agency for Cultural Af-



#### Quake-resistance, Seismic isolation, Vibration-damping

Quake-resistance implies reinforcing a building's structure to enable it to withstand vibrations, through the use of sturdy pillars, joists, walls counterbraces and the like. This prevents buildings from collapsing due to vibrations transmitted directly by earthquakes. Since the entire building vibrates, however, this can't prevent the furniture inside the building from falling over. Seismic isolation minimizes the vibration transmitted to buildings by circumventing the earthquake vibration with seismic isolators installed between the building and its foundations. Since the building doesn't shake, there's no need to worry about furniture toppling over. Vibration-damping absorbs and suppresses the building's vibrations and prevents the upper floors from swaying too much, so the system is widely used in tall buildinas.

Quake resistance and vibration-damping



The dotted line shows the vibration with quake resistance; the solid line shows the vibration with damping.



The dotted line shows the vibration with seismic isolation

#### Someone who buys and lives in a building wants peace of mind.



Shuji Nakada Company Executive (right) and Takahiro Nakada Nakada Building firm Corporation ujieda, Shizuoka Prefecture)

As a local contracting firm, we construct about 18 custom-built houses, shops, and apartments per year, using predominantly wood and other natural materials. Shizuoka Prefecture is the location of the estimated epicenter of a Tokai earthquake, which has an 87% probability of occurring within the next 30 years, and it's not uncommon for major earthquakes to occur here. Having done our homework, studying guake-resistance and seismic isolation, we decided that since guake-resistance measures can't prevent falling furniture, the only thing to do is use seismic isolation. We looked at several manufacturers and concluded that THK's technology was far superior to the others

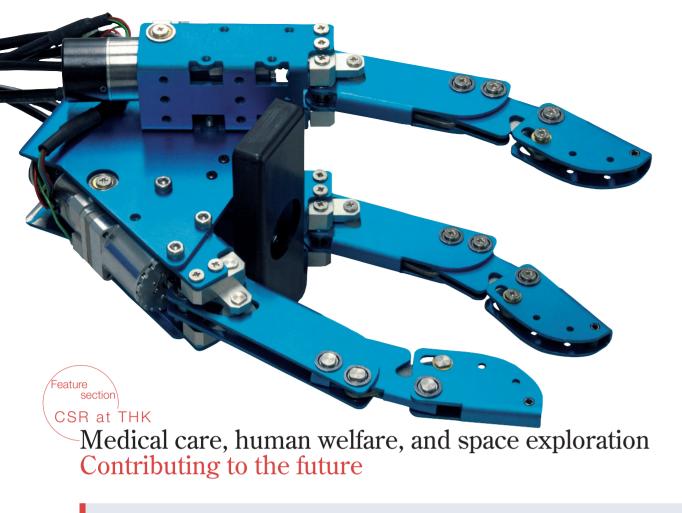
This happened to be just when we were planning to build a two-generation house for ourselves, so we decided to install seismic isolation devices in our own house first. We didn't want our children or grandchildren to be injured by earthquakes. We included a glassed-in area enabling the seismic isolators to be observed at any time. Since then we've constructed seven seismically isolated buildings.

Seismically isolating a house costs about the same as

an expensive car. It's important that the client clearly understands this. Because it requires precision it's more trouble to build, but above all else, it's our duty as a local contractor to provide mind, so we recommend installing seismic isolation lation. devices



Seismic isolation devices installed our clients with peace of in their own house. One tatami mat has been replaced with glass, enabling clients to view the instal-



#### Robot technology is crucial to an aging society with a declining birthrate.

THK's rolling technology moves heavy objects using minimal force. When this technology is applied to ordinary life, the result is machines that can be made to move using less force, and systems that augment human power. At THK, we're taking a long hard look at future needs and are working to develop devices and machines that go beyond the domain of existing components.

The development of robots for use in medical treatment is one such example. The repositioning robot, which is being developed at the MRC Center,<sup>1</sup> is a device that assists a surgeon's movements during surgery. When operating on a broken femur, the surgeon needs to use considerable force to reposition the bone correctly, and this carries the risk of exposure to X-ray radiation. Assistance from a repositioning robot, which utilizes 13 LM Guide and Ball Screw components, enables the surgeon to provide treatment faster and more accurately, by reducing the manual labor involved and preventing risk of exposure. Another example is the ongoing development of minimally invasive<sup>2</sup> robots, which make it possible to perform complicated endoscopic surgery by remote control. These medical robot-development projects are being carried out in cooperation with universities and medical equipment manufacturers.

The Robot Hand (shown above), which was used in the Japan Aerospace Exploration Agency's Fiscal 2006 "Open Space Lab" recruiting campaign, is a device that helps astronauts carry out extravehicular tasks and performs actions for them. A micro Ball Screw is utilized in the drive unit to provide both dexterity and grip strength. Because it can deliver a strong force using only a small motor, this technology is expected to have applications in fields other than space exploration as well, such as in industrial robots and robots for use in providing nursing care.

The term "universal design" implies designs and functions that can be used easily and equally by anyone. THK's technology makes it possible to provide support by using forces that exist in people's immediate environment and to offer the functions required for true universal design. The CAP<sup>a</sup> Project is promoting the use of technology in this area. In Japan, with its aging population and declining birthrate, there are fears of labor shortages in the future. More than ever before, there is a need for women, the elderly, and physically handicapped people to participate in society, so there is a growing demand for devices that will support human power in situations such as those where nursing care is required. THK intends to make good use of technology that can move heavy objects using minimal force, and expects to play an important role in a society faced with an aging population and declining birthrate.

1 MBC: Mechatronics Bobotics Com-

puting 2 Minimally invasive: Having the lea

possible physiological impact3 CAP: Consumer, Application, Products

Repositioning robot assisting surgical procedure



#### Humanoid robots and people to coexist

The development of technologies and products, such as the Robot Hand, that enable machines to perform movements on behalf of human beings will be essential in addressing labor shortages. Eventually, this will lead to the creation of robots that imitate humans, or humanoid robots. It's conceivable that robots will carry out tasks previously performed by humans in locations inaccessible to humans or in harsh environments where humans can't work directly. In agriculture, forestry, and fisheries, where the aging workforce and lack of successors is more acute, robots are expected to play an active role in facilitating a variety of tasks. In households and urban areas as well, there's a need to develop robots that can coexist with humans. THK is undertaking an extended period of development spanning the next 10 to 20 years, in an effort to provide the world with things that don't yet exist in the field of components for humanoid robots.

The technology for medical robots and humanoid robots is an aggregate with various parts, comprising many component technologies, including those involving machines, electronics, and software. Highly advanced technological

#### I want to produce something that nobody has thought of.

#### Kaoru Hoshide CAP Project General Manager

The CAP Project promotes development in four categories: household appliances, the daily environment, universal design. and humanoid robots. We always have 20 to 30 projects going on. Of course, not all end up as products. Basically, we develop machines that move heavy objects with minimal force. that support human power. Either way, the approach is to assist ordinary people in their daily lives. The aim is to come up with things that nobody else has thought of, to introduce new products to fill holes in the market, and to create new markets. We intend to make THK's existence an essential part of society.

developments are being made in weight and size reduction and the achievement of higher precision, as well as with corrosion resistance, X-rays, vacuums, and other aspects of use in special environments. Not only are these developments applicable to new fields, they can also be channeled back into THK's key products. Thus, they are expected to lead to improvements in Japanese *monotsukuri*.

#### MRC Center CAP Project

The MRC Center was established in 2000 for the purpose of creating products that the world has never seen, through the use of mechatronics (mechanical electronic engineering), robot control technology, and computer technology. Products are currently being developed in new areas, including medical robots and humanoid robots.

The CAP Project, begun in 2002, is based on the concept of electrically motorized living. The project promotes development devoted to finding uses for THK products in household appliances and other types of consumer goods. Both of these undertakings are based on the concept of developing products by creating something the world has never seen. Both the MRC Center and the CAP Project are cooperatively engaged in the field of humanoid robots.

## THK products are involved in a broad range of areas.

Below are just a few examples.

#### Industry

NC machine tools, industrial robots, semiconductor production equipment, all types of production machines, testing equipment

#### At home

Refrigerators (drawers), induction ranges (drawers), universal-design system kitchens (height-adjustment mechanisms), seismic isolators

#### Transportation

Vehicles (stabilizers, height sensors, transmissions), motorcycles, buggy cars, agricultural machinery, construction machinery, electrically powered lifts in vehicles for the disabled, pendulum mechanisms for trains, platform doors, sliding doors on bullet trains, coupler-access door drive units, snow plows

#### Buildings and offices

Large-scale automatic doors, electrically operated blinds, seismic isolation devices, vibration damping systems

#### Medical facilities

Devices used in dentistry, CT scanners, bloodanalysis equipment

#### Other

41 1

Drive units for search lights mounted on rescue vehicles, electric-powered wheelchairs, drive units for medium-size astronomical telescopes, wind-power generators, wave-power generators, electrically operated roof boxes, all types of amusement games, showcase slide mechanisms, ball-distribution systems for golf driving ranges

# Management system

# Social contributions lead to corporate value. Practicing CSR through our core business

Higher corporate value is unattainable without contributions to society. THK embraces a corporate philosophy devoted to "providing innovative products to the world and generating new trends to contribute to the creation of an affluent society," and this philosophy embodies THK's CSR policy. From the time THK was established, the pursuit of CSR through our core business has always been at the heart of our corporate activities. Today, however, the importance of corporate social responsibility is increasingly being called into question. To once again ensure that our business activities are conducted with CSR in mind, THK has reexamined its various efforts to date, thoroughly disseminated our corporate philosophy and charter, and improved the decision-making criteria that determine the actions of our employees. THK has established corporate governance systems, compliance systems, and information security systems; created mechanisms for disclosing information and evaluating the status of efforts to achieve targets; and made voluntary efforts to carry on CSR-based business activities.



## Management system Corporate governance

THK's basic approach to corporate governance is to strive to improve the transparency of operations for shareholders and investors and provide appropriate and effective management, in order to maximize shareholders' returns. To this end, THK fairly and efficiently executes systematic long- and medium-term plans and plans for each Fiscal year, and manages its progress using reliable systems. Management information, including information on progress in carrying out these plans, is issued periodically by means of fair and appropriate methods. THK is improving its corporate governance to ensure that the Group continues to steadily deliver the highest possible returns to its shareholders over the long term.

