

## CSR Report 2009 Corporate Social Responsibility Report

**NTN Corporation** 

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### **Corporate Data**

### Corporate Name: NTN Corporation

### Brand Name: NTN

Established: March 1918

### Head Office:

1-3-17 Kyomachibori, Nishi-ku, Osaka, Japan 550-0003

Representatives: Yasunobu Suzuki, Chairman and CEO Hirotsugu Mori, President

### Number of Employees: 20,679 (consolidated) 5,485 (stand-alone) (as of March 31, 2009)

### Fiscal term: March 31st

Capital: ¥42.3 billion (as of March 31, 2009)

#### Net Sales: ¥527.1 billion (consolidated), ¥315 billion (stand-alone) (as of March 31, 2009)

Stock listing: The first sections of the Tokyo Stock Exchange and the Osaka Securities Exchange

### Description of Business:

Manufacture and sales of bearings, constant velocity joints, precision equipment, and other products

Number of Subsidiaries: Japan: 20; Overseas: 43

### List of Primary NTN Group Companies

### Japan:

NTN Kongo Corporation / NTN Engineering Plastics Corporation / NTN Powder Metal Corporation / NTN Mikumo Co., Ltd. / NTN Mie Corporation / NTN Omaezaki Corporation / NTN Casting Corporation / NTN Kinan Corporation / NTN Kamiina Corporation / NTN Fukuroi Corporation / Hikari Seiki Industry Co., Ltd. / NTN Bizen Corporation / NTN Hakui Corporation /

NTN Tado Corporation / NTN Houdatsu Shimizu Corporation / NTN Akaiwa Corporation / NTN Bearing Service Co., Ltd.

#### Asia:

NTN MANUFACTURING (THAILAND) CO., LTD. / NTN-NIDEC (THAILAND) CO., LTD. / NTN (China) Investment Corporation / Shanghai NTN Corporation / NTN-NIDEC (Zhejiang) Corporation / Guangzhou NTN-Yulon Drivetrain Co., Ltd. / NTN-RAB (Changzhou) Co., Ltd. / NTN NEI Manufacturing India Private LTD. / NTN BEARING-SINGAPORE (PTE) LTD. / NTN CHINA LTD. / NTN BEARING-THAILAND CO., LTD. / NTN BEARING-MALAYSIA SDN.BHD. / NTN KOREA CO., LTD.

### Americas:

NTN USA CORP. / NTN BEARING CORP. OF AMERICA / AMERICAN NTN BEARING MFG. CORP. / NTN-BOWER CORP. / NTN DRIVESHAFT, INC. / NTN-BCA CORP. / NTN BEARING CORP. OF CANADA LTD. / NTK PRECISION AXLE CORP. / NTN-SUDAMERICANA, S. A.

### Europe:

NTN Wäzlager (Europa) G.m.b.H. / NTN Kugellagerfabrik (Deutschland) G.m.b.H. / NTE Gardelegen G.m.b.H. / NTN TRANSMISSIONS EUROPE / NTN TRANSMISSIONS EUROPE CREZANCY / NTN BEARINGS (UK) LTD. / NTN FRANCE / S.N.R. ROULEMENTS

#### Japai America NTN Head Office Production site Asia and Asia and Sales site other Japan other Japan 25.5% 36.4% 15.4% 37.0% 5,276 194.8 7,539 81.3 Number Sales by of Regular region (Consolidated) Europe Employees 26.9% (Consolidated) (March 2009) 141.7 (March 2009) 527.1 20,679 (billion yen) Europe Americas Americas 23.6% 14.5% 20.7% 4,872 2,992 109.3

### **Editorial Policy**

NTN started issuing annual "Environmental Action Reports" in fiscal 1999. In fiscal 2006, the name of this report was changed to the "CSR Report" and the report was expanded to include the social and economic aspects of our activities so that our readers can better understand how we work to be a socially responsible corporation.

In this year's "Features" section, we outline examples of products we have created that contribute to society, which is a major focus of ours. We also outline our efforts to pass on skills to the next generation and our activities in Europe to preserve the environment. We believe that this is particularly important information for both our stakeholders and the NTN Group. The "Social Aspects" section has separate sections for each of our stakeholders, and we report our efforts to meet our responsibility to each set of stakeholders. The "Environmental Aspects" section describes important efforts related to our 2010 environmental targets as well as our progress toward achieving these targets.

In addition, we have employed universal design principles for the color and layout of this report to make it easier for the color weakness to understand.

In addition, our home page contains information on each operating site's CSR efforts and their social contribution activities, as well as their environmental performance data.

We would appreciate it if you would let us know what you think by using the attached questionnaire.

• Reporting period:

Fiscal 2008 (from April 1, 2008 to March 31, 2009) (Some of the information in this report dates from before or after fiscal 2008.)

- Organizations Included in Report: NTN Corporation and its primary group companies
- Expected date of issue for next report: End of June 2010
- Guidelines used for reference: Ministry of the Environment: "Environmental Reporting Guideline (2003 edition)" "Environmental Reporting Guideline (2007 edition)" GRI:

"Sustainability Reporting Guidelines 2002" "G3 Guidelines"

#### **Future Projections**

This report describes not only current and historical facts, but also the future outlook and plans of NTN Corporation and its group companies (NTN Group). The future plans and outlook are assumptions or estimates based on information available at the time this report was prepared. Due to uncertainties, actual results of future business activities or events may differ from the outlook or plans described in this report. NTN shall not be liable for such results and asks for your understanding in this regard.

### Contents

- 1 Corporate Data
- 2 Editorial Policy / Contents
- 3 Business Scope
- 5 Message from NTN Top Management



Feature Article With a lineup of bearings from small to extra-large, NTN bearings contribute to society



Strengthening "Hitozukuri" which is a foundation stone of "Monozukuri" Improving on the knowledge and skills we are passing on to the next generation



Contributing to environmental preservation in Europe through the development, manufacture, and sale of the ultimate ecofriendly product: the bearing

### **CSR Management**

- 13 CSR Promotion Structure
- 15 Compliance

### **Social Aspects**

- 17 Responsibility to Customers
- 20 Responsibility to Suppliers
- 21 Responsibility to Employees
- 24 Responsibility to Shareholders
- 25 Responsibility to Local Communities

### **Environmental Aspects**

- 27 Environmental Management
- 31 Targets and Results
- 33 Reducing CO<sub>2</sub> Emissions
- 35 Reducing Waste Generation and Conserving Resources
- 36 Managing Chemical Substances
- 37 Developing Environmentally-Friendly Products
- 38 Third-party Opinions

Working to keep the earth "Blue" forever — "NTN Blue" is "Ecology Blue" — **Business Scope** 

Top Message

## Supporting progress and abundance in society

Bearings are NTN's primary product. These parts are used in the rotating sections of a variety of mechanisms in a wide range of industrial applications from aerospace to automobiles, industrial machinery, and precision equipment. By reducing friction and reducing energy consumption, bearings can truly be considered eco-friendly products.

We also play an important role in the increase of wind power generation, a source of clean energy, as well as in the development of railway networks around the world. In addition, our products are a key part of modern medical technology – we contribute to society by improving human health.



#### Aerospace applications see pp. 7-8

### Aircraft bearings

As an increasing number of airplanes are replaced around the world, we are supplying bearings for major airplane engines across the globe even as the precision and speed requirements for these bearings grow more stringent.



#### Aerospace applications → see pp. 7-8

### Rocket bearings

We have established technologies that allow bearings to withstand extreme conditions such as extreme cold, high speeds, and severe vacuum conditions, and as a leading manufacturer of bearings for rockets and satellites, we support the Japanese space program.



### Wind power generation applications — see pp. 7-8

#### Bearings for wind power generators

Wind power generation is expanding rapidly because wind is clean energy that does not emit CO<sub>2</sub>. By providing high-load, high-capacity bearings for wind power generators, NTN company contributes to environmentally-friendly wind power generation.

### Factory automation applications

### **Parts feeders**

Today's manufacturing facilities are becoming increasingly automated, and we are expanding our lineup of parts feeders for automatically lining up and supplying parts of all shapes and sizes based on a variety of needs.



### Sales (Consolidated) by segment



Sales (Consolidated)





### Environmental preservation applications

## Grinding swarf briquetting machine

We developed a briquetting machine that allows us to reuse the metal particles and the grinding fluid from swarf, a byproduct of the bearing manufacturing process. Through the sale of these machines, we are also helping to reduce the waste generated throughout the manufacturing sector.

### Engineering plastics applications

### Bearee

These are resin sliding bearings made of a fluorine resin that are used in various locations including food processing machines, medical devices, and seismic isolation devices.



### **Operating profit (Consolidated)**





#### Medical applications → see pp. 7-8

### Bearings for CT scanners

Precise medical examinations are a part of modern medicine, and there is a demand for better CT scanners. We supply bearings for CT scanners in Japan and around the world.

### Medical applications

### Force sensing system for cerebral aneurysms treatment

We developed the world's first sensing system for measuring the force used to insert coils during coil embolization operations to treat brain aneurysms.





### Machine tools applications

## Bearings for machine tool spindles

The bearings used for machine tool spindles need high precision and to operate at high speeds. NTN continues to provide clients with high-quality, high-performance products.

#### Construction machinery applications

### Bearings for loading shovels

Many of our bearings are used in the wheels and drive-trains of construction machinery such as loading shovels and cranes, which are vital for maintaining infrastructure.



joints and other products We supply a wide variety of parts that are used in key parts of vehicles. We use sophisticated technology to confront the challenge of producing environmentally-friendly vehicles that are safer and more fuel efficient.







**Business Scope** 

Top Message

Feature Article



### Precision equipment applications

### Multi-repair system

Manufacturers of LCD panels and plasma display panels strive to make them larger with higher resolution. Our high-precision positioning technology is used to efficiently repair and process defects in order to improve production efficiency and resolution.

### Shareholders' equity (Consolidated)



### Total assets (Consolidated)



### Number of employees (Consolidated)

environmental impact.