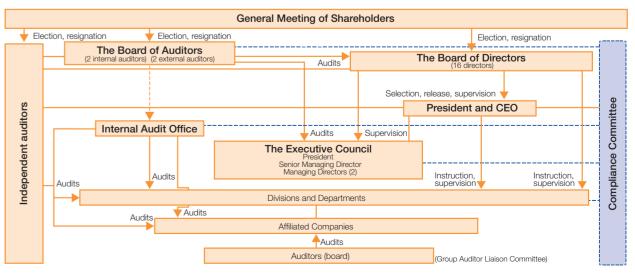
### Corporate governance system

THK employs a system of statutory auditors. The management structure, based on a board of auditors that includes both THK's Board of Directors and external auditors, employs a system that establishes an Executive Council.

The Executive Council presents necessary information and issues related to business decisions to the Board of Directors, which ultimately makes corporate management decisions. At present, the Board of Directors does not include an outside auditor, but arrangements are being made for an outside auditor to attend important meetings of the Board of Directors and the like, to facilitate the auditing of management. Auditors work in cooperation with independent auditors to obtain reports on the progress and results of auditing activities.

THK has established an Internal Audit Division, which is responsible for internal auditing and operates under the direct authority of the CEO. The Internal Audit Division, in cooperation with the auditors, regularly conducts audits to determine the status of specific business efforts and evaluate management efficiency.

#### Corporate Governance Framework





#### Maintaining and improving internal controls

In 2005, in an effort to promote reliability in the performance of duties, THK established "THK's Basic Policy" and worked to instill these principles in its employees. Efforts are currently being made to establish or reinforce internal controls, for the purpose of further solidifying management infrastructure in full compliance with legal requirements.

In April 2006 a set of basic principles for internal controls was established, based on Japanese corporate law, for the purpose of formulating and implementing a system for planning and establishing internal controls. In January 2007 THK began developing a system for ensuring the reliability of its financial reporting, based on Japan's Financial Instruments and Exchange Law, which will take effect in March 2009. In connection with this effort, THK has launched a companywide "J-Project," under the authority of the CEO, and is promoting "THK's Basic Policy on Internal Control" throughout the entire corporation, including subsidiaries and affiliated companies.

Preparations are expected to be completed in Fiscal 2007, and trial runs will be conducted with the expectation that these systems will go into operation in Fiscal 2008.

## Management system

## Compliance and risk management

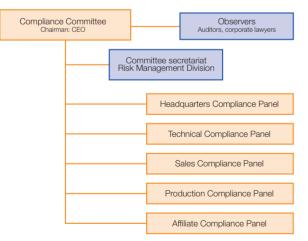
In order to maintain business development, it is important for the company to win the trust of the community at large through strict compliance. At the same time, whatever situation arises, it is essential to take adequate measures to minimize damage through stringent risk management. At THK, we regard compliance and risk management as basic requirements for business survival and work to ensure that all our employees share this attitude.



#### Compliance system

In 2005 the Compliance Committee was established as a permanent body, with the CEO as its chairman. The Compliance Committee discusses and approves all policies, rules and regulations, and training programs related to compliance, and deals with serious compliance violations and internal reporting. The most serious matters are put before the Board of Directors, which decides whether the matter will be reported. A Compliance Panel, with representation from each business department, has been established under the committee's jurisdiction. A Compliance Panel member is assigned for each area and business location to fulfill the roles of promoting the compliance system and serving as a consultant and liaison.

#### Compliance system



#### Training and educational activities

To foster an understanding of compliance among employees, explanatory sessions for management personnel in Japan were held through Fiscal 2006. In Fiscal 2007 explanatory sessions were held for plant supervisory personnel and new employees at 11 business locations and plants throughout Japan, and the "THK Companies Action Charter," which was formulated in 2007, was distributed. Continuing efforts are being made to instill a basic awareness within the company that compliance is vital to the company's continued existence.

THK's CEO addresses Compliance Panel members at THK headquarters (August 2006)

#### Internal reporting system

To prevent board members and employees from committing compliance violations and help ensure that appropriate actions are taken quickly in the event that a violation occurs, an internal "THK helpline" has been set up. From March 2005, when the service was inaugurated, through March 2007, 12 cases were addressed, involving labor-management problems or internal regulation violations. To deal with complex cases that are difficult to address internally and matters requiring legal adjudication, THK has also established an external service to enable consultation with lawyers. All communications and consultations conducted through these services are considered and dealt with by the Compliance Committee. Regulations prohibit unfavorable treatment of the reporting party within the company.

#### Risk management

The Risk Management Division was established to enable the entire company to deal prudently with risk. The division formulates guidelines for relevant departments concerning risk associated with compliance, environmental matters, disasters, information security, legal obligations, and security-related trade controls, and promotes appropriate actions through education and training. To ensure that business can be conducted without hindrance from unforeseen circumstances, THK has also formulated preventive measures, protection measures, and recovery measures, based on business continuity planning.

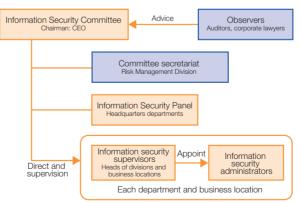


The effective use of information technology in today's advanced information society has a significant impact on how competitive a business can be. In a negative sense, improper disclosure of information has become a problem for society. THK has taken action to both improve our use of information technology and reinforce information security. We are striving to build a world-class system, with particular attention to preventing information leaks, which can undermine a company's credibility. Care is taken in the training of THK personnel to ensure that appropriate actions will be taken in the future.

#### Information management system

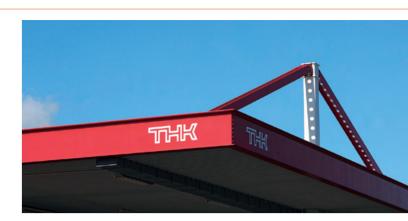
THK has established an Information Security Committee as a permanent body, with the CEO as its chairman, responsible for all THK companies and affiliates. The committee holds discussions on rules, regulations, and educational programs concerned with information security and oversees progress in this area. At the same time, on-site information security supervisors have been assigned at each plant, branch office, and headquarter division. These supervisors appoint information security administrators, who implement specific measures. In addition, the Risk Management Division secretariat and the Internal Audit Division are working together to establish a framework for inspecting Group-wide information security operations. In 2006 a total of 13 information security training classes were held for office managers, department managers, section managers, and other such personnel. THK will continue to promote effective information security in the future.

#### Information management system



#### Preventing improper access

THK has installed an intrusion detection system enabling improper access via the Internet to be monitored in real time. To prevent our servers from an external attack, a triple-layer



firewall has been installed. Daily checks are conducted to ensure there are no security gaps, and periodic advanced-level tests are carried out as well. THK has unified control over electronic data coming from and going to external sources, monitors incoming e-mail for spam and viruses, and scans outgoing e-mail for viruses. We have taken steps to protect the THK intranet from improper access and exposure to viruses, and we are making efforts to maintain and improve an impenetrable security system, one that prevents THK from passing on computer viruses.

#### Personal data protection

Businesses have a fundamental social and legal duty to protect all personal data from improper external or internal disclosure or other inappropriate use. THK has established and applies Personal Data Protection Guidelines to ensure that laws concerning personal data protection are thoroughly observed and understood, and these guidelines are continually evaluated and improved. THK's policies relating to personal information are posted on the "Personal information protection policy" page on our website.

#### Management of confidential information

To prevent improper disclosure of confidential information, all main server rooms; departmental, office, and plant server rooms; and research and development facilities and other technical facilities are kept secured, and all access is monitored. THK's Confidential Management Guidelines prohibit employees from removing business data from the company premises, to prevent mishaps. Disaster contingency measures have been reinforced, with THK's core system servers at the Data Center in Tokyo and backup servers in Osaka both running simultaneously.

# Involvement in society

# Based on our corporate philosophy, we help create a sustainable society.

Advances in business and social advances are closely related. Protecting jobs, cultivating personnel, and securing fair profits and paying taxes-these form the basis for company activities. For these things to happen, though, it is essential to build good relations with the stakeholders: customers, shareholders and investors, partner businesses (cooperating companies and suppliers), employees, government agencies, and local communities. In order to help create a prosperous society through our products and based on our corporate philosophy, we place great value on our relationships with all stakeholders. Providing products that satisfy our customers. Building equitable and transparent relationships with our suppliers and vendors. Respecting employee diversity and individuality and supporting their efforts to contribute to society. Emphasizing the local perspective, whether in Japan or overseas, and actively promoting harmonious coexistence and partnership with local communities. Through these kinds of activities, THK helps create a sustainable society, and we hope these efforts will enhance THK's local reputation.



#### Involvement in society

## Together with our customers

At THK, adopting the customer's point of view is a fundamental principle in sales, product development, manufacturing, quality assurance, and every other area of business. As a creative company developing new products, we look at things from the customer's perspective when considering the development of new products, product functionality, quality, delivery dates, costs, and other factors. In this way, we can respond to needs that customers haven't even thought about yet. THK will continue to be a good partner, providing satisfaction to our many customers.

## Building an organization that delivers customer satisfaction

#### The TAP I Project-Improving sales power

Members of the sales staff who interact with clients have the important task of finding out customers' needs and challenges in order to present solutions and channel this information into product development. To enhance the skills of the sales staff, the TAP1 I Project was inaugurated in 1997. Sales personnel are provided with opportunities for technological training to help them identify customers' potential requirements and offer solutions. Communication skills are essential for accurately determining needs and presenting appropriate solutions, so training to improve communication skills is also provided, with the aim of helping individual employees form long-term relationships of trust with customers. These skills vary depending on the personal attributes of the individual employee, however, so each employee has to look within as well. It's not simply a matter of reading a manual. Through communal efforts such as the sharing of case studies, individuals are encouraged to discover their own individual strengths, and this improves a diverse range of individual capacities. The TAP I Project, designed for creative, development-oriented companies operating at the global level, is being expanded to include sales firms in Europe and North America as well.

1 TAP: THK Advantage Program; Projects include TAP I (sales divisions), TAP II (production divisions), and TAP III (ancillary divisions).