Railroad applications

Bearings for the Bullet Train and other

railroad applications

Japanese Bullet Train. We contribute increased speed and safety to this

Our bearings are used in railroads

mode of mass transport with low

around the world including the

→ see pp. 7-8



4

## Through our new medium-term business plan "NTN 2010 for the Next Step," we will promote CSR activities and work to increase corporate value



Yasunobu Suzuki Chairman and CEO

Hirotsugu Mori President

## **CSR** activities are the core elements of our management

Fiscal 2009 marked the beginning of "NTN 2010 for the Next Step," NTN's new medium-term business plan. It is based on a review of our previous medium-term business plan that started in fiscal 2007 and on the dramatic changes in the business environment from the world economic downturn. This plan reflects our return to a technology-focused approach that is based on our corporate philosophy, "For New Technology Network." Through "NTN 2010 for the Next Step," we are also working to increase our corporate constitution so that we don't rely only on our size to succeed.

It's no understatement when we say that corporate social responsibility (CSR) is the core elements that underpins our management. It is through CSR activities that we work to meet the expectations and trust of all of our stakeholders, including our customers, shareholders, investors, suppliers, employees, and local communities. Corporate social responsibility is more important than ever because of the severity of the current economic environment. This is why in fiscal 2008, we worked to more thoroughly establish corporate ethics and legal and regulatory compliance through revisions to our CSR guidebook and through management education. Additionally, each of our operating sites is working to reduce their CO<sub>2</sub> emissions to address environmental problems such as global warming and resource depletion; we are also involved in "NTN Kigyo no mori" (NTN corporate forest stewardship) activities to contribute to local society and to preserve the environment.

NTN's internal control system is an added layer of protection and provides peace of mind that our financial reports are valid and trustworthy. We have also created a risk management system to manage the risks faced by our company. Encompassing hazards such as earthquakes and pandemics, this integrated risk management system incorporates provisions ranging from prevention measures to crisis countermeasures.

## Responding to the expectations and trust of our stakeholders

We create many opportunities to interact directly and talk with our stakeholders. We help them understand how we are working to respond to global environmental problems and contribute to local communities. Customers: We always look at things from our customers' perspectives. In addition to proposing suggestions that are suited to their needs, we have broadened our technical horizons to actively promote the modularization and standardization of products.

Shareholders and investors: We disclose information by holding Investor Relations plant tours and product exhibitions for our shareholders and investors so that they can better understand our management policies and strategies. Also, at the June 2008 shareholder meeting, our shareholders approved our "Policy for responding to a large-scale acquisition of NTN shares" in order to increase corporate value and to secure profitability for our shareholders.

Suppliers: We are strengthening strategic partnerships to overcome tough economic times through cooperation. Looking to our shared future, we are also working on joint human resources development.

Employees: We always work to maintain and improve a safe and pleasant work environment. To support women in the workplace, we have established on-site child-care facilities and the "Advancement of Women" project. In our "Dream Workshops," we work to create a workplace that supports the independence of handicapped workers and gives them motivation. We also hold workplace tours for our employees' families in order to strengthen the relationships between the company and employee households.

### Using environmentally-friendly plants, equipment, and processes to manufacture environmentally-friendly products

The entire NTN Group is working to reduce industrial waste and to reduce CO<sub>2</sub> emissions to prevent global warming. Though both bearings and constant velocity joints are eco-friendly products because they reduce friction-caused energy losses, we are also contributing to the environment in other ways. Our products are used in wind power generators, which harness natural wind energy. Our products are also used in railroad, which are a clean mode of transportation. When we establish new plants, we install solar generation panels and wind power generators so that we effectively use natural energy. In our manufacturing processes, we have introduced environmentally-friendly processing methods that do not need any oil, created compact production lines, and reduced industrial waste with our grinding swarf briquetting machine. We create plants that are friendly to the global environment.

We also distributed a "Household Eco-Account Book" this year so that employees can continue to reduce energy consumption in their households. Additionally, our employees take part in "NTN Kigyo no mori" activities to strengthen their relationship with both nature and local communities.

## We work to make our "Monozukuri" reflect the idea "Design Determines All"

Safety and quality form the core elements of our company's "Monozukuri." During this major correction in the world economy, having equipment, rules, and structures that prevent mistakes is vitally important. Our "Monozukuri" is based on the idea that "Design Determines All." Our designers personally inspect the actual manufacturing site regularly in order to improve their ability to create solutions and propose new designs. Through periodic safety education and the "hazard experience corners" located in our primary operating sites where employees can raise their safety awareness by experiencing the latent hazards of equipment and work, we are working to achieve zero workplace accidents.

### A stronger corporate constitution through prompt decisions

We have designated the two years of "NTN 2010 for the Next Step" as a period in which to build a management constitution that is resilient to fluctuations in demand and to increase flexibility in our traditional direction and way of thinking. This will accelerate our decision-making and help us to connect decisions to results.

To strengthen our corporate constitution so that our business does not rely only on its size to succeed, we will improve the follow-through of each employee to increase corporate value.

We hope that our stakeholders continue to understand and support the NTN Group. Thank you.

June 2009

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Yasunobu Suzuki Chairman and CEO

Hirotsugu Mori President

## With a lineup of bearings from small to extra-large, NTN bearings contribute to society

Our bearings range in size from several millimeters to five meters (and larger), and are used in a wide variety of industrial machinery.

Medium, large, and extra-large bearings are used all around the world in jet engines, rocket engines, CT scanners for hospitals, wind power generators, railroads, Ferris wheels and etc.



A molybdenum high-speed steel is used to withstand extreme speeds and temperatures.

Outer diameter\*: 52.5 cm



### Jet engine bearings

We have been given the "Certified Supplier" designation by General Electric, the world's largest aircraft engine manufacturer, indicating GE's confidence in NTN.

\* Outer diameter: the diameter of the outside of the bearing



#### Working to further improve our quality through daily improvement

Tsutomu Sato Assistant Manager, Manufacturing Section-2 Extra-large Bearings Plant, Kuwana Works

Kuwana Works' Extra-large Bearings Plant 2 started production in February 2007 to expand production of bearings for industrial machinery. In this facility, cutting-edge equipment is used to produce bearings primarily for wind power generators, CT scanners, mining and construction machinery.

All of us at Manufacturing Section-2 work hard to achieve further improvements in quality, and we focus on our "5S-3TEI" activities every day (see. p. 10). The average age here is 32, which makes us a pretty young workforce, but we will continue to think of creative solutions for daily improvement.

### Jet engine bearings that support safe air travel Rocket bearings that help achieve extreme rotational speeds

NTN produces and supplies bearings that support the high-speed rotation of shafts inside jet engines.

**Bearings for jet engines** need to be durable to operate under extreme conditions — temperatures of approximately 200°C and speeds of approximately 10,000 rpm. The material we chose for this application is molybdenum high-speed steel, which maintains its hardness and its dimensions at high temperatures and withstands the friction and centrifugal forces that occur at high speeds. In the event that the lubricant supply to the bearing stops during flight, the bearing is designed to rotate for a set period of time without seizing an example of how we work to ensure quality when it affects safety.

NTN supplies high-performance, high-quality bearings for jet engines in Japan and around the world including General Electric (GE). To help ensure safe air travel, we work with our group company S.N.R. Roulements, which has a great deal of experience with aerospace bearings in Europe.

Our company's products have actually left this planet and gone into the vastness of outer space. For example, the turbo-pumps in the engine of the domestically-produced H-2A rocket contained our bearings and a large number of our products can be found in "Kibo," the international space station's Japanese Experiment Module.

### Enabling precision medical examinations and supporting health with our low-vibration bearings for CT scanners

CT scanners (computed tomography scanners) are indispensable tools for diagnosing disease. Demand for CT scanners continues to grow as the populations of developed countries age and the economies of the BRIC countries grow. Our large bearings are used in the gantry of CT scanners — the rotating X-ray device and frame that are rotated around the patient to take images.

In recent years, the inner bore size of the gantry has been increasing to accommodate people with larger body frames, while at the same time, there has been a demand for lighter and more compact devices to make them easier to transport and install. When the scanner





for CT scanners

Using a dynamic damper that eliminates external vibrations, we simultaneously achieved the contradictory objectives of a larger design that is also lighter and more compact.

turns on a lighter, more compact frame, however, the frame tends to vibrate, preventing the accuracy that is so vital to the examination.

This is why our engineers developed a low-vibration bearing for CT scanners with a dynamic damper that controls vibration. The dynamic damper actively eliminates external vibrations and achieves the seemingly contradictory objectives of a larger design that is at the same time lighter and more compact. Our company continues to work to develop bearings that help people maintain their health around the world.

### Wind power generator bearings meet a variety of needs including longer life, higher output, and larger sizes

We develop and manufacture bearings used in wind power generators, including the main shaft that support the wind power generator blades, the gear box that transmit the rotational motion of the blades to the generator, the drive unit that changes the direction of the nacelle (the part that contains the gear box and generator) according to the direction of the wind, and the generator itself.

Wind power generation farm are often constructed in isolated areas, and the generator itself is high above the ground. Thus, they are difficult to do maintenance and the primary parts of the generators need to be reliable over a long period of time. Recently, wind power generators have been increasing in size with the objective of improving generating efficiency, and there is a growing need for extra-large bearings that can withstand larger loads. It is for these reasons that we are increasing our lineup of bearings for wind power generators starting with our "spherical roller bearings," which are able to meet the need for longer life, higher output, and larger size.

Wind power is a clean form of energy without CO<sub>2</sub> emissions. Because further demand is expected around the world, we started production of these bearings in February 2007 at Kuwana Works' Extra-large Bearings Plant 2 and in October 2008 at Kuwana Works'

### Wind power generator bearings

We are increasing our lineup of bearings for wind power generators with longer life, higher output, and larger sizes starting with our "spherical roller bearings'

Outer diameter: 158 cm



Outer diameter: 22 cm

Extra-large Bearings Plant 3. We are also increasing our capacity for producing the bearings for 2.4MW wind power generators, which are the largest class of generators in Japan. Further, in April 2008, we established NTN Houdatsu Shimizu Corporation in Ishikawa Prefecture to manufacture extra-large bearings. This facility is expected to start operations in October 2009.

### Railroad bearings that contribute to safety, durability, and a lower environmental impact

In recent years, there has been an increased focus on railroad as a high-volume mode of transportation with low energy consumption. Demand for railroad bearings is growing rapidly in China, where the railway network is rapidly growing because of economic development, as well as in Europe, where there is a high level of environmental awareness and a demand for even faster railroad transport because of the expansion of the European Union.

The bearings used in railroads are subjected to stringent controls because they directly affect passenger safety, so we continue to develop products that maintain a high degree of reliability while achieving a lower environmental impact.

Our company's bearings are known for their durability and safety. They have garnered a great deal of trust and are used not just in Japan but in China, North America, and Europe. We will continue to support this low-impact form of high-volume transportation with our bearings.

### NTN bearings at the amusement park: **Bearings for Ferris wheels**

Our extra-large spherical roller bearings are used for the rotating shaft in Ferris wheels. Each bearing supports a massive wheel, gondolas, and passengers, which together weigh approximately 500 tons.

Safety is the greatest priority in Ferris wheels, which carry large numbers of people to great heights. We design these bearings to withstand heavy loads. We carefully consider the materials we use and carry out meticulous quality control in manufacturing them.

These efforts have been recognized and our extra-large bearings are used in Ferris wheels in Japan.



### Strengthening "Hitozukuri" which is a foundation stone of "Monozukuri" Improving on the knowledge and skills we are passing on to the next generation

The knowledge and skills developed by our experienced workers are the core elements of this "Monozukuri (manufacturing)" enterprise and a prime source of our competitiveness. As the baby boomer generation continues to retire, developing the human resources to respond to globalized production is

becoming increasingly urgent. It is important to find a way to pass on the knowledge and skills of veteran workers so the next generation will also be capable and improve upon the heritage of NTN experience. We describe our "Hitozukuri (developing the individual)" efforts from the standpoint of passing on skills.

A Meister demonstrates how to use a general-purpose lathe at Kuwana Works

### Meister certification award and badge



#### We are developing people who think for themselves and don't do only what they're taught

#### Kazuo Suzuki

Supervisor, Planning and Promotion Section Mono-zukuri Center, Iwata Works (Grinding Meister)

I teach trainees the engineering and technical skills related to grinding that were developed by people who came before us and that allow us to achieve levels of precision on the order of a ten-thousandth of a millimeter. I teach the trainees in a practical way so that they don't just repeat what they learn, but so that they make them their own by thinking about the technology and techniques.

I believe that my duty as a Meister is to develop personnel who think critically based on the five "Gens" — Genba (actual place), Genbutsu (actual object), Genjitsu (actual conditions), Genri (principles), and Gensoku (rules).



#### I'm going to take what I learned about 5S at Okayama Works back to Thailand and put it to use

Suphichai Phawang Assistant Manager, HUB Production Section Automobile Plant Production Department NTN MANUFACTURING (THAILAND) CO., LTD. (NMT)

What surprised me when I first visited Okayama Works is how beautiful the plants were both inside and outside. The passageways in the plants were orderly and the passageways for the forklifts and employees were clearly divided. Daily records on the production line were organized, measuring devices were tagged and well-ordered, and it was in this clean and orderly environment that I learned in detail about 5S<sup>\*</sup>. I will go back to NMT and use what I learned to start 5S activities right away.

### Passing on skills based on OJT in a Monozukuri work site

One of the basic approaches within the NTN Group is to realize our corporate philosophy through individual growth, and it is through long-term thinking that we develop our human resources.

The people responsible for "Monozukuri" form the core elements of any manufacturer, so to develop these human resources, we are carrying out various activities to improve the technical skill level of our production departments.

Our training is made up of OJT (on-the-job training) and self-improvement for the basics combined with supplemental OffJT (off-the-job training). OJT is not just about working in the workplace. At NTN, it means that a supervisor methodically develops the people he/she is in charge of with a clear plan. This arrangement allows both the supervisor and the people he or she is in charge of to grow and allows valuable skills to be passed on.

### Meisters, with a high level of specialized knowledge, are the key to passing on skills at NTN

In "Monozukuri," the technical skills of the skilled employees who actually carry out the heat treatment, forging, etc. are vitally important because they can affect the actual quality of the products. Thus, it is necessary to continuously develop human resources with a high degree of technical skill. The Meisters play a large role in their development.

Meisters are skilled employees who have developed a high degree of professional ability in their field. Our company methodically works to raise the standard of engineering and technical skills of our skilled employees, and has identified the strategic employment categories used regularly by the NTN Group that need to be passed on. In 2005, we created a system to certify and utilize Meisters.

Only employees recognized by the entire company to have a high level of knowledge and skills as well as extensive experience in the actual execution of work in fields that need to be passed on to the next generation — fields such as grinding, heat treatment, and machine maintenance — are certified as Meisters. The NTN Meister Certification Committee, which is made up of directors in charge of production, certifies Meisters. There are 11 active



#### (left to right) Exterior of the Technical Skill Training Center, its interior, and the Skill Training Room, at Kuwana Works

Meisters at NTN (as of June 2009). Each operating site also chooses Junior Meisters out of their experienced skilled employees as possible Meister candidates.

Meisters not only work to ensure that the unique skills and knowledge that the NTN Group cannot allow to fade away are passed on, but also solve engineering problems faced by production departments. In all of these ways, they contribute to an overall increase in skill level.

### "Skill Training Rooms" were set up to systematically and efficiently pass on unique skills at NTN

The NTN Group has opened "Skill Training Rooms" at the operating sites where most of the **Meisters** are found: Iwata Works, Kuwana Works, and Okayama Works. By establishing a place where trainees can learn all the elements necessary for production activities such as quality, safety, environmental issues, 5S-3TEI\*, and visualization, our company is able to systematically and efficiently teach and pass on vital technical skills.

Each operating site has also built up its own set of unique skills, and these different characteristics are reflected in each Skill Training Room. For example, Kuwana Works focuses on skills related to grinding and heat treatment as the skills they want to pass on. This is why its Skill Training Room is equipped with facilities to carry out the General Heat Treatment Skill Test, a national certification, and it has been designated a skill testing area since 2008.

In each Skill Training Room, the Meisters and Junior Meisters work together to teach theory and practical skills according to the skill level of the trainees in order to develop them into the next generation of skilled employees. The Skill Training Rooms also



accept overseas trainees to raise the skill level of the NTN Group, which is expanding globally.

\* 5S-3TEI: These are the basic activities for improving productivity. 5S refers to five Japanese words beginning with S: seiri, seiton, seisou, seiketsu and shitsuke. These mean, respectively, organization, arrangement, cleaning, standardization, and sustained discipline; and 3TEI refers to three Japanese words beginning with tei: teiichi, teihin, and teiryou. These mean, respectively, prescribed position, prescribed item, and prescribed amount.

### Passing on safety know-how with "hazard experience corners"

In "Monozukuri," safety comes first. Our company gives employees a thorough safety education to secure a safe work environment. In addition to regular classroom training, we have set up "hazard experience corners" at each operating site in order to pass on all the practical safety know-how we have developed over the years.

In the hazard experience corners, we use a safety experience simulator to recreate situations in which accidents such as pinchpoint accidents, dragging, tripping/falling, and flying/dropped objects can be experienced. By having our skilled employees learn what kind of hidden dangers there are in the workplace, avoid these dangers, and instinctively understand safety know-how that is so difficult to teach in a classroom, we are encouraging them to work safely.

# Social Aspects

### Supporting our young skilled workers in their efforts to become certified technicians to encourage their development

The NTN Group supports employees in their efforts to become Ginoshi (certified technician). The Ginoshi certification is a national certification that is given to those who pass a skill test that is based on Japan's "Promotion of Human Resources Development" law. These categories include machining, heat treatment, and machine maintenance.

Our company helps employees find correspondence courses related to this skill certification test, and has study sessions at each operating site to support them in their efforts to become certified.

A voluntary study group studying machine maintenance at Okayama Works



Top Message

Feature Article

CSR Management

### Contributing to environmental preservation in Europe through the development, manufacture, and sale of the ultimate eco-friendly product: the bearing

Since establishing a sales company in Germany in 1961, we have expanded the number of manufacturing and sales sites in Europe.

The birthplace of industrial machinery, Europe leads the world in the range and volume of bearings for industrial machinery.

This region also leads the world in environmental awareness, with a high demand for wind power generation and high-performance bearings. By supporting the rotating sections of all kinds of machines and cutting energy consumption by reducing friction through the manufacture and sale of bearings – the ultimate eco-friendly product – our European operations are working for greater harmony with the global environment.



## Joint environmental audit with other companies (NTE)

At NTE, we carry out "cross audits" with neighboring companies as part of our ISO 14001 internal audits. We currently carry these audits out with a hazardous materials management company and a machine manufacturer. Exchanging information ISO 14001 issues and environmental efforts and sharing good ideas related to improvement are the aims of these cross audits. The results of the audits are reported to NTE's directors and the suggestions for improvement and advice are recorded in NTE's management system as audit results.

Additionally, we distributed brochure on sorting waste at NTE to raise the environmental awareness of employees.



### Converting boilers to run on natural gas to reduce CO<sub>2</sub> emissions (SNR)

In April 2008, France's No.1 bearing manufacturer, S.N.R. ROULEMENTS (SNR) became a consolidated NTN Group company. SNR established a basic environmental policy in 2001 and its employees are working unitedly to carry out environmental preservation activities. One activity is **reducing CO2 emissions**, an effort that all of our other operating sites are also engaged in. In 2006, for example, SNR started converting the heating and boiler systems at their Head Office and plant in Annecy to natural gas from fuel oil. This reduced the total CO2 emissions from their French plants from 16,500 tons in 2005 to 13,500 tons in 2008.

SNR acquired ISO 14001 certification for their six operating sites in France in 1999, their Brazilian plant in 2004, and their Romanian plant in 2006. At the end of 2008, they renewed their certification under the multi-site format.