#### Sharing and utilizing comments from customers

THK has improved organizational coordination in order to be able to respond quickly to customers' needs. Customer needs identified by the sales staff and problems related to product development are posted on the THK intranet, where they are accessible in real time by all departments, and this activates THK's problem-solving mechanisms. In addition, the Quality Assurance Section at each plant sends questionnaires about the plant's efforts to sales personnel, based on the understanding that the views of sales people reflect the opinions of the customers. In 2007 THK established the Pro-



duction-Sales CS<sup>2</sup> Improvement Committee, which brings site managers engaged in sales and production together to exchange information, and also introduced the "development treasure chest," an internal system for collecting ideas about development and improving product-related "self-discovery" efforts by employees.

2 CS: Customer Satisfaction

#### VOICE

## Customer satisfaction through sales activities

Taiki Nakamura Team Leader, Sales Section, UENO Branch



We receive various requests from our customers regarding quality, delivery lead times, costs, and the like, and the role of sales people is to coordinate these requests and improve customer satisfaction. As a creative, development-oriented company, we're striving for greater customer satisfaction.

The simplicity of THK product functions enable them to be used in almost every area of business. The same customer may use them as product parts and also in their manufacturing equipment. Our customers work in purchasing, development, basic research, and various other departments. The job of the Sales Section is to enable people in fields where our products aren't used to understand the advantages of using THK products. The TAP I Project is effective in helping us acquire the technology and techniques to do this, and in improving organizational strength. However, the most important thing in sales is having the desire to seize new opportunities. The methods differ depending on the personality of the individual.

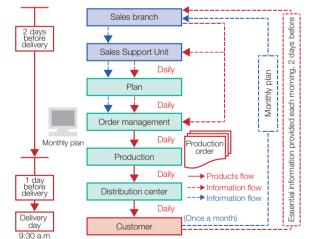
When I first joined THK after graduating with an engineering degree, I thought creating new things was the job of the technical staff. But exploring new possibilities, together with the customer, is the salesperson's job too, so the job is about creating something that didn't exist before.

#### The TAP II Project—Creating a production system yielding greater customer satisfaction

Quality: Satisfy the customer's product-quality requirements by rapidly providing products incorporating the latest technology. Delivery: Meet the customer's deadlines. Cost: Meet the customer's cost requirements. QDC: Quality, Delivery, Cost. In order to achieve customer satisfaction from the QDC perspective, the TAP II Project was inaugurated at five THK plants in Japan in April 2003. The project involves the introduction of a just-in-time production system that shortens lead times and reduces stock while preserving quality. A delivery model has been constructed, taking into account the lead time between order and delivery, that encompasses not only the plant but also the sales divisions that generate the orders and the Distribution centers that ship the goods.

In the past, departments generating orders processed them in daily batches. Now they are processed several times a day, which permits the establishment of production-on-order systems, reducing the cost of managing and shipping stock. Recently, it has become possible to rapidly deliver products incorporating the latest technology to customers. To achieve this type of production format, the processing at each plant has been standardized, employees have been trained, on-site improvements have been stepped up, and productivity has been improved. THK will continue to promote higher productivity by standardizing and automating the processing, with the aim of establishing a zero-stock production-to-order system.

#### Delivery planning flow chart



Structure of system for meeting orders in 2 days

#### Streamlining business with distributors

In February 2005 THK inaugurated the Web-EDI,<sup>1</sup> designed to make dealings with distributors more efficient. By sharing data on stock quantities and storage sites via the Internet, THK can quickly respond to customers while preventing both

overstocking and stock shortages.

1 EDI: Electronic Data Interchange; a system of electronically transmitting data on business transactions between companies in a standard format

#### Communicating with customers

Exhibitions provide opportunities to hear customers' views. THK participates in various exhibitions to enable people to come into direct contact with our products and better understand them.

In Fiscal 2006 THK participated in 48 exhibitions in Japan, including the Japan International Machine Tool Fair (JIMTOF). and actively took part in exhibitions overseas as well. THK also took part in local activities, holding private exhibitions and visiting customers with our exhibition trailers. We strive to assist our customers by accepting more proposals, to able us to respond accurately to customers' needs.





#### Global information service

Because the information required by customers varies according to country and region, THK has created websites in 17 countries, enabling us to post information appropriate to each region. Since earthquakes are a particular problem in Japan, our Japanese website features a seismic isolation

page explaining the differences between seismic isolation and quake resistance. In the USA and Germany THK sells its products via online stores, facilitating their use.



THK Global homepage

#### Providing technical information to customers

To provide customers with technical support. THK makes CAD data, product features, examples of product applications, product lifespan calculations, and other technical information available on our Technical Support website. Over 120,000 visitors, primarily designers and developers, have viewed the site, which can be viewed in three different languages. The site is being updated to add more languages and improve its functions, to provide the latest information quickly.

#### Involvement in society

## Together with our customers

#### Efforts to improve quality

THK undertakes quality assurance activities to provide all our customers with products that are both safe and reliable.

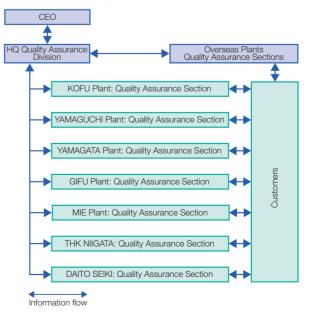
THK has acquired ISO9001 Quality Management System certification for all our plants in Japan, the USA, Europe, and Asia, and our FAI Division and European plants have acquired ISO/TS16949 (Automobile Production Quality Management System) certification, which requires a more advanced level of quality management. THK's Quality Assurance Division and Production Division prepare lists of quality-related priorities each Fiscal year in the areas of product design, manufacturing processes, materials procurement, and technical services, and are fully committed to implementing specific quality-improvement activities at each plant. To promote optimum-site production, which makes it possible to guickly serve our overseas customers, we are engaged in a global qualityimprovement effort, which includes evaluating the quality of locally procured goods, based on the quality-control system THK has established in Japan.

#### Quality assurance system

THK has established quality assurance sections at each plant and sets specific numerical targets and action targets related to quality, incorporating them into the action plans of each division, where they are implemented. Information on these activities is shared at Quality Assurance meetings held every three months, and further improvements are achieved through application of the PDCA cycle.<sup>2</sup> THK also conducts quality audits at cooperating companies and suppliers, providing a total quality assurance system.

2 PDCA cycle: The Plan-Do-Check-Act cycle; a management cycle employed to ensure that work proceeds as planned

#### Quality assurance system





#### Customer satisfaction efforts

To ensure that customer views are reflected in product guality, the results of customer feedback surveys from sales departments and data on problems are sent to plants via the THK intranet. The plants receiving this data guickly study it and meet directly with customers when necessary, making specific improvements and assisting with the development of new products in cooperation with other departments. To ensure that customers can use products correctly, THK's Customer Satisfaction Department, established in 2006 within the Quality Assurance Division, examines data on problems and makes improvements to catalogs and operation manuals concerning the technology used. In cooperation with the sales headquarters, the Customer Satisfaction Department also promotes technical services, preparing case studies, classified by type of business, to prevent the recurrence of problems.

#### Customer comments lead to improvements.

Kazuhiro Kadosawa Quality Assurance Section, KOFU Plant



At the KOFU Plant the quality policy is devoted to "continuing improvements and use of the QDC management cycle to improve customer satisfaction," and we work to improve quality. I analyze complaints from customers, help to formulate measures to identify the causes, and report the findings. In order to find the exact cause of a problem, I visit the manufacturing site, where I work with the design and Engineering and Development Department to pursue the matter thoroughly, but I also have to keep the lead time short for my reports. To be able to provide answers quickly, it's essential to improve my own knowledge about products and manufacturing methods.

In the Quality Assurance Section, we visit customers to explain things to them and have a lot of opportunities for direct contact with customers at the plant as well. You can learn a lot from complaints, and I think that relaying the customer's comments to the plant should result in improvements.

## Involvement in society

## Together with our partner businesses

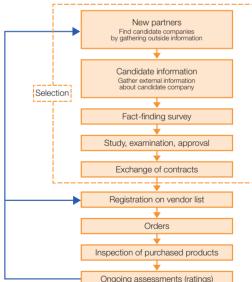
At THK, we regard our suppliers and cooperating companies as essential partners in our efforts to create superior products and contribute to society. We strive to build good relationships through fair and equitable dealings while keeping an eye on the entire supply chain and expanding our efforts to improve quality, delivery, and cost. THK intends to further solidify our collaboration with our partner businesses and to continue to grow along with them.



#### Fair and equitable commerce

THK employs a system under which prospective partner businesses are screened based on the Purchasing Management Guidelines; those that pass the screening are registered as vendors. In addition, each year we implement impartial QDC-related evaluations, based on ISO9001, using partner business rating forms. If areas of concern have been identified, the results are reported to the partner business, and THK offers guidance on making improvements. The findings of this rating system are being verified, and THK will continue to perfect this method of evaluations.

#### Partner business registration procedure



#### Building strong partnerships

The THK Association—Sharing information and friendship The THK Association, consisting of THK's cooperating companies, suppliers, and other partner businesses, is a venue for interaction to promote mutual progress for THK and the association's member companies. The association, which has 199 member companies as of March 2007, sponsors educational activities and information-exchange sessions related to improving product quality and productivity. THK acts as the secretariat, and the THK Association's board of governors provides voluntary assistance with planning and operations. In Fiscal 2006 the association presented six workshops on production methods and factory tours at THK plants in Japan, and held social gatherings in various locations.

At the THK Association general meeting, THK's CEO presented awards for outstanding VA<sup>1</sup> proposals from partner businesses.

1 VA: Value Analysis; a management method for increasing component and product functionality by reducing overall costs (production and sales costs)



June 2007: THK CEO Akihiro Teramachi presents Koyo Giken Co., Ltd., with a VA proposal award at the THK Association general meeting

#### Quality improvement activities

To promote improvements in the quality of procured parts, THK conducts outside audits, based on the auditing plan for each plant, at companies providing critical processes and vendors having problems with delivery deadlines. The audits place emphasis on discovering weak points. Problems illuminated by audits are identified, and guidance and suggestions for improvements are provided. Through this system, efforts are made to improve the quality of procured goods, and this results in the formation of mutually beneficial relationships with partner businesses.

#### Increasing efficiency

In 2001 THK introduced the Procurement EDI, which enables orders to and from partner businesses to be transmitted via the Internet. This helps shorten lead times and enables partner businesses to use order data to manage delivery deadlines more efficiently. The system employs an Internet browser and can be easily installed, since there are no special platform requirements. THK hopes to expand its use.