As an R&D partner of TGV (French high-speed train), SNR contributes to the rail industry, which is a part of a modal shift to transportation that consumes less energy and emits less CO<sub>2</sub>.



NR's Annecy Plant

A boiler at SNR that was converted to run on natural gas

## Establishing reduction targets for natural gas and electricity and promoting the reduction of CO<sub>2</sub> (NTE)

At NTN TRANSMISSIONS EUROPE (NTE), which manufactures constant-velocity joints, we set reduction targets for natural gas and electricity in order to reduce CO<sub>2</sub> emissions.

In 2000, we used about 820 km<sup>3</sup> (1,755 tons of CO<sub>2</sub>) of natural gas to heat NTE's plant and offices, but by installing mist collectors on the heat treatment and grinding equipment to improve air quality inside the plant and improve heating efficiency, we reduced the natural gas figure to about 290 km<sup>3</sup>

NTN FRANCE

in 2008 (621 tons of CO2).

NTN BEARINGS (UK) LTD.

NTN TRANSMISSIONS

EUROPE (NTE)

Power consumption was on the increase due to increased production several years ago. Inverter-based compressors and a power monitoring system were introduced in order to improve our power management according to production volume. The result was power consumption of approximately 37,000 MWh in 2008, a reduction of 4,000 MWh from the previous year (218 tons of CO<sub>2</sub>).

United Kingdom

In 2008, we started milk run collections (multiple collections per trip) of parts to suppliers, resulting in a decrease of approximately 4,300 km of truck driving per week. We will continue to optimize transportation efficiency to reduce CO<sub>2</sub> emissions.

### Responding to the REACH regulation (NTN Wälzlager (Europa) G.m.b.H., NTN FRANCE, and NTN BEARINGS (UK) LTD.)

**REACH**, the EU's new regulations on chemical substances (see p. 36) has come into effect, and three of our sales companies — NTN Wälzlager (Europa) G.m.b.H., NTN FRANCE, and NTN BEARINGS (UK) LTD. — worked with the Environmental Management Dept. at our Head Office and various engineering departments to pre-register the substances handled by our company. They also ensured that raw material manufacturers have also carried out pre-registration. Pre-registration allows the actual registration to be postponed so the regular import and sale of products can continue.

The three companies have worked with the Environmental Management Dept. at our Head Office, various engineering departments, and the plants on investigating and responding rapidly to customer inquiries about substances of very high concern (SVHCs) published by the European Chemicals Agency in October 2008.



Unique efforts at each company include "supporting intractable disease children with used consumables" and "reducing CO<sub>2</sub> emissions by promoting bicycle use"

Primary sites of the NTN Group in Europe

At NTN Kugellagerfabrik (Deutschland) G.m.b.H., we use spent toner cartridges to support intractable disease children.

We used to send toner cartridges back to the manufacturer, but in 2007 we started sending them to a charity managed by a major hamburger chain. This charity sends the spent toner cartridges back to the manufacturers, and the manufacturer provides the refund for the cartridges to the charity. The funds raised are used to build facilities for family members to stay when they have to travel long distances to the hospital with their sick children. We will continue to support this charity.

At NTN BEARINGS (UK) LTD., we are encouraging employees to make use of a system to bicycle to commute.

This system is promoted by the government to reduce CO<sub>2</sub> emissions and promote employee fitness. When employees use their bicycles to commute to work, their social insurance premiums and taxes are reduced and the social insurance premiums paid by the company are also reduced. We also use posters and the company intranet to promote bicycling. Some employees actively use this system.



Providing used pallets used to transport products to a local summer camp for children

Helga Petrasincu Manager, Human Resources Department Environmental representative NTN Kugellagerfabrik (Deutschland) G.m.b.H.,

At NTN Kugellagerfabrik, we have been donating the pallets used to carry products from Japan to a summer camp for children

organized by the town of Mettmann, which allows these pallets to be used effectively. (Japanese pallets are of a different standard, and thus cannot be reused in Europe.)

The camp gives children on summer vacation fun and experience, and they use these pallets to create buildings and streets on empty lots in the town. Currently, we provide a quarter of our used pallets to this summer camp.

Children playing on wooden pallets

Business Scope

### **CSR Management**

## **CSR Promotion Structure**

A revised "CSR Guidebook" was distributed in order to promote CSR activities

### The NTN Group's Corporate Philosophy

### **NTN's Corporate Philosophy**

We shall contribute to an international society through creating new technologies and developing new products. (For New Technology Network)

- 1. Creation of original technologies
- 2. Offering the technologies for additional values and services that are suitable for each customer and end user.
- Improvement of employees' standard of living, distribution of fair returns to stockholders, and contribution to society based on the steady growth of our business.
- Promotion of globalization, and formation of management systems / corporate organization which are essential for NTN, as an international leading company.

### NTN's "Environmental Policy" was added to "NTN's Basic Policies"

We established "NTN's Basic Policies" as our management policies for practicing our Corporate Philosophy.

In March 2009, we added the "Environmental Policy." The entire NTN Group committed to actively preserving the global environment and to fully informing all directors and employees.

### Informing everyone of our "CSR Policy" using our "CSR Guidebook" and "Response Card"

In June 2006, we established a "CSR Policy." With the aim of continuing to be a corporation that is trusted by society, we



summarized NTN's approach and the main points of our wide range of activities into eight items to declare how we fulfill our responsibilities to stakeholders.

At the same time, we established an "Employee Code of Conduct" that encourages employees, managers, and supervisors to be proactive. We also revised the "Business Code of Conduct" that sets out how directors and employees should conduct themselves. We distributed a "CSR Guidebook" and "Response Card" that describes policies such as our Business Code of Conduct in easy-to-understand terms to further incorporate CSR activities into our day-to-day business.

### **CSR** Policy

- Legal compliance/Policy for activities: We shall comply with both the letter and the spirit of laws and regulations, and carry out our business activities in an open and honest manner.
- Customers: We shall strive to develop new technologies and new products, as well as to provide safe and reliable products.
- Business partners: We shall engage in fair and free competition, and at the same time establish excellent partnerships with our business partners.
- Stockholders/Disclosure of information: We shall work to develop this corporation and increase stockholder return, while at the same time communicating broadly with society and actively disclosing information.
- Employees: We shall value the individuality and diversity of our employees, work to create a safe and pleasant work place, and achieve comfort and prosperity.
- The environment: With ample consideration to preserving the global environment and protecting the ecosystem, we shall work toward the creation of a sustainable, progressing society.
- Society: We shall make every effort to interact meaningfully with society on a local level, and to engage in activities that contribute to society.
- International activities: We shall, as a matter of course, obey all international rules as well as the laws of each country and each region that we operate in; we shall also respect local cultures and practices and contribute to local development.

### **Employee Code of Conduct**

- 1. We respect social ethics and act as good members of society.
- We have noble ambitions and always make efforts to brainstorm and achieve the set target.
- 3. We accept changes, have broad vision and act voluntarily.
- 4. We deepen mutual understanding and enhance the vitality of our work site.
- Management and supervisors in particular, as faces of the corporation, improve their qualifications, make efforts to develop individuals, always take care of safety and show leadership.

### **Business Code of Conduct**

- 1. Compliance with laws and norms
- 2. Pursuit of quality and safety
- 3. Compliance with the Anti-Trust Law
- 4. Fair trade with suppliers
- 5. Honoring agreements
- 6. Refusal to engage in improper conduct with business partners
- Proper labeling and specification
   Respect for intellectual property rights
- Proper control of confidential information
- 10. Ensuring security by strengthening export controls
- 11. Compliance with industrial laws
- 12. Compliance with corporate accounting principles
- 13. Compliance with international rules
- Promotion of environmental preservation
   Positive contribution to society
- 16. Compliance with labor-related laws and company work rules
- 17. Realization of a safe and positive work environment
- 18. Respect for human rights
- 19. Prohibition of sexual harassment
- 20. Proper control of information about individuals
- 21. Strict distinction between public and private matters
- 22. Confronting harmful social forces
- 23. Proper utilization of our information system
- 24. Prohibition of insider trading
- 25. Self-restraint regarding entertainment and gifts
- 26. Lawful donations/political donations

### **CSR** promotion structure

## Meetings to explain the revised "CSR Guidebook" to our managers

Our CSR Committee spearheads CSR activities and is made up of the director responsible for the CSR Dept. and CSR managers from each operating site in each group company in Japan.

In fiscal 2008, in order to strengthen compliance, we reviewed the applicable laws, regulations, and case studies and revised the "CSR Guidebook." We distributed the revised Guidebook to all directors and employees in the NTN Group in Japan (about 11,000 persons including those working overseas). In addition, we held meetings on the subject for our managers and 689 people attended these meetings.





### **Corporate governance**

## Spearheading the creation of a more transparent management system

Strengthening corporate governance and making it comprehensive is one of our most important issues. We are working to create an efficient management system with a high degree of transparency.

We employ an auditor system; independence and objectivity of the corporate auditors are assured by employing three outside auditors (of the four auditors on the audit team (Standing: 2, Part-time: 2)). Directors meetings are held to make decisions on important items and to direct the execution of business in the company. In 2004, we put in a system of executive officers so that decisions can be made and executed more rapidly.

To strengthen our organizational structure, in April 2008, responsibility for internal audits and operating the internal control system was transferred from the CSR Dept. to the newly created Internal Audit Dept.



### Introduction of measures to prevent hostile takeovers

If there is a large-scale acquisition of NTN shares, we believe that how to respond to such an action should be decided by the shareholders. This judgment should be based not just on information from the parties attempting the acquisition, but also on the evaluation and opinion of our company. We also believe that a considerable review period is essential. Our company believes that if such acquisition is harmful to corporate value or to the interests of shareholders, it is necessary to negotiate with the parties making the large-scale purchase and take any necessary countermeasures.

Based on this approach, a "Policy for responding to a large-scale

acquisition of NTN shares" (Measures to prevent a hostile takeover) was adopted by the Board of Directors on February 5, 2008. The annual shareholder meeting was held on June 27 of the same year, where this policy was approved. The objectives of this policy are to ensure that our shareholders are given enough information and to ensure that there is sufficient time and opportunity for good faith negotiations to secure and improve corporate value and shareholder profit.

These measures are valid for 3 years, but shareholders may cancel them at a shareholder meeting with immediate effect so that the wishes of our shareholders are always reflected.

### **CSR Management**

## Compliance

We are enriching our compliance-related education to increase employee awareness

### **Compliance management system**

## We have started new educational programs to ensure thorough compliance

NTN holds total compliance as a foundation on which we build our CSR activities and our CSR Committee has a Compliance Subcommittee. This subcommittee is made up of the CSR Dept., the Legal Dept., and the Personnel Dept. It spearheads and manages overall compliance efforts across the entire NTN Group. The CSR Dept. investigates and analyzes compliancerelated issues and risk, then educates and raises awareness. The Legal Dept. judges things from the perspective of laws, regulations, and company rules and operates the "Help Line." The Personnel Dept. judges things based on policies and measures related to personnel.

In fiscal 2008, we held meetings to explain the "CSR Guidebook" to CSR managers and to all managers to educate them on issues related to legal and regulatory compliance. We



A talk on compliance issues during a training session for new employees



distributed study materials in order to reinforce their knowledge of these issues.

In September 2008, we surveyed 4,000 employees using questionnaires to gauge how well they understood compliancerelated issues as well as the situation in their workplaces. Over 80% of those surveyed completed and returned their questionnaires. The results were analyzed to understand the level of compliance at each operating site.

In fiscal 2009, the CSR Dept. plans to support our CSR managers as they carry out compliance-related education for their departments for all employees. We continuously use questionnaires to raise awareness of issues related to compliance.

### Internal reporting system

### We have opened our "Help Line" to suppliers

If any director or employee discovers or foresees any actions that contravene or may contravene the laws, the Business Code of Conduct, or our internal rules, they can make a report, ask questions, and get advice from the "Help Line." There is one line inside the company and one outside the company; employees do not have to go through managers to use the help lines. They are able to send information directly by mail or by e-mail, and we take the utmost care to protect user confidentiality and to ensure that users are not penalized. These help lines have been opened to our suppliers, and we give advice to people from companies with which we have a business relationship.

To improve our employees' understanding of the "Help Line" and to encourage use, we have posted how to use the "Help Line," and we have established a database to which information can be sent directly by e-mail. In fiscal 2008, we worked hard to inform employees of the "Help Line" at the meetings related to the "CSR Guidebook." We will use opportunities such as internal training sessions to ensure that all employees are informed of the "Help Line."

## Managing confidential and personal information

### Appropriate management and protection of information

To manage confidential information, we established an "Information Security Policy" and "Confidentiality rule," which have been adopted at all related group companies. In addition, the sales departments in Japan use a "Confidentiality manual."

To manage personal information, we have established "Personal Information Management rule" and a "Personal Information Management manual." In our system, managers in each department are managed by chief management officers and the Internal Audit Dept. carries out audits.

### **Risk management**

## Creating a risk management system based on both prevention and countermeasures

In March 2008, our company established "Risk Management rule" and established a Risk Management Committee. By shifting our organizational structure from one focused on responding to crises to one that incorporates preventative measures, we re-configured our risk management system into something more comprehensive.

The Risk Management Department (CSR Dept.) is in charge of the preventative measures, while the Emergency Management Department (General Affairs Dept.) is in charge of crisis countermeasures. In the event of a serious crisis, a central task force shall be established to take action and minimize damage.



### Recognizing critical risks and implementing countermeasures related to stopping the spread of infectious diseases

We are implementing a risk management plan through the Risk Management Committee, which selects countermeasures for risks common to all operating sites of the NTN Group as well as through individual departments that are addressing risks that are not common.

As a measure to mitigate earthquake damage, the manufacturing departments of the NTN Group in Japan have been spearheading earthquake improvements to buildings and facilities. In fiscal 2008, these improvements were carried out at Iwata Works, and they will be carried out at the other operating sites in turn.

To prevent the spread of infectious disease, in December 2008, we established "Detailed rules for implementing countermeasures for infectious diseases" and a "Manual of countermeasures for new strains of influenza," which included everything from preventative measures to crisis countermeasures, and we started stockpiling pharmaceuticals and masks. In April 2009, we responded rapidly to the new strain of swine influenza that in order to prevent infection within the NTN Group.

We are working on implementing countermeasure plans with other departments spearheading efforts to counter other risks.

## More stringent risk management and disaster countermeasures at our group companies

At the NTN Group, the Risk Management Committee spearheads countermeasures for risks common to the entire group.

We have a system that can be used to confirm the personal safety of employees through the internet or telephone in the event of a disaster, and in fiscal 2008, this system was expanded to cover our primary group companies. Every year, we simulate a disaster and carry out training on how to use the system.



Earthquake resistance improvements at Iwata Works



Supplies at Okayama Works in preparation for the new strain of influenza



Supplies at Nagano Works in preparation for the new strain of influenza

### **Social Aspects**

## **Responsibility to Customers**

Working to achieve quality management and customer satisfaction

### Striving to further improve customer satisfaction

(Seohan 協士

### Creating a system that allows us to be closer to the customer

In January 2008, we reviewed our organizational structure so that we can be closer to the customer when we provide technical information. Thus at each of our sales offices, we assigned dedicated sales staff and sales engineers to our primary customers and sales agents so that we can respond directly to customer requests and questions.

In fiscal 2008, we continued to send engineers to customers to hold product exhibitions and technical seminars. We held product exhibitions for customers at 10 companies in the automotive sector and 18 companies in the industrial machinery sector.

Also, we often carry out customer satisfaction surveys related to our products and services to understand and improve the level of customer satisfaction.

In fiscal 2008, we conducted a survey of the 70 companies that make up our primary customer base (including overseas companies in Europe and the US).

Over the years, the total number of respondents saying that our overall performance was "Very good" or "Good" is going up: 92% in 2006, 95% in 2007, and 97% in 2008.

The results of this survey, including customer opinions and requests, are given to the departments affected and are used to create even better products and to improve service.

#### Meeting customer requests

#### Tomoo Kiuchi

Planning and Marketing Department Automotive Sales Head Quarters



We promote product exhibitions as a forum where young engineers who are involved in product development and design can hear directly from customers about their needs, and to offer new products that are based on customer feedback. We are working to strengthen our relationship with customers by offering products that satisfy their needs.

Product exhibition at the customer

### Quality management

### **Quality Policy**

"To assure appropriate quality in order to achieve the functions and specifications required by customers" • NTN's quality must be in step with the market change. (Applicable quality) • NTN's quality must be superior to the competitors' quality. (Competitive quality) • NTN's quality must be profitable in the marketplace. (Economical quality)

### FY2008 Period Quality Management Policy

### 1. Engineering

"Design Determines All"=Design and development free from customer complaints

- (1) Integration of parts variation -Design easy-to-understand, easy-to-
- manufacture, and mistake-proof products (2) Exhaustive design verification – Designing based on scientific basis –
- (3) Learn from past defects and organize the implementation of countermeasures
- (4) Promotion of a "Go and watch the production site" activity -Recognize and learn from actual production process-

### 2. Production

Establish systems on the following premise: "Humans will make mistakes and machines will fail"

- Observation of basic rules Abide by the rules we have made —
   Continuation of special activity aiming at "zero customer complaint" and
- horizontal deployment of the activity to overseas production facilities (3) Assuring the quality of newly manufactured products
- Establishment of a global quality assurance system –
   (4) Realization and horizontal deployment of the model line of KANZEN SEISAN\*
   (5) Improvement of quality at subcontractors
- -Coexistence with subcontractors-
- (6) Strengthening the control of special processes —Eradication of serious customer complaint—
- (7) Reducing defective product disposal cost —A challenge to "zero defect"—

### 3. Sales

Actions creating customer satisfactions and corporate profit Acknowledgement of customer requirements and their companywide development

### 4. Logistics

In quest of sure and steady operation

Improvement of logistical quality aiming at "zero" inconvenience to customer

KANZEN SEISAN: The shop floor condition which we can obtain the best quality and productivity without scrap and machine breakdown.

### FY2008 Period Quality Management Policy 1. Engineering Designing and developing parts knowing

### Designing and developing parts knowing that "Design Determines All"

Our engineering departments work comprehensively to design and develop products that do not result in customer complaints, following the idea "Design Determines All."

In fiscal 2008, in working hard to "design easy-to-understand, easy-to-manufacture, and mistake-proof products," we consolidated similar product classifications. We put greater emphasis on developing products with an understanding of how they are used in the field (particularly overseas). We used quality engineering and CAE\* to carry out preliminary design verifications to achieve "Designing based on scientific basis." We also make sure that the products are changed to reflect the countermeasures that we took in response to past problems.

Our designers have the motto "Recognize and learn from actual production process." They go to the manufacturing worksite and cooperate with the quality assurance departments and manufacturing departments to build in manufacturing process quality at the design stage.

 CAE (Computer Aided Engineering) : A computer system that supports the design and development of industrial products.

### 2. Manufacturing On the following premise: "Humans will make mistakes and machines will fail"

Our manufacturing departments continue to establish systems based on the premise that "Humans will make mistakes and machines will fail." Our manufacturing departments also believe that following the basic rules comes first. These include laws, regulations, standards, and drawings; 5S (organization, arrangement, cleaning, standardization, and discipline); and 3TEI (prescribed position, prescribed item, and prescribed amount).

For special processes that may cause critical defects (forging, heat treatment, etc.), we have established even more stringent quality inspection systems. We hold heat treatment engineering meetings to develop and improve our specialist engineers.

Because we are becoming increasingly globalized, we are also strengthening our quality assurance systems overseas.

### 3. Sales

### Provide what customers require

Our sales departments have "Actions creating customer satisfactions and corporate profit" as a fundamental, and they work to accurately understand what customers request (such as changes to specifications, design, and purpose) and to rapidly report these requests to the appropriate departments at NTN.

In addition to contacting the department in charge in the event of a quality problem, they use the complaint management database to accurately convey the information required to all the appropriate departments.