#### Involvement in society

## Together with our shareholders

THK strives to manage its business activities appropriately and efficiently in order to maximize shareholder earnings. In addition to making efforts to bring about internal improvements, we try to elicit a range of views from our shareholders and investors to help us increase the transparency of corporate management through fair and appropriate disclosure of information.

#### Investor relations events

At THK's semiannual investor meetings, the CEO provides a detailed explanation of our business performance and business strategies. Plenty of time is provided for answering questions and listening to candid opinions directed at company management. THK also tries to expand the dialogue with shareholders and investors through small-scale meetings, individual interviews, and the like. THK is also working to expand opportunities for communication with institutional investors overseas, through regular annual visits.

Since 1998 THK has held its annual General Meeting of Shareholders on a Saturday in mid-June, avoiding the period when most General Meeting of Shareholders are held, to enable more of our shareholders to attend. In an adjoining venue, the company presents an exhibition focusing on THK products in use in familiar surroundings, to enable visitors to obtain a better understanding of THK products that are rarely seen up close in daily life. Shareholders unable to attend General Meeting of Shareholders can exercise their voting rights by mail or via the Internet.





holders

in familiar surroundings, on display in a venue adjoining the site of the General Meeting of Shareholders

#### Investor relations tools

THK publishes an *annual report*, as a means of disclosing information appropriately and impartially to shareholders and investors, and also publishes *Investor Information* for use as an informational tool. These items, along with materials presented at investor meetings and other materials, and other materials, are posted in Japanese and English on the Investor

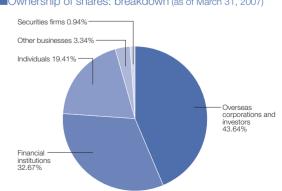
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Relations page of the THK website. Video coverage of investor meetings is also provided in both Japanese and English. In these and other ways, THK strives for appropriate and impartial information disclosure to all investors regardless of affiliation or location.



Investor Relations web page (English-language site)



#### Ownership of shares: breakdown (as of March 31, 2007)

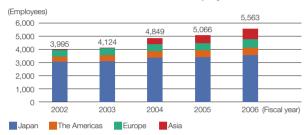
## Involvement in society Together with our employees

## Involvement in society

## Together with our employees

Ever since the company was first established, THK has advanced together with its employees, embracing the sentiment that "a company is its people." THK employees are interested in everything and actively seek to achieve their goals and dreams; they provide customers with innovative solutions and drive THK's development. THK is sustained by the growth of its employees, and at the same time the company contributes to employee growth. We intend to sustain and expand this favorable relationship, helping one another grow.

#### Trends in numbers of consolidated employees



#### THK employees, non-consolidated (average age/years of service) (As of March 31, 2007)

- Permanent staff, all ------2,961 (35.4 years/13.1 years)

- Temporary staff ------- 412

#### Thinking in terms of "human resources"

THK uses the term "human resources" to refer its human materials, based on the concept that our employees, who drive the company's business, are not mere human materials but valued resources. By providing environments and systems that are rewarding and easy to work in, THK seeks to expand and increase the quality of these assets. These efforts are supported by a system that coordinates the efforts of the Human Resources Department, which creates environments and systems that help improve individual strengths, and the Human Resources Development Department, which finds and recruits new employees.

#### Personnel system

In June 2005 THK introduced a personnel system devoted to "people-building," based on the notion that it's essential to cultivate people who can bring about innovation and people who take responsibility for the roles they play. The system positively evaluates employees who assume individual responsibility, refuse to be encumbered by traditional approaches, and demonstrate future-oriented actions. Providing a broader field for vigorous cultivation of human



resources only increases THK's strengths as a creative, development-oriented company. We will operate our personnel system effectively and make further improvements in order to develop more human resources who can bring about innovation and take responsibility for their own roles.

#### Developing human resources globally

THK regards global development as crucial to the achievement of long-term management goals and has therefore improved its overseas production and sales activities. Although Japanese personnel are assigned to positions of senior responsibility at each business location, we employ local staff in other managerial capacities and strive for two-way communication, as well as an understanding of THK's corpo-

rate philosophy. In the future, THK will bring locally hired employees to Japan for training, assign graduates of overseas universities to positions in Japan, and hire foreign exchange students, thereby sharing and disseminating our global vision.



TMA (USA) staff undergoing technical training in Japan

#### Eliciting individuality

To prevent employee individuality and the potential for personal growth from being obscured within the larger organization, THK strives to fully develop its human resources and is improving its system for putting the right person in the right job and making full use of employee abilities.

#### Career talks

The Human Resources Development Department holds "career talks," interviewing individual employees to ascertain their backgrounds and aspirations, and has compiled a career talk database.

This information is expected to be put to use in personnel planning, for recruiting personnel and reinvigorating the orga-

nization. Over the next three years THK intends to establish a system for holding career talks with all its employees.

#### Announcing opportunities

Rather than simply reassigning employees to new positions, THK employs a system known as "announcing opportunities," whereby specific job openings, such as those occurring at the start of a new project, are announced to all employees. Applicants for such positions do not need the approval of their supervisors, and the information is kept confidential until the transfer is completed. The selection process focuses on the employee's work record and favors those who seek out new challenges. The system was utilized for two projects in Fiscal 2006, and two employees were transferred to new positions.

#### Proposals for improvements

THK has established a system eliciting proposals for improvements, to assist efforts to improve and refine products, operational efficiency, quality, safety, productivity, technology, and other areas. We value our employees' originality, ingenuity, and on-site perspectives. In Fiscal 2006 alone 8,095 proposals were submitted, ranging from ideas for revising distribution routes to suggestions for demonstration models for use in sales activities. By continuing to encourage such proposals, the system not only improves operations but also improves employees' day-to-day observation skills and inspires greater self-motivation.

#### Employee inventiveness

THK has established an "employee invention" system that actively solicits and rewards submissions of inventions by employees. Directed primarily at technical employees, the system is intended to generate greater motivation and encourage employee inventions, in full compliance with the law. Submissions are screened and reviewed internally, and, when necessary, applications for patents are submitted. Employees who submit inventions receive a cash reward regardless of the screening results. In Fiscal 2006, 458 inventions were submitted and 120 patent applications were filed.

#### Eliciting ideas for new products

In Fiscal 2006, as a creative, development-oriented company, THK initiated a system for eliciting ideas for new product development, not only from technical departments but from the sales and production divisions as well, in order to utilize the intelligence of all our employees. Information accumulated independently by each department is shared with all the others, in the hope of providing clues that will lead to new product development. The system is designed to make it easy for non-technical employees to present their ideas. The ideas submitted are reviewed in screening sessions attended by representatives from the sales, production, and technical divisions, and the best suggestions are selected. In Fiscal 2006, the system's first year, 57 ideas were submitted, of which 15 were cited for commendation.

#### VOICE

Thanks to the announcement of an opportunity, I'm now working hard in my new job.

Yasuaki Yoshino Senior Staff, System Department Corporate Strategy Division



For nine years after joining the company, I worked in the Sales Support Section of a sales branch. In November 2006 there was an internal announcement of an opening in a position related to using, maintaining, and developing core systems. I applied for the job, and in April 2007 I was transferred to the Systems Department. I thought the complex work I had been involved in at the branch would help me make systems more efficient. Programming is one of my interests, so this was an excellent opportunity. Currently I'm involved in constructing a work-support system. I get a great sense of satisfaction from being able to help make everyone's work more efficient while incorporating the views of experienced users. To tell the truth, because there are personal relationships in the workplace, I had to summon up a little courage to put my name in for a transfer, but I think this is an extremely good system. It gave me the opportunity to do something that I really wanted to do

## Involvement in society Together with our employees

## Expanding employees' individual strengths

In order for THK to achieve further advances, it is essential that each employee bring to his or her job first-class technical strengths and solution-finding abilities as well as the ability to cope with globalization. We have developed a variety of training programs that help improve individual strengths, in order to cultivate human resources who understand their own responsibilities and can act on their own initiative.

#### Education and training

As a manufacturer of superior products, THK provides training for new employees not only to ensure that they know about the company and about basic adult responsibilities but also to instill technical knowledge. This is where the importance of self-reliance, honoring one's responsibilities, communication skills, and cooperation are taught. With regard to specific skills, THK actively offers opportunities for language

training, to cultivate human resources capable of acting in international settings. We also provide opportunities for self-development in the form of e-learning, for improving various skills



Language training at THK headguarters

#### Language trainees

English	Headquarters: 39; branches: 13; plants: 29
Chinese	Headquarters: 3
Korean	Headquarters: 1

All classes are conducted for a period of 6 months.

#### Plant activities

Efforts are made at each plant to cultivate human resources who possess superior skills, to improve product quality and productivity.

#### Skill maps

A "skill map" is a computerized record of employee skills and abilities. THK uses skill maps to enable employees to identify their own strengths within the context of those of all employees and to motivate them to improve their abilities. To expand the TAP II Project, each employee must be multi-skilled and capable of dealing effectively with a greater number of processes. THK cultivates the development of multiple skills by identifying the skills that employees already possess and improving the areas in which they are lacking. Through direct discussions between workers and supervisors, we find out what skills employees want to acquire, and this results in more effective distribution of personnel.



#### Proficiency testing

THK encourages employees to take nationally administered skills tests at each plant. In Fiscal 2006 19 employees passed five types of national tests. We also conduct internal skills testing in order to evaluate and test specific skills required for various positions. This helps reveal technical abilities and leads to greater awareness and motivation.

#### Skills schools

THK has established "skills schools" at each plant, where qualified employees train skilled workers. Workshops are also offered for employees intending to take national or internal skills tests and employees who want to acquire new skills.



Susumu Aminaga (at right), Environmental Management Section, Manufacturing Promotion Department, YAMAGUCHI Plant

I've worked in production technology for a number of years, during which I've constantly acquired skills that are useful in improving equipment and increasing productivity. So far I've earned 12 national qualifications as well as a number of technical qualifications in electrical construction and welding skills. Since the skills school was established in 2000, I've been working as an instructor, teaching basic skills, such as how to operate milling machines and drills, according to the aptitude of the students.

#### Akira Hamada (at left), Group Leader, Manufacturing Section IV, Manufacturing Department, YAMAGUCHI Plant

In June 2006, after being assigned to a department that improves operations at the production sites, I enrolled in the skills school, where I took classes for two hours a week. The production processes are almost entirely automated so I didn't think basic skills were necessary, but the skills I acquired are very useful for making improvements. At the skills school we can get the answers to very specific questions, which helps in making routine improvements.