### Quality management system

### Continuously improving our quality management system

Our company has an ISO 9001:2000 compliant quality management system. Our operating sites in Japan and around the world that produce automotive products have ISO/ TS16949:2002 certification, which is the most stringent standard for quality management required by European and American automakers. By using these systems effectively and continuously improving them, we supply products that are trusted by customers and that can raise the level of customer satisfaction.

We have even more stringent quality controls for products with a high possibility of catastrophe in the event of failure, such as bearings for aerospace devices, the Bullet Train, railroads, and critical safety parts for automobiles.

IRIS, a specialized quality management standard for products related to rail transport, will become mandatory in Europe in 2010, so we are pushing efforts to obtain this certification as well.



### **Communicating with customers**

### Rapidly responding to questions and complaints

When there is a question or complaint from a customer to any of our sales offices, the people in charge respond and are able to visit the customer immediately if needed. Questions received via our website are all reviewed by the General Affairs Dept. at the Head Office, and are then handled by member of our sales staff or a sales engineer at one of our sales offices.

Depending on the nature of the request or matter, the person in charge then gives the customer a phone call, sends information, or visits the customer. The information obtained through further communication with the customer is then used later in product R&D.

### Efforts related to sales agents

### Helping sales agents expand their sales

Whenever we put a new product on the market, we hold

a meeting to explain the product to the sales agents that sell our products. Also, we periodically hold training sessions for new and mid-level employees of our agents.

Information that is used to ensure the safety of the final product that our product is installed in is communicated directly by our sales staff or sales engineers to our sales agents.

In fiscal 2008, we held a meeting of our Domestic Sales Agent Association in Japan, sales agent and sales engineering seminars (beginner and intermediate), meetings to explain the changes of the price sheet, plant tours, sales conferences with our primary sales agents, and joint seminars and product exhibitions with sales agents at customer locations. We had sales agents from all over Japan come to NTN Mie Corporation to take a tour of Plant 1 and the new Plant 2. During these tours, we outlined how we are going to improve production capacity and shorten lead times.

We will continue to reinforce our sales engineers at NTN and to help our sales agents expand sales and gain new orders.



A seminar for sales agents

### Supplying technical information

## Supporting design reviews at our customers by providing a catalog of 3D CAD data

As part of our technical services to our customers, we created a 3D electronic catalog of the precision bearings for machine tools and offered it for free in June 2008.

Machine tool manufacturers need to respond to fluctuating markets and to be able to rapidly develop new products. They also need to verify designs in advance using 3D CAD. NTN's electronic catalog enables them to confirm the positional relationship between bearings and adjacent parts at the

structural design stage, allowing them to rapidly carry out computer-based thermal and structural analyses of NTN products as they would be installed. This is our contribution to a more efficient development of new products at our customers.



3D electronic catalog

### **Social Aspects**

## **Responsibility to Suppliers**

Working together as a partner that takes responsibility for quality and the environment

### Helping suppliers improve quality

### Sharing knowledge and know-how to improve quality

We continue to support suppliers in their efforts to improve quality. Part of this is our "Supplier quality improvement meeting," which we hold each year. At this meeting, each supplier presents examples of improvements and attends presentations by external speakers, thus sharing knowledge and know-how to raise awareness of quality improvement issues.

In fiscal 2008, this meeting was held on November 18 and a total of 113 companies participated. We also



recognized suppliers for their contributions to improved quality and we had external speakers give talks on quality.

Additionally, we support suppliers in their efforts to obtain ISO 9001 certification. For those suppliers that carry out special processes (such as forging and heat treatment), we carry out a yearly quality audit, and we request that they review their work procedures and strengthen their quality assurance system. These support measures have resulted in a decreasing number of customer complaints caused by problems at our suppliers.

#### Growing together with our suppliers

Daisuke Nakano Project Manager, Quality Management Department

We hold a Supplier quality improvement meeting yearly as part of our support of efforts to raise quality so that we can grow together with our suppliers. This fiscal year, we had a difficult time allocating programs, choosing a theme for our quality talk, and choosing a speaker, but we received

### Procurement Policy

### Strengthening our system of cooperative progress with strategic partners

Suppliers who (1) have strengths in technology and quality, (2) who want to expand overseas, and (3) who are able to jointly spearhead efforts to increase corporate value are considered to be strategic partners. Strategic partners form the core of NTN's parts and services suppliers.

We will continue to strengthen our systems to cooperate with strategic partners. We aim to consider environmentallyfriendly green procurement as we improve quality and our technical strengths.

### Maintaining fair and appropriate relationships

### Continuing our periodic internal audits to maintain fair dealings

Since we established our "voluntary audit manual for subcontractors" in 1997, we have carried out periodic internal audits at each operating site to check that dealings are appropriate and are fair according to the Subcontract Act. The Procurement Dept. gets involved to provide audits and guidance as needed.

To thoroughly establish the importance of fair dealing with subcontractors, we require all of our procurement staff to attend external seminars about dealing with subcontractors fairly.

warm applause from everyone after the talk, and I was very relieved.

The Subcontract Act applies to approximately 80% (by count) of our suppliers.

### **Dialogue with suppliers**

### Sharing important information related to our business plan

### NTN holds supplier meetings twice a year.

In fiscal 2008, 85 suppliers participated in these meetings, and we not only explained the trends in production volume at each of our operating sites, but also requested their support for our production activities and asked them to obtain various types of certification. In addition, we recognized 10 companies based on a large number of variables including their excellence (quality, production, and value) and ISO certification status.

We use questionnaires to better understand the business conditions of our suppliers and we help them strengthen their business base when necessary.



Supplier meeting

Top Message

### **Social Aspects**

## **Responsibility to Employees**

We work to create a safe, comfortable workplace where our diverse personnel can thrive in their work

### Efforts to maintain a good work-life balance

## NTN opens a daycare at Iwata Works to help employees with their child-care

Our company has always been active in creating systems to support the next generation and promote the advancement of women. In fiscal 2007, we started the "mom-back system" to allow female employees time to raise children. We also introduced a "babysitter utilization support system." Through efforts like these, we strive to create a workplace that is pleasant to work in.

In fiscal 2008, we established an action plan to work toward "creating an environment that minimizes career interruptions from raising children." As part of this effort, we established an intra-company daycare in April 2009 called "Bear Kids Land" at Iwata Works to help employees with their child-care and give them peace of mind. This is the first intra-company daycare at NTN.

"Bear Kids Land" accepts children on a temporary basis, as well as for extended periods in case the parent has to work overtime. As of June 2009, 16 people use this system. This facility is able to handle children with allergies and all meals are cooked on site. The singlestory facility is made of natural wood with environmentally-friendly solar power. It is also earthquake-resistant so that it may be used as an evacuation center.

We plan to build similar facilities at Kuwana Works and Okayama Works.

"Beana" (left) and "Beata" (right), the mascots of "Bear Kids Land"

### We consider a home-like warmth to be important

Kanako Tominaga Bear Kids Land Davcare Manager



We carefully create a home-like warmth at this small daycare so that NTN employees can have peace of mind when they drop their children off. I wish everyone could experience the joys of seeing these children grow up every day.

"Bear Kids Land," Iwata Works



### **Our employees**

## A large increase in overseas employees; a gradual increase in the number of female engineers in Japan

In fiscal 2008, there was a slight increase in the number of domestic employees, but we expanded our hiring of female engineers. Also, the addition of SNR ROULEMENTS as a consolidated group company dramatically increased the number of overseas employees. The worldwide economic downturn in the latter half of fiscal 2008 has necessitated significant cuts in production, but we will make any adjust in our labor force in compliance with all relevant laws.

Our company has a system of bolstering the ranks of persons being trained in the company's skills with temporary employees. Temporary employees who master certain skills are registered as regular employees. In fiscal 2008, 105 employees were registered in this way.



### Diversity in the workplace

### Supporting opportunities for female employees

Increasing the diversity of our labor force, particularly the advancement of women, is key to improving our competitiveness as a corporation. This is why we started the "Advancement of Women" project in October 2007 to solve problems with corporate culture, employee awareness, and in the systems at NTN, as well as to carry out activities to promote the abilities of women.

In fiscal 2008, the a workplace in which women can excel was explored in terms of awareness, corporate culture, systems, developing abilities, and education. Company magazines were issued, and those who were being promoted to management or supervisory positions went through training to raise awareness. In addition, maternity leave was increased to a year and a half.

### Giving opportunities for people to use their abilities after retirement

This company has had a system in place since 1982 to reemploy employees with a high degree of skill. In 2006, we revised our system for re-employing individuals in their early 60s for continuous employment according to revisions to Japan's Act on Stabilization of Employment of Elderly Persons.

This system is for employees who satisfy all employment standards such as willingness and desire to work, attitude, health, and strength. There are two options in this program. The first is the Skill Transfer option, which allows participants to pass on their technical skills, abilities, and professional knowledge to young employees. The second is the Full Excellence option, which allows participants to utilize the skills they have developed through the years to work. In 2008, we re-employed 116 individuals.

### Supporting the employment of the disabled in our "Dream Workshops"

We have set aside workplaces that allow us to help disabled people excel and become independent, and we work to employ disabled people.

In addition to the employment of disabled people at various workplaces, under the motto "creating pleasant workplaces where disabled persons play an important role," we created "Dream Workshops" at Iwata Works, Kuwana Works, and

Okayama Works in 2004. In these workshops, disabled persons take responsibility and have a sense of purpose in their work as they carry out their duties with experienced employees. As of June 2009, 10 persons work in these workshops. We will work to further diversify the work at the "Dream Workshops" and to increase

the number of employees who work there.

In fiscal 2008, we had 83 disabled employees, who make up 1.84% of our workforce, meeting Japan's legal requirement of 1.80%.



Work in progress at the "Dream Workshops"

## NTN Group magazine integrated into a single global edition

Until fiscal 2008, there were two separate editions of the NTN Group magazine — one for group companies in Japan and one for overseas companies. In fiscal 2008, these two editions were combined into a single international group magazine to foster a sense of global company unity. This magazine is distributed to group companies in Japan and overseas.