#### Involvement in society

## Together with our employees

#### Creating a safe and healthy working environment

THK works to create a safe and healthy working environment, primarily through the general Affairs Sections at our headquarters and production sites.

#### Occupational health and safety

THK sets specific targets at each plant for achieving the Group-wide goal of zero industrial accidents.

Every month a Health and Safety Committee meets at each plant, and health and safety patrols are conducted to identify risks and implement improvements. Educational activities, such as health and safety workshops, are also held, and training is provided for firefighting teams established at each plant. Employees can consult with nurses concerning mental health issues and, when necessary, be referred to specialists. Thus, collaboration with industrial physicians has improved.

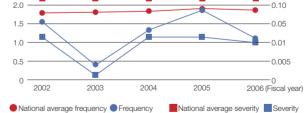
The headquarters Health and Safety Committee, which meets once a month, provides firefighting training once a year. THK will continue to ensure cooperation between human Resources Departmenf and industrial physicians and take measures to safeguard mental health.



A "health news" posting at the KOFU Plant

Headquarters firefighting training (January 2007)





Frequency: Frequency of the occurrence of industrial accidents Frequency = (accidents) / (working hours) x 1,000,000 Severity: Degree of severity of industrial accidents Severity = (lost working days) / (working hours) x 1,000

#### Creating a vibrant work environment

To help create an employee-friendly work environment, THK has established child-care leave and family-care leave systems, in accordance with labor laws. In Fiscal 2006 46 employees took advantage of the availability of child-care leave.

#### Communication with employees

THK makes an effort to create opportunities for communication among employees and between employees and managers. In Fiscal 2006, which marks the thirty-fifth year since THK was founded, 2,920 guests including employees and their families attended special anniversary celebrations in Kyoto, Hakata, Tokyo, and Yamagata. THK's company magazine serves as a communication tool for employees. The magazine is primarily in Japanese and English, but articles from non-English-speaking countries appear in the local language as well, making it easier for more employees to read them. The magazine is published three times a year in printings of 6,500 copies and provided to all corporation employees, including locally recruited temporary employees and part-time staff.



35th anniversary party at the New Takanawa Prince Hotel in Tokyo



Children's play area at the Kyoto party, held at the Westin Hotel

VOICE

Continuing a rewarding career after childbirth Takako Ikeda

Senior Staff, Sales Promotion Section Asia Pacific International Sales Department



I wanted to work in a position where I could use my English, so I joined THK in 1995. Since then I moved from clerical work to a career track where I'm in charge of dealing with customers primarily in Southeast Asia-Korea, Malaysia, Thailand, Singapore, and Vietnam. At the time of the birth of my child, who's now three, I took almost a year off from work, including a six-week maternity leave and a child-care leave. When I came back to work, I was able to return to my old job, and I've been able to maintain continued relationships with the customers. Actually, I was worried about returning to work, though, because there wasn't much precedent for taking child-care leave at company headquarters. Although I work full-time without taking reduced hours for child care, I wouldn't have been able to raise a child and continue working full-time if I hadn't made up my mind to do it and if I didn't have cooperation from my family and the people around me. Attitudes within the company are gradually changing. I think people should talk to each other about creating an environment that's easy to work in, so that more employees will be able to both work and raise children.

## Involvement in society Together with local communities

THK believes that, as a member of society, in addition to the social contributions we make through our business activities, it's essential to contribute to society in the interest of harmonious coexistence with local communities. THK naturally demonstrates concern for the environment in the process of carrying on company business, and as a corporate citizen we recognize the importance of coexisting with regions and local communities. With regard to the actions we take as a business, THK is proceeding to make its own unique social contributions.



#### **Regional activities**

THK voluntarily endeavors to conduct socially meaningful activities, rooted in each respective local community, at each of its workplaces, plants, and group companies. These activities cover a broad spectrum that includes maintaining the environment, traffic safety campaigns, and participation in local events. THK places great importance on communicating with people in local communities through contributions to local society.

#### Plant tours

Each THK plant opens its doors to local communities by providing plant tours for nearby educational institutions. In Fiscal 2006 elementary school students from nearby schools toured THK's MIE and GIFU Plants. At the KOFU Plant, 189 students from 6 local high schools, 37 university students,

and 7 students from a school for the deaf participated in plant tours. In addition, two junior high school students visited the plant to observe their parents at work.



Elementary school students touring the MIE Plant in June 2006

#### Internships

Internships for high school and university students are available at the YAMAGATA, KOFU, MIE, and GIFU Plants, and at THK NIIGATA, Each June the DAITO SEIKI, MISHIMA Plant admits interns from local industrial high schools. In Fiscal 2006 five high school students participated in a twoday training session there. The presence of curious high

school students performing work provides a positive stimulus for employees, and internships offer an excellent opportunity for interaction between the company and schools



High school student interns at THK NIIGATA

# Participation in environmental activities

Each plant works to maintain the local environment, chiefly through its Environmental Management Section. In August and October of 2006, 20 employees from the GIFU Plant, which is situated close to a residential area, gathered rubbish and cut grass under roadside trees in an area spanning two kilometers, from Sekigahara Station and the plant perimeter to the Sekigahara Bypass. At the YAMAGUCHI Plant, which is located in an industrial park, a local social welfare association arranged for a "silver manpower group," organized by a former director of the local forest cooperative, to clear weeds, as a way of utilizing local manpower. At the KOFU Plant, employees cleaned up the area around the plant as part of the "Clean Yamanashi" campaign. KOFU Plant employees also participated in Yamanashi Prefecture's "eco-driving" campaign by putting stickers on company vehicles and driving them appropriately. In addition, leftovers from the plant's

cafeteria, together with leftovers donated by other companies in the Kokubo Industrial Estate, are converted to compost, which is used by local farmers.



Sticker supporting eco-driving on a company vehicle at the KOFU Plant

#### Participation in local events

THK cosponsors and participates in local events, which serve

as venues for communication with local residents.

#### Participation in local events

- · Sponsorship of a booth at the Kokubo Industrial Estate Summer Festival (KOFU Plant, July)
- Participation in the Sekigahara Festival (GIFU Plant, October)
- Hosting of the THK Festival of Appreciation (YAMAGATA Plant, September)
- Participation in an industrial park ball game tournament and marathon (KOFU Plant, October)
- Co-sponsorship of the Cherry Marathon and dispatch of workers to provide roadside assistance (YAMAGATA Plant, June)
- Participation by all new employees in a "New Friendships" event sponsored by the Chamber of Commerce (MIE Plant, July)

#### Involvement in society

## Together with local communities

- Implementation of spring and autumn traffic safety campaigns (DAITO SEIKI MISHIMA Plant, April and September)
- · Co-sponsorship of the Shimizu-cho Spring Festival and staff participation in firefighting events (DAITO SEIKI MISHIMA Plant, August)
- · Co-sponsorship of and assistance with the Hometown Festival sponsored by the Chamber of Commerce (DAITO SEIKI SENDAI Plant October)
- · Co-sponsorship of and contributions to the Azumino-shi local baseball competition (DAITO SEIKI MATSUMOTO Plant, April)





Potato cooking event (YAMAGATA Plant)

Support activities

THK supports all types of charitable causes devoted to disaster relief and education.

- Principal charitable contributions in Fiscal 2006
- Donation for earthquake recovery in Java (Japanese Red Cross Society, May)
- Fundraising for Nagaoka University of Technology's 30th Anniversary Memorial Project (July)
- · Cooperative fundraising for Red Feather (fundraising event held in cooperation with the Tokyo Social Welfare Corporation, July)
- Support for the Japan Science Foundation (December)

#### Overseas activities

THK regards global development as one pillar of its long-term business goals. Striving for optimal-site production, THK is improving production systems in the Americas, Europe, and Asia, while simultaneously promoting local hiring of employees and managers and emphasizing contributions to local areas. Development at these overseas locations is evaluated at each respective location. The expansion of business in France has been assessed as a notable achievement in French-Japanese relations, and THK was awarded the medal of Officer of the French National Order of Merit in June 2003. The award ceremony, held at the French embassy in Tokyo, was attended by officials including the President of the Alsace Public Development Corporation and the Mayor of Ensisheim, located in the Alsace region of France.

In Fiscal 2006 THK was named an honorary citizen of Da-





ceremony at the Tokyo Prince Hotel (November 2006)

ceremony at the French embassy (June 2003)

Traffic safety campaign (DAITO SEIKI MISHIMA Plant)

lian, in recognition of its contributions to the development of Dalian, China. In addition, THK also received the Azalea Prize, which is awarded to individuals, organizations, and businesses, for contributions to the development of and increased interaction with the city of Wuxi, China.

#### Activities in the Americas

At THK Manufacturing of America, workplace tours are provided once a year for local high school juniors and seniors. After touring the site, interested students can apply for parttime summer vacation jobs there. In Fiscal 2006 two former students and part-time workers joined the company as fulltime employees.

THK provides health consultations to encourage greater health awareness. In addition, 21 employees have been trained in the use of defibrillators, which have been installed in two locations for use in the event of cardiopulmonary arrest. In these and other ways, THK is concentrating on creating a safe and healthy work environment.



Visit by local high school students (May 2006)



On-site defibrillator, ready in the event of cardiopulmonary arrest

#### Activities in Europe

At THK Manufacturing of Europe, environmental education is provided for employees, to promote environmental activities based on ISO14001. In Fiscal 2006 training in thoroughly separating waste products was provided for all plant employees, and environmental education was provided as needed

for new employees. The company promoted two-wav communication with employees in the form of "career talks," and carried out hiring activities and personnel evaluations without regard to race or gender.



Photographs are used to help raise environmental awareness

#### Activities in China

THK Dalian has conducted employee satisfaction surveys to gain a better understanding of the attitudes and aspirations of its employees, for the purpose of achieving greater mutual understanding and increased cooperation between personnel dispatched from Japan and the approximately 480 Chinese employees. Based on these survey findings, detailed improvements are being made, including efforts to provide a more amenable work environment and more comfortable living accommodations.

# Harmony with the environment

## Harmony with the environment

## Promoting environmental management

# Aiming to be a company in harmony with the environment, we practice energy conservation through our products.

Environmental issues are a common problem for the entire human race. Efforts to resolve environmental issues are essential to THK's existence and its activities. By producing the LM Guide and other products that utilize rolling technology, THK has helped conserve energy and resources and reduce the burden that human activities inflict on the global environment. In addition, by means such as the acquisition of ISO14001 certification for each of our manufacturing plants, we actively work to reduce environmental impact. THK promotes energy conservation and energy efficiency, and to combat global warming we have established the goal of achieving a 15% reduction in CO<sub>2</sub> emissions per basic unit by 2010, compared with 2005 emissions.

THK will continue to provide environmental solutions through its products and concentrate on developing environment-friendly products. Working in cooperation with our affiliates, cooperating companies, and local communities, we are striving to further reduce environment burdens while preserving and improving the natural environment.



## Basic environment policy

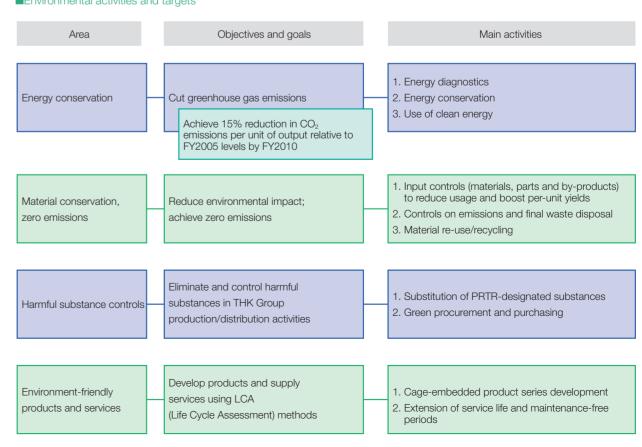
THK established a basic environment policy in April 2001 and has engaged in business activities aimed at coexisting with the environment. In Fiscal 2005 THK designated a set of areas and targets for environmental efforts as common

### [THK Group's basic policy regarding the environment]

Since the development of the LM Guide, the THK Group have contributed to both society and the economy through their pioneering role as manufacturers of linear motion systems and machine components. We also believe that it is a company's social responsibility to leave the global environment in a healthy state for the next generation, which is why we are undertaking the following initiatives to continually decrease environmental burdens and maintain and improve the natural environment.

- 1. Conservation of the environment is considered a major management concern, and we are striving to accurately grasp the impact on the environment produced by the Group's business activities, products, and services. Every division participates by setting relevant environmental goals.
- 2. In addition to following environmental laws, we set self-imposed standards for Group companies and regularly review them to improve the efficiency and effectiveness of our environmental management.
- 3. We will continually promote the development of products that help reduce environmental burdens.
- 4. We will continually promote conservation and recycling of resources, with particular attention to reducing and recycling waste from our manufacturing divisions.
- 5. To promote greater unity in our environmental activities, we will provide guidance and support to our affiliates and business partners, and strive to work in cooperation and harmony with local communities.
- 6. This basic policy regarding the environment shall be disseminated to all divisions in the Group through education, training, and activities designed to improve awareness. We will disclose information concerning the environment to parties within and outside the Group in a timely manner.

#### Environmental activities and targets



objectives. We have made efforts to achieve these objectives, verifying our progress through companywide quarterly reviews and disseminating relevant information.

#### Harmony with the environment

## Promoting environmental management



#### Environmental management system

THK is proceeding with the acquisition of International Environment Management System ISO14001 certification, which has already been acquired at five THK plants in Japan, at THK NIIGATA, and at plants in the Americas and Europe. Based on this management system, THK is making efforts to improve environmental conservation at each plant, establishing policies and targets appropriate for each respective plant, and taking action to achieve these targets. THK will proceed with the acquisition of certification at all THK Group companies in Japan and plants in China. Furthermore, We are carrying out activities to improve the precision of its data, making it possible to view the results of these activities, and extending the scope of the data beyond the present five THK plants in Japan.

#### ■ISO14001 accredited business locations

Site	Date certified	Certifying body	
YAMAGATA Plant	September 10, 1999		
KOFU Plant	December 28, 2000		
YAMAGUCHI Plant	February 2, 2001	JQA	
MIE Plant	September 6, 2002		
TMA (USA)	July 14, 2003	QMI	
TME (Europe)	February 3, 2004	AFAQ	
GIFU Plant	December 24, 2004	104	
THK NIIGATA	October 21, 2005	JQA	

vironmental management reviews. THK responds to every problem with specific improvements.

#### Environmental education

The Environment Management Department Risk Management Division at THK headquarters promotes voluntary environmental activities by individual employees. THK carried out environmental education activities at seven sales offices in Fiscal 2006. In addition, environmental news, relevant laws, internal standards for green purchasing, and customer standards for environmental audits were posted on the THK intranet.

The environmental Management Section at each plant provide educational activities for employees, to promote the achievement of respective environmental objectives. Curriculums include the 5S<sup>1</sup> activities, emergency response, and global warming. The environmental divisions also promote the acquisition of environment-related certification and work to instill strict adherence to environmental laws.

1 5S: The five-S approach: Sort, Set in Place, Shine, Standardize, Sustain



raining in the handling of LNG (August 2006)

#### Environmental audits

THK conducts internal audits to continually improve the environmental management system. Audits are conducted at our sales branches, production sites, and headquarters, to ensure that everyone has a thorough grasp of THK's basic environment policy, ensure adherence to environment-related laws and regulations, and monitor compliance with environmental surveys requested by customers. The Environmental Management Section at each plant conduct internal audits, and the performance of basic duties is verified through en-

#### Employees possessing environmental qualifications

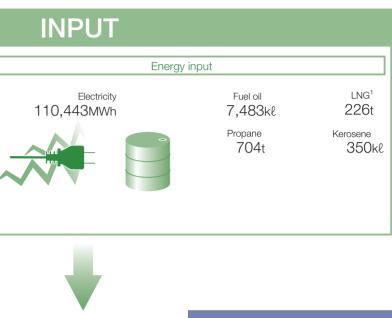
Pollution Control Managers (air) 7
Pollution Control Managers (water quality) 2
Pollution Control Managers (noise) 1
Pollution Control Managers (vibration) 3
Pollution Control Managers (dioxins) 1
Energy Officers (heat, electric power) 13
Controlled Industrial Waste Supervisors13
ISO14001 Internal Environment Auditors 114

#### Harmony with the environment

## Environmental impact: The big picture

THK conducts its business activities with constant attention to reducing environmental burdens. By promoting effective recycling, THK succeeded in significantly reducing the volume of industrial waste for permanent disposal in Fiscal 2006.









Green purchasing guidelines have been distributed to all suppliers to promote the purchase of materials with low environmental impact.

#### Each business location implements green purchasing, pursues zero emissions, and performs other activities to reduce environmental burdens, based on ISO14001. THK is working to make modal shifts and is reducing energy use in distribution processes

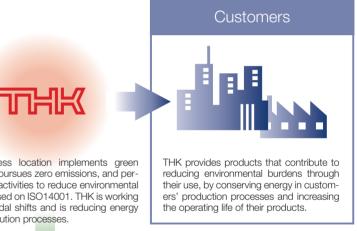


1 LNG: Liquefied natural gas

2 CO<sub>2</sub> emissions: The equivalent CO<sub>2</sub> volume corresponding to the amount of electricity, fuel oil, propane, kerosene, LNG, butane, gasoline, and light oil utilized at the plant (conversion values are based on data from the Ministry of the Environment)

3 NOx: Oxides of nitrogen, generated by fuel combustion in boilers, etc

4 SOx: Oxides of sulfur, generated by combustion of fuel containing sulfur in boilers, etc



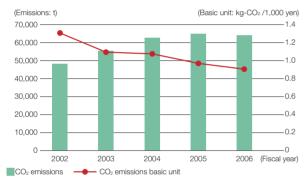
## Harmony with the environment Energy conservation

#### Reducing CO<sub>2</sub> emissions

THK is directing its efforts toward three priority areas: energy diagnostics, energy conservation, and the use of clean energy, as objectives for reducing output basic unit<sup>1</sup> CO<sub>2</sub> emissions by 15% by 2010, compared to the figure for Fiscal 2005. Over the last five years, as annual output has increased, the total CO<sub>2</sub> emissions have also increased. In Fiscal 2006, however, THK succeeded in reducing CO<sub>2</sub> emissions by 1.5% in comparison to Fiscal 2005, for a basic-unit decrease of approximately 6%. THK will continue to actively practice energy conservation while pursuing both economic expansion and the prevention of global warming.

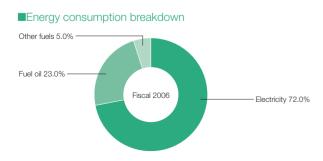
1 Output basic unit:  $CO_2$  emissions per 1,000 yen of output (kg- $CO_2$  /1,000 yen of output)

#### Trends in CO<sub>2</sub> emissions



#### Reducing energy consumption

Energy is principally used to provide power for machining, thermal processing, and other processes, as well as for air conditioning, compressors, and lighting. Electricity purchased from power companies accounts for 72% of the energy consumed, fuel oil accounts for 23%, and the remainder is obtained from propane, LNG, and other fossil fuels. In order to reduce CO<sub>2</sub> emissions while increasing output, it is essential to reduce the amount of energy consumed, while shifting to energy sources with low CO<sub>2</sub> emissions. THK is working to increase overall energy efficiency by replacing and improving plant equipment and applying energy diagnostics to existing equipment.





#### Plant activities

Energy diagnostics are applied at each plant, appropriate maintenance is practiced, and outdated equipment is replaced. At the YAMAGUCHI and YAMAGATA Plants, cogeneration systems have been introduced to enable fuel-oil-powered in-house power generation. Due to sudden increases in crude oil prices, the plants have adopted a flexible approach enabling them to increase the percentage of purchased electricity, which produces lower CO<sub>2</sub> emissions compared to electricity generated in-house. In addition, THK employees practice energy conservation by preventing air leaks and turning out lights during breaks.

#### Introduction of GHP equipment

THK's CHUBU Distribution Center was rebuilt in January 2007, expanding the floor area requiring air conditioning. Gas heat pump (GHP) air conditioning equipment fueled by LNG, which produces lower CO<sub>2</sub> emissions than crude oil,

was installed; the same type of equipment is used at the nearby GIFU Plant. In this way, despite the expansion of floor area, an increase in energy consumption was avoided.