The new group magazine, "BLUE HORIZON," is a bilingual magazine in both Japanese and English. By sharing the same information with

employees in Japan and overseas in a timely manner, we are strengthening the relationships between employees working hard around the world.



### Occupational safety and health

## Strengthening efforts to eliminate workplace accidents

We work to create safe work environments based on a "safety first" spirit that respects people. We have therefore created a safety and health management system based on Occupational Safety and Health Management System (OSHMS). As of fiscal 2008, all seven operating sites of the NTN Group in Japan have been certified by the Japan Industrial Safety and Health Association.

Also, as part of the "policies to eliminate accidents" at NTN Group companies in Japan, we did the following: (1) We raised safety awareness through month-long company-wide safety themes (2) Operating sites did crosschecks of health and safety. Further, a Health and Safety Committee involving both the Head Office and group companies was formed to intensify our health and safety efforts.

Despite these efforts, 32 workplace accidents still occurred in the group in fiscal 2008, so we will make sure to once again go back to the basic idea of "safety first" and make our health and safety management even more thorough to achieve zero workplace accidents.





### **Rewards for employee inventions**

## Clear rules for attributing patent rights and calculating rewards

To reward our employees' inventions and to improve our technical competitiveness, we have established a "Patent Management rule" and a "Patent Reward rule" and we have clarified how patent rights are attributed and how the value of the award is calculated. Rewards are also made for know-how and inventions considered to be trade secrets. There is no upper limit to actual awards. The Invention Reward Committee determines which innovations to recognize.

In fiscal 2008, there were 55 separate patent rewards made to 99 individuals. (In fiscal 2007, there were 50 rewards to 79 individuals).

### **Respecting the rights of workers**

### Building labor relations based on mutual trust

Our company has concluded a labor agreement with the NTN Labor Union based on a spirit of mutual trust and equality between labor and management. The parties have pledged to uphold this agreement based on common goodwill. Labor and management will communicate through informal talks and various labor-management meetings to work on accomplishing various measures. Labor-management meetings will be held regarding any changes to labor conditions and personnel management and any changes will be carried out upon mutual agreement .

In fiscal 2008, negotiations and deliberations were carried out during the spring negotiations, autumn negotiations, business talks, and various labor-management meetings.

### **Respecting human rights**

## Creating a fair and equitable workplace that respects human rights

Our company has a section on human rights in both our "CSR Management rule" and our "Business Code of Conduct." Based on this, we strive to create a fair and equitable workplace environment, respect human rights, and to end discriminatory acts in the workplace such as sexual harassment.

This stance has also been reflected in our "CSR Policy," and we use opportunities such as work training for newlyappointed managers, training for managers and supervisors, and training for new employees to raise employee awareness.

### **Social Aspects**

## **Responsibility to Shareholders**

We strive to actively disclose information and increase corporate value

### Tour of the Okayama Axle Unit Plant

### Technical skills are passed on through an introduction to our most advanced technology and activities

We make the utmost effort to disclose information to shareholders and investors in a fair, accurate, and timely manner. As part of this effort, we invited large institutional investors and analysts in Japan to an "IR plant tour" of



Okayama Works' Axle Unit Plant in July 2008 and a total of 50 individuals participated in the tour.

The axle unit is an integrated unit that combines the vehicle axle with peripheral parts such as bearings. This is a crucial component because decreasing the size and weight and improving function greatly impacts the vehicle's environmental performance and safety.

The tour included a talk on "Meeting the challenge of smaller, lighter, and more functional products to help the global environment." In addition, we introduced trends in production technology that will increase cost competitiveness and productivity as well as our activities to pass on technical skills. Some participants commented that "they were left with an extremely favorable

impression of the motivated efforts of NTN's engineers." We will continue to hold IR plant tours and product exhibitions and create opportunities for information disclosure.

# CSR Management

Feature Article

Business Scope

Top Message

### Shareholder returns

## Shareholder returns that are appropriate from a medium-to long-term perspective

Shareholder returns are an important part of NTN's policies. It is standard practice to pay steady dividends to shareholders based on a medium-to long-term perspective. Dividends are determined considering our consolidated performance as well as dividend trends.

The annual cash dividend for the fiscal year ended March 2009 was  $\ensuremath{\texttt{Y}13}$  per share.

### **Disclosure of information**

### Shareholder's meeting / Meetings for individual investors

On June 27th, 2008, we held our 109th annual shareholders' meeting. At this meeting, we used display panels to introduce various aspects of our business. We also installed four LCD monitors, a practice that we started in 2007. Before the meeting started, we showed a video introducing the company. During the meeting, photos and graphs were shown on the screens as the chairman gave the business and financial report

to make the shareholders' meeting easier to understand. We will continue to work to have even more of our shareholders participate in this meeting by making changes such as moving up the meeting date.

In September 2008, we participated in a seminar for individual investors held by a securities company. Participants regarded our company highly in terms of growth potential and future prospects. NTN's presentation was rated by 70% of participants to be "good or very good."

### **Recognition from outside agencies**

## NTN has been selected by several SRI funds and indices

NTN has been recognized by the stock market as one that works to preserve the environment and contributes to society. NTN has been selected by SRI (socially responsible investment) funds and SRI indices.

In Japan, we have been chosen every year since 2003 by Morningstar. Outside of Japan, NTN has been chosen since 2002 by FTSE4Good and since 2005 by Ethibel PIONEER and Ethibel EXCELLENCE (as of June 2009).



### **Social Aspects**

## **Responsibility to Local Communities**

Carrying out activities to work better with local communities as a good corporate citizen

## Contributing to local communities and preserving the environment by planting forests

## Tree-planting activities at Iwata Works and Okayama Works

Each of the operating sites in the NTN Group works with local communities to contribute to society. One example of this is tree-planting activities in various locations.

In July 2008, Iwata Works signed an agreement with Iwata City and Shizuoka Prefecture to establish the "Shizuoka mirai no mori supporter" system (Supporters of Shizuoka's future forests). We are working with the prefecture and local communities to carry out "NTN Kigyo no mori" (NTN corporate forest stewardship) activities.

Okayama Works' "NTN Kigyo no mori"



### Being part of local communities

### Spearheading proactive social contribution activities

Our company upholds "positive contribution to society" as a basic part of our Corporate Philosophy. We regard social contribution activities as "investing in society." We choose some of the various problems facing society and voluntarily work to solve them as one of our basic policies.

A "positive contribution to society" is also part of the Business Code of Conduct. Through these documents, we urge employees to help us be good corporate citizens and take part in social contribution activities as well as cultural, educational, and sports activities. Also, we call on employees to give support proactively and recognize employees with excellent track records.

### Taking part in local cultural events and supporting education

The general affairs departments at our various operating sites are the contact between local residents and NTN.

In fiscal 2008, we supported the Kuwana Riverside Fireworks Festival in the Kuwana area. As part of our social contribution efforts for local residents, Nagano Works donated money to an organization that helps send students from a local junior high school overseas for training. In August 2008, Okayama Works signed a "Kigyo to kyodo no mori zukuri" agreement (Public-corporate forest-planting) with Mimasaka City, Okayama Prefecture. This agreement allows NTN to borrow approximately 3.5ha of city-owned forest to create an "NTN Kigyo no mori."

Both operating sites have been working with local governments to continue forest preservation activities, and these new agreements allow us to further expand our activities. These new forests will become not only rest areas for local residents but also offer opportunities for our employees and their families to experience nature.

### "I wonder if the oak tree that I planted is growing?"



General Affairs Section, Personnel and General Affairs Department, Okayama Works



It was through NTN's corporate forest stewardship activities that I first experienced planting acorns and cutting down old trees. I was able to actually touch the trees and breathe the clean forest air, which was very relaxing and comfortable. I'd like to take part in activities like this in the near future.

## Working to make sure local communities are safe

## NTN receives "Superior Society Award" for traffic safety activities

In January 2009, the Japan Traffic Safety Association and the National Police Agency held the 49th National Citizen's Traffic Safety Conference, where NTN Kongo Corporation was given a "Superior Society Award." This award was given to recognize NTN Kongo's traffic safety leadership, local traffic safety activities, and for keeping company vehicles free of accidents and infractions.

We are encouraged by this award and will continue participating in activities to make local communities safe and give residents peace of mind.



Certificate and award from the Japan Traffic Safety Association

### Contributing to local communities

### NTN receives the "Medal of Honor with Dark Blue Ribbon" for its social contribution activities

NTN was awarded the "Medal of Honor with Dark Blue Ribbon" for the social contribution activities of Iwata Works and Kuwana Works. The donation of a full concert grand piano by Kuwana Works and of facilities (including a gazebo) by Iwata Works prompted Iwata City and Kuwana City to send applications to the

Ministry of Education, Culture, Sports, Science and Technology, leading to this award.

The donated piano and gazebo are enjoyed by many citizens and contribute to the cultural and tourist activities in each city.



Chairman Yasunobu Suzuki receives a certificate from the mayor of Kuwana City

## The NTN booth at the 4th Omaezaki City Large Industry Festival

On November 22-23, 2008, NTN Omaezaki Corporation had a booth at the "4th Omaezaki City Large Industry Festival," Shizuoka Prefecture at Omaezaki City Hall. The booth featured a vehicle built by the team from Shizuoka University for the "Student Formula SAE Competition of JAPAN," which aims to develop the human resources that will take over the automobile industry some day. NTN provided engineering support and

products to this student team. Many residents and children came to look at the booth, and we were successful

children came to look at the booth, and we were successful in contributing to this large event which marks the 5th anniversary of the incorporation of Omaezaki City.



The Student Formula SAE vehicle on display

## Donating computers to elementary schools around NTN MANUFACTURING (THAILAND) CO., LTD. (NMT)

Located in Rayong Province in central Thailand, NMT produces automotive products. The 10th anniversary of its establishment

was in May 2008 and to mark this event, NMT donated computers, printers, and stationery sets to seven local elementary schools (with a total of 1,500 children).

All of our employees have a renewed sense of thankfulness toward local communities.