Changing energy consumption

In March 2007 a drip-feed carburizing furnace (carburizing quenching facility) was installed at the Yamagata Plant for use in heat-treating LM Guide blocks. This constituted a shift to an electrically powered heat source. In comparison to the old gas furnace, propane gas use is expected to be reduced by

approximately 43 tons (CO<sub>2</sub> emissions: 131 tons) annually. Other maintenance and improvement activities are also advancing, based on annual plans.



Drip-feed carburizing furnace installed in March 2007 at the YAMAGATA Plant

#### Energy-saving equipment

In March 2007 an invertercontrolled air compressor was installed at the KOFU Plant, and the plant switched to centralized control. This is expected to result in energy savings in Fiscal 2007.



installed at the KOFU Plant

#### Lights Off Campaign

Employees at DAITO SEIKI'S SENDAI plant took part in the Ministry of the Environment's Lights Off Campaign to reduce CO<sub>2</sub> emissions, turning off lights on the plant's outdoor signs and in the tennis courts, walkways, and the plant entrance from 8:00 p.m. until the following morning, from June 16 through June 21, 2007—one day ahead of the campaign schedule. The campaign featured an event on the evening of June 18 called Black Illumination 2006, which called for the electricity to be turned off at various sites, including Tokyo

Tower, from 8:00 to 10:00 p.m. During the five-day campaign 39,845 buildings were involved, reducing power consumption by 812,508 kWh (based on self-reporting).



#### Promoting green distribution

After Japan's energy conservation laws were revised in April 2006, THK's Distribution Department, which oversees four Distribution centers in Japan, developed a Green Distribution Project aimed at reducing environmental burdens arising from distribution. The Distribution center will begin implementing improvements in Fiscal 2007, based on the Green Distribution Medium-term Plan for 2007 to 2008. This plan sets forth a list of priority improvements for accurately determining ton-kilometers<sup>2</sup> and energy consumption. THK alone shipped more than 30 million tons in Fiscal 2006 and was therefore designated a shipper by the presiding Bureaus of Economy,

Trade and Industry. THK pursues a policy devoted to improving distribution efficiency and reducing CO<sub>2</sub> emissions by improving means of transport, such as by enacting a modal shift from transportation by truck to shipping by rail and using low-emission vehicles.

2 Ton-kilometer: Unit used to express amounts of cargo transported; one ton of freight transported one kilometer equals one ton-kilometer

#### Modal shifts

In April 2005 the means of distribution from the YAMAGUCHI Distribution Center to customers switched from transportation by truck to shipping by rail. The shift from weekly distribution using 10-ton trucks to semiweekly distribution by rail using 5-ton containers made it possible to reduce CO<sub>2</sub> emissions in Fiscal 2006 by 334 tons. Longer transportation times and other factors are still an issue, but THK is efficiently balancing various modes of transportation and reducing CO<sub>2</sub> emissions. In Fiscal 2006 THK implemented a similar modal shift<sup>3</sup> for transport from the CHUBU Distribution Center to selected customers. THK is pursuing a policy devoted to implementing modal shifts wherever possible and is proceeding to do so gradually, while consulting and cooperating with our customers.

3 Modal shift: A transition from transportation by truck to shipment by sea and rail, to permit shipping in bulk and reduce  $\rm CO_2\ emissions$ 



#### Modal shift: YAMAGUCHI Distribution Center

Ton-kilometers remain the same, but shipping by rail reduces  $\mbox{CO}_2$  emissions by 334 tons

## Material conservation and zero emissions

#### Harmony with the environment

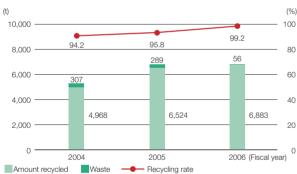
## Environment-friendly products and services

## Promoting zero emissions

THK has established targets for the achievement of zero emissions<sup>1</sup> at each of its plants, in the areas of managing input of materials, parts, and subsidiary materials; managing emissions and waste for permanent disposal; and reusing and recycling. The principal materials used in 99% of THK products are metals, mainly steel. Improvements in rail-cutting yield for LM Guides and machining yield for Ball Screw shafts and nuts have enabled increases in the yield ratios for raw materials. In addition, THK has succeeded in increasing the operating life of grindstones and reducing the amount of grindstone molding (dressing) required, by changing the grindstones and coolant used in processing and improving the methods of use. Industrial waste unavoidably generated through business activities is thoroughly separated from ordinary waste, recycled, and reused as a useful resource. As a result, the percentage of waste requiring permanent disposal has been reduced to 0.8% at THK's five plants in Japan. THK will continue to strive for zero waste and is working to reduce the amount of waste generated and implement rigorous recycling.

1 Zero emissions: A model system of circulating resources in which waste matter is used as a resource, leaving no waste whatsoever

#### Trends in waste emissions



#### Plant activities

THK has established specific targets for the achievement of zero emissions at each plant.

#### Sludge as a useful resource

Impurities such as coolants are contained in sludge generated by the many grinding processes involved in THK's production processes. Until recently, this sludge has been treated





Grinding sludge generated by manufacturing processes

Compressed, solidified briquette



as grinding waste and discarded for landfill disposal. THK has switched to processes that do not cause impurities to be mixed into sludge, which can now be compressed, solidified, and converted into briguettes. These are sold as a useful resource at the YAMAGUCHI and YAMAGATA Plants.

#### Promoting recycling through thorough separation

For waste materials generated by various processes at THK's KOFU plant, records are kept of the controlling department, type and amount of waste, and personnel responsible. Departments that separate waste erroneously receive warnings

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and are required to separate the waste correctly. Starting in fiscal 2007, waste will be separated into more categories, and designated contractors will begin purchasing waste materials, which will be converted to useful resources.



テクノー2

5.9Kg

深山修-

Waste separation at the GIFU Plant

#### Recycling cutting tools

Japan is almost entirely dependent on other countries for the many rare metals, such as tungsten, contained in cutting tools. For social and economic reasons, these rare metals are expected to become difficult to obtain in the future. At the YAMAGATA Plant, used cutting tools began to be recycled in fiscal 2006. Previously, used cutting tools were either reground or discarded, and cutting tools that were not reground were all treated as scrap metal. Now, expert contractors de-

termine which tools can be reground and which should be recycled. In fiscal 2006 640 kilograms were recy cled as rare resources

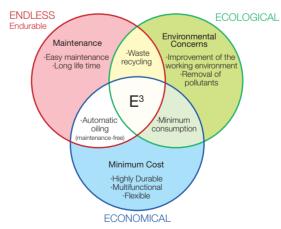


Used cutting tools to be recycled

#### Creating products with minimal environmental impact

THK is concerned about environmental impact at every stage of operations, from the procurement of raw materials through production, sales, and permanent disposal. THK's linear motion systems reduce friction resistance for objects in motion, and this helps reduce electricity consumption by machines and conserve energy. In developing new products, THK is embracing the basic concept of "cubic E." This is a development principle devoted to improving the serviceability and safety of products while extending their operational life (Endless); reducing waste and contaminant emissions and improving the plant work environment by greatly reducing amounts of grease and other lubricants used (Ecological); and increasing cost performance by providing multi-functionality and high durability (Economical). THK actively strives to develop environment-friendly products of this sort and helps to reduce environmental burdens by providing them.

#### Cubic E



#### Green products

THK considers "green products" to be products manufactured from parts and materials that do not contain environmentally hazardous substances<sup>2</sup> or contain less than the maximum allowable amount of such substances. Harmful substances used in surface treatments or parts are steadily being replaced in both new and preexisting products. Beginning in Fiscal 2006, virtually all products produced according to standard specifications will be green products.

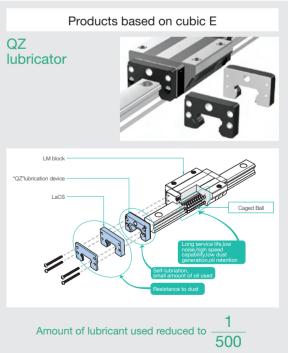
2 Environmentally hazardous substances: Chemical substances capable of inflicting some type of adverse impact on the human body or on ecosystem

#### Promoting green purchasing

In Fiscal 2004 THK issued a set of green purchasing<sup>3</sup> guidelines. These guidelines, which were explained and distributed to our suppliers and posted on the THK website, require that suppliers be surveyed concerning hazardous substances and urge suppliers to reduce or eliminate the use of prohibited materials, establish environmental management systems, and take action to reduce environmental burdens. In addition, in evaluating and selecting suppliers, THK has added an "E," for "environmental consciousness" to the old QDC criteria, and now places a high priority on purchasing from suppliers conforming to the high standards of QDCE.

Based on surveys of hazardous substances used, THK has prepared a database of environmentally hazardous substances contained in all parts used to make its products (the THK Group Chemical Substances Standards list includes approximately 800 types of chemical substances). This data is updated whenever a new product is developed or new materials are used. This also provides a system that enables us to answer queries from our customers regarding substances subject to risk management.

3 Green purchasing: Giving preference to purchasing raw materials that have minimal environmental impact from suppliers who strive to reduce environmental burdens



Attaching the QZ to the LM Guide enables long-term maintenance free operation without requiring the installation of forced lubrication systems. The lubricant efficiently coats the ball transfer surfaces, reducing lubricant usage to 1/500 the volume required by previous lubricating mechanisms. Reducing the amount of lubricant also reduces the amount of waste lubricant, which results in greener machining and work environments.

#### Harmony with the environment

## Management of hazardous substances



#### Dealing with environmental risk

THK classifies measures taken to deal with environmentally hazardous chemical substances included in products, environmental pollution, greenhouse gas emissions, and environment-related domestic and overseas laws and regulations under the heading of "environmental risk." Strict adherence to the law is our foremost priority. THK's Risk Management Division is leading the effort to study methods of ensuring Group-wide compliance, transmitting relevant information to the departments involved, and helping to implement appropriate measures.

#### Substances prohibited by THK

THK designates harmful chemical substances that can affect the human body or the environment as "environmentally hazardous substances," and, in principle, prohibits their use in parts and materials. For substances that may be present in the form of impurities, maximum allowable values are specified.

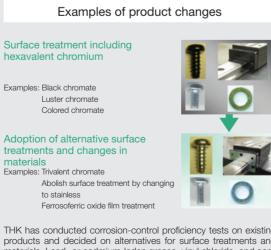
#### Substances prohibited by THK

1 3	
Substance	Limit value and conditions
Cadmium or cadmium	100 ppm.
compounds	75 ppm or less for metals
Mercury or mercury compounds	1,000 ppm.
Polychlorinated biphenyl (PCB) Polychlorinated terphenyls (PCT)	—
Polychlorinated	Restricted to 3 or more
naphthalene (PCN)	chlorine elements
Chlorinated paraffin (CP)	Number of carbons in chain is restricted to 10–13; chlorine concentration of 50 or more only
Polybrominated biphenyls (PBB)	_
Polybrominated diphenyl ethers (PBDE)	_
Bis(tributyltin)oxide (TBTO)	_
Tributyle tins (TBT) Triphenyl tins (TPT)	_
Asbestos	_
Azo compounds	Azo group compounds that can generate specified amines
2,4,6-tri-tertial-butyl-phenol	_
Lead or lead compounds	1,000 ppm. The following are permitted: lead-free cutting steel, 0.35% or below by weight; aluminum alloys, 0.4% or less by weight copper alloys, 4% or below by weight
Hexavalent chromium compounds	1,000 ppm.

#### Compliance with the RoHS directive

In response to the RoHS<sup>1</sup> directive, the European Union law regulating toxic substances that went into effect on July 1, 2006, THK has switched to different surface treatment processes and parts for existing products and has expanded the application of the green purchasing guidelines to include unit products in Japan and overseas plants. When delivering products to customers in China, THK provides them with the information required to enable them to comply with China's new law on preventing contamination in the manufacture of electronic information-related products,<sup>2</sup> which took effect in March 2007. THK has also gathered information, improved procedures for managing chemical substances, and expanded its data resources in preparation for REACH,<sup>3</sup> the European Union's new regulatory system governing chemical substances, which was enacted in June 2007 and is scheduled to take effect in 2008.

- 1 RoHS directive: Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
- 2 China's new law on preventing contamination in the manufacture of electronic information-related products: A law that requires labels indicating specific hazardous substances contained in electronic information-related products and parts. In Japan it is generally referred to as China's RoHS directive
- 3 REACH: Registration, Evaluation, and Authorization of Chemicals in the European Union



THK has conducted corrosion-control proficiency tests on existing products and decided on alternatives for surface treatments and materials. Lead- or cadmium-laden grease, vinyl chloride, and copper alloys have been replaced with materials that are free from lead and cadmium.

#### Harmony with the environment

Management of hazardous substances



#### Compliance with the PRTR Law

Currently, only two substances, xylene and toluene, are designated by the PRTR Law<sup>4</sup> as substances requiring notification, and THK properly reports emissions of these substances. THK requires special handling of all chemical substances classified under the PRTR Law as designated chemical substances and is switching to alternative materials that do not contain these designated chemical substances. In Fiscal 2006 we switched to such alternative substances for materials used in 13 product items. THK will continue to work to ascertain the amounts of designated chemical substances emitted into the environment and displaced as waste materials, handle them properly, and reduce the amounts.

4 PRTR Law: Law promoting better management and understanding of environmental emissions of designated chemical substances

#### ■Materials subject to PRTR Law (Fiscal 2006) (Units: kg)

Туре	Amount handled	Amount emitted into the atmosphere	
Xylene	6,510	44	
Toluene	4,811	132	
Ethyl benzene	822	23	
Benzene	322	49	

#### Plant activities

At each plant, equipment has been improved and the emergency response capabilities have been strengthened, based on ISO14001, to prevent environmentally hazardous substances from being released into the environment.

#### Dealing with emergencies

Voluntary emergency response training is provided at each plant in preparation for accidents. At the GIFU Plant, underground waste solvent tank levels are marked and



monitored to ensure that mats at the KOFU plant

Emergency response training: removing spilled oil with absorbent

leaks do not occur. The tanks are emptied every two years and checked for cracks.

At the KOFU plant, emergency kits are installed in locations where coolant containers are exchanged, and emergency training for dealing with oil spills is provided once a year.

#### Preventing waterborne emissions

All waste solvents inside THK plants are treated as industrial waste materials. Waterborne emissions of oil are prevented by the installation of oil-water separators and sewer equipment. In November 2006, an incident occurred at the YAMAGUCHI Plant in which waste oil became mixed with rainwater and was released off site. Corrective action was quickly taken, and the incident was reported to local government authorities, so there was no actual damage to the local community.

Site	Item	Limit Value	Actual value
YAMAGATA Plant	BOD (mg/l)	600	59.6
	COD (mg/l)	_	164.0
	Nitrogen (mg/l)	_	_
Fidili	Phosphorus (mg/l)	_	—
	Release destination	Sewer	
	BOD (mg/l)	600	77.5
	COD (mg/l)	_	76.0
KOFU Plant	Nitrogen (mg/l)	240	119.0
	Phosphorus (mg/l)	1	0.05
	Release destination	Sewer	
	BOD (mg/l)	600	140.0
	COD (mg/l)	600	130.0
GIFU Plant	Nitrogen (mg/l)	240	89.0
	Phosphorus (mg/l)	32	6.1
	Release destination	Sewer	
	BOD (mg/l)	20	13.0
	COD (mg/l)	20	9.0
MIE Plant	Nitrogen (mg/l)	60	2.7
	Phosphorus (mg/l)	8	0.05
	Release destination	Public waterway	
	BOD (mg/l)	30	2.5
YAMAGUCHI	COD (mg/l)	20 (voluntary controlled value)	9.8
Plant	Nitrogen (mg/l)	100	8.8
	Phosphorus (mg/l)	10	1.5
	Release destination	Public waterway	

#### Water quality (Fiscal 2006)

· BOD: Biological Oxygen Demand; Index used to indicate water contamination by organic materials; the amount of oxygen required for the oxidative decomposition of contaminant substances in water by microorganisms

· COD: Chemical Oxygen Demand; Index used to indicate water contamination by chemical substances; the amount of oxygen consumed by oxidizing agents when oxidizing contaminant substances in wate

# Third-party opinion

I met Takeki Shirai, who was then General Manager of the Engineering Division at THK, about 20 years ago. That's the first time I remember hearing the term "corporate social responsibility." At that time, LM Guides were being installed on many machine tools. It was a very active period for converting from sliding guides to rolling action. Now, 37 years after it was founded, THK is one of the world's leading companies. So what exactly is THK's driving force? When I read the CSR report I understood very well how THK absorbs customers' needs and gathers seeds along with product sales, and how new products are continuously being proposed, created, and developed. THK's growth is due to the establishment and passing on of the basic technology of products utilizing a rolling phenomenon that no other company has utilized, and this has led to the development of an environment-friendly and customer-oriented product lineup. I expect them to "faithfully execute principles boldly and swiftly," to further enhance the sophistication, precision, and reliability of their products and pursue and elucidate the principles and rationale for their products through experimentation and theory.

The use of robots for the first time in the development of areas like medical and welfare will, I think, be a technology that really makes a CSR contribution. While this will involve system technology that goes beyond THK's technology, the essence lies in superior mechanical parts. I expect THK to strive to meet the needs of society as part of its CSR efforts. The lessons of the Great Hanshin-Awaji Earthquake have given rise to the development of seismic isolation and damping systems, which have become giant products. These are products that play an important CSR role by protecting cultural assets and social infrastructure, and we can look forward to the development of more lightweight and highstrength products.

There's never been a time of greater upheaval in corporate compliance and adherence to corporate philosophies than today in Japan. At THK, to ensure that the company is operated transparently, based on their corporate philosophy, they have created a corporate governance system, provided security systems, actively practiced disclosure and provided information about the achievement of objectives, established internal reporting systems, and practiced thorough risk management through their Risk Management Division. By doing these things, they've succeeded in creating an organization devoted to achieving CSR. Please be an organization that can practice monotsukuri in good conscience, to help create a sustainable society. Monotsukuri is also about people building. Through the various types of internal education and training systems devoted to expanding the individual strengths of employees, through workplace safety systems, through Group-wide communication activities, through the global company magazine, please strive for good relations with local communities and people-friendly CSR activities.

In mechanical *monotsukuri*, maintaining a low risk of largescale environmental pollution is distinctive. THK's commitment to CSR can be seen through its efforts to manage and recycle plant waste from cutting and grinding processes and the like, and through its compliance concerning the handling of harmful chemical substances. Like all bearing manufacturers, however, THK should make environmental improvements on its parts-processing lines.

As globalization continues to advance and as its products flow out into the world, I understand how THK, through its passion for *monotsukuri*, its compliance efforts, and its management systems, is steadily working to carry out its corporate social responsibility.



Professor Shigeo Shimizu Department of Precision Engineering School of Science and Technology Meiji University

Born 1942. In 1969 Professor Shimizu earned a master's degree from the Meiji University Graduate School of Mechanical Engineering. In 1980 he completed his dissertation, *Linear Motion Bearing Life and Load Distribution* (Tokyo Institute of Technology). He has conducted research on rolling mechanical elements, reliability engineering, and tribology.

Publications: Dynamic Load Capacities of Rolling Mechanical Elements (Kosaido), Approach to Reliable Design for Mechanical Systems (Surikogaku-sha). Prizewinning papers: Load Distribution, Accuracy and Rigidity of Linear Motion Ball Buide System (Japan Society for Precision Engineering, 1991), Fatigue Limit Concept ind Life Distribution Model for Rolling Contact Machine Elements (STLE, 2003).

#### Postscript

The *THK CSR Report 2007/2008* is THK's first such report. While editing this report we engaged in thoroughgoing discussions within the company concerning the question of what CSR means to THK. As a result, we were able to seriously reconsider the role of THK and its products and view our company from the viewpoint of social responsibility.

As noted in the feature section of this report, CSR is THK's core business, and it is through the processes of this core business that THK contributes to society to the greatest possible extent. For the first time, we realized that we should take great pride in this mission as we go about our daily work. Committing ourselves to business activities in which stake-

holders have placed their trust leads to greater stakeholder satisfaction with THK's progress.

Many sections of this *CSR report* still seem somewhat incomplete. There are many levels at which the THK Group as a whole can contribute, including the environment, employment, and local communities. We will make a Group-wide effort to further enhance the contents of the next report.

We would like to hear the views of you, the reader, so that we can use this valuable feedback as a reference resource for THK's future CSR activities and in creating the next report. We will greatly appreciate your candid thoughts and opinions.

CSR Report Compilation Project (Next scheduled publication: October 2008)