Employees handing out stationery sets to Children in Thailand

### Guangzhou NTN-Yulon Drivetrain Co., Ltd. (Guangzhou NTN) recognized as an "Advanced Corporation" by the Guangzhou Development District government

In April 2009, Guangzhou NTN was recognized as an "Advanced Corporation for fiscal 2006 to 2008" by the Guangzhou Development District government. The reasons for this honor included corporate activities with good labor-management relations, charitable activities related to last year's earthquake in Sichuan, and scholarships for children in low-income households in neighboring regions.

Guangzhou NTN was one of only six organizations and agencies to be recognized out of 5,000 in Guangzhou Development Distinct. We will take this award to heart and continue to contribute to local communities at Guangzhou NTN.





Meeting the children who received our scholarships

Certificate

## Shanghai NTN Corporation (Shanghai NTN) raises funds to support victims of the Sichuan earthquake

The earthquake that hit Sichuan Province on May 12, 2008 caused devastation in the region. Shanghai NTN's labor union became the contact for all donations raised to support victims

and all employees supported this effort.

The 80,000 yuan that was raised (approximately 1.2 million yen) was sent to victims of the Sichuan earthquake through the local branch of the Red Cross.



Employees raising funds for the Sichuan earthquake

## Our serial feature in newspapers aims to increase children's interest in science

In October 2007, our company started a serial advertisement titled "Oshiete! Bearbear. Oyako de manabo bearing" (Teach me, Bearbear! A family lesson on bearings) in business newspapers. Aimed primarily at children in the middle elementary grades, it deals with the principles of friction, how bearings work, and their



relationship to environmental problems. This serial aims to increase children's interest in science through bearings.

In June 2009, we put back numbers on our website.

## **Environmental Management**

Strengthening our efforts to reduce environmental impact

### **Environmental Policy**

### The Environmental Policy was completely revised to clarify details

The NTN Group is spearheading environmental preservation activities led by the company-wide Environmental Management Committee, which includes group companies in Japan, and is also creating a group-wide environmental management system.

During its April 2008 meeting of our company-wide Environmental Management Committee, it set environmental targets for the entire company and for individual operating sites for reducing CO2 and waste as well as the details of initiatives to achieve these targets.

Also, the Energy and Natural Resources Conservation Action Committee of our Manufacturing Department and the

### **Environmental Policy**

Harmony with the global environment is our most important issue and we will continuously strive to contribute to the harmonious development of society and work to reduce the impact of our corporate activities on the environment.

- 1. Developing and selling environmentally-friendly products • We shall use high-precision processing and tribological technologies to develop environmentally-friendly products and make them available to society in order to contribute to energy savings around the world.
- 2. Reducing environmental impact
  - We shall work to improve energy efficiency in all of our business activities to prevent global warming, everything from procuring raw materials and parts to manufacturing, logistics, and sales.
  - We shall use resources effectively, reduce waste, and be thorough in the 3Rs (reduce, reuse, and recycle) to reduce the generation of waste.
  - We shall establish total management of environmentallyhazardous substances used in products and manufacturing processes, and actively work to find and use substitutes for chemical substances suspected of being harmful to proactively prevent environmental pollution.
- 3. Complying with laws and regulations and enriching our environmental management system
  - We shall comply with laws, regulations, and statutes, and set and meet strict voluntary standards and internal rules to meet the needs of local communities and customers
  - . We shall update the organization and implementation of environmental management and carry out environmental audits to maintain and improve the environmental management system. Also, we will publicize our environmental efforts to promote communication with the rest of society.
  - We shall conduct environmental education and internal notification activities to promote improved awareness of this Environmental Policy and environmental preservation to employees and all other persons working at the NTN Group.
- 4. Efforts to contribute to society and protect the natural environment
  - · We shall actively participate in social contribution activities and environmental protection activities to work together and become partners with local communities.

March 1, 2009 Chief Environmental Management Officer NTN Corporation Office Environmental Action Committee of our Head Office and Sales Department work to reduce our CO<sub>2</sub> emissions.

In March 2009, we completely revised our Environmental Policy, which concerns the environmental preservation carried out under these environmental management systems. While the Basic Concept remains unchanged, outlining the importance we give to harmony with the global environment, the related Policy was rewritten into four items to clarify them. We also added details, including items about sending updates on the status of our efforts and the comprehensive management of hazardous materials.

### Environmental management system

### Working to obtain ISO 14001 certification for all of our operating sites in Japan and overseas

The NTN Group has obtained a multi-site ISO 14001 certification for some operating sites and is preparing its other operating sites to join the multi-site certification in order to create a comprehensive environmental management system across all operating sites.

17 out of 21 operating sites in Japan have obtained ISO 14001 certification and 16 of those are in the multi-site certification.

NTK PRECISION AXLE CORP. (NTK) became ISO 14001 certified in fiscal 2008, giving a total of 16 out of 18 overseas operating sites ISO 14001 certification.



Committee

\*1 Includes related companies in Japan.
 \*2 At some sites, the Management Section or Administration Section is in charge of these duties.

Registration

UL

LRQA

LRQA KPMG

LRQA

AFAQ

ΤÜV

P.IR

CNAB

ΤÜV

SGS

Pogion	Operating site		Date of Certification Registrat				Pagion	Operating site		Date of certification		Registra	
Region	Company	Plant	Year	Month	Registration No.	Registration body		Region	Company	Plant	Year	Month	Registration I
Japan	Multi-site certification 1999 11 JSAE176 JSA								NTN-BCA CORP.		2000	7	A8699
	(Operating sites included)							USA	NTN USA CORP. I	Head Office	2000	4	0112005
	Head Office, Kuwana Works, Iwata Works, Okayama Works,								NTK PRECISION A	AXLE CORP.	2008	4	4000717
	Takarazuka Works, Nagano Works, NTN Kongo Corp.,							Canada	NTN BEARING CORP.	OF CANADA LTD.	1999	7	287
	NTN Mikumo Corp., NTN Engineering Plastics Corp., NTN Powder Metal Corp., Hikari Seiki Industry Co., Ltd., NTN Casting Corp., NTN Omaezaki Corp., NTN Mie Corp.,						Germany	NTN Kugellagerfat (Deutschland)		1999	6	201167-2	
	NTN Fukuroi Corp., NTN Kinan Corp.							France	NTN TRANSMISS	IONS EUROPE	2003	1	19479
	NTN Tado Corp. 2005				JSAE1058	JSA			NTN MANUFACTU	JRING			
	AMERICAN NTN	Elgin Plant	2000	6	111994	LRQA	Thailand	Thailand	(THAILAND) C	0., LTD.	2003	3	31634
	BEARING MFG. CORP.	Schiller Park Plant	2000	9	112115	LRQA		NTN-NIDEC (THAIL	AND) CO., LTD.	2008	3	C2007-026	
USA	NTN-BOWER	Macomb Plant	2000	6	111998	LRQA	QA		NTN-NIDEC (Zhejia	ing) Corporation	2005	1	02005E10013
	CORP.	Hamilton Plant	2000	6	111999	LRQA		China	Guangzhou NTN-Yulon	Drivetrain Co., Ltd.	2005	4	10404324
	NTN DRIVESHAFT	1999	12	A8478	UL			Shanghai NTN Co	rporation	2005	7	CH05/048	

### Operating sites expected to be ISO 14001 certified

Operating sites with ISO 14001 certification

Region	Operating site	Expected year/month of certification		
neyiun	Operating site	Year	Month	
	NTN Hakui Corporation	2010	7	
Japan	NTN Houdatsu Shimizu Corporation	2010	7	
	NTN Kamiina Corporation (joining our multi-site certification)	2010	7	

### **Environmental audits**

### NTN highly regarded for efforts to curb overall CO<sub>2</sub> emissions

NTN Group has a multi-faceted approach to environmental audits. In addition to external audits for ISO 14001 certification, we carry out "internal audits" as well as "cross-audits," which are done between operating sites.

This is the 10th year since we gained multi-site ISO 14001 certification. In the fiscal 2008 renewal audit, only one observation and 10 minor instructions were received. We have been highly regarded for our efforts to reduce not just our CO2 emissions rate, but total CO2 emissions.

Also, in fiscal 2008, there was an accidental release of firefighting foam at NTN Mie Corporation, and in response, we

carried out an "emergency cross-audit" at all operating sites to prevent its recurrence.



ISO 14001 renewal audit

Region	Operating site	Expected year/month of certification			
region	Operating site	Year	Month		
Japan	NTN Bizen Corporation (joining our multi-site certification)	2011	7		
China	NTN-RAB (Changzhou) Co., Ltd.	2010	3		
India	NTN NEI Manufacturing India Private LTD.	2012	3		

### **Environmental education**

### Telling employees' families about the importance of environmental activities

The NTN Group puts management, new employees, and new managers through the necessary environmental education. In fiscal 2008, to strengthen our management of environmentallyhazardous materials, we trained people in charge of the actual execution of work in the quality assurance departments in how to use fluorescence spectrometers.

Between April and September, our primary operating sites held workplace tour events for employees' families. These did not just involve a plant tour, but also introduced our environmental efforts and featured a power generation demonstration using an actual solar panel. An environmental quiz was used to get families to learn about the importance of environmental activities.

In fiscal 2007, the NTN Group started distributing Household Eco-Account Books to employees to make households more aware of the importance of reducing energy consumption. In fiscal 2008, approximately 2,500 people participated.



The NTN Household Eco-Account Book

### **Environmental accounting**

## 17% improvement in cost effectiveness compared to the previous fiscal year

In fiscal 2008, we invested 1.035 billion yen in environmentally-

related equipment, and we spent 2.9 billion yen in related costs. Both of these figures are less than last year but the economic benefit was 903 million yen, a 30 million yen improvement.

In terms of our environmental impact, lower production volume reduced CO<sub>2</sub> emissions and the amount of paper and styrofoam that we purchased, which improved our recycle rate.

Environmental preservation costs At operating sites							
	Classification		Equipment investment		Costs		
	Classification	Amount	Details	Amount	Details		
as ists	Pollution prevention costs	41	Environmental equipment (dust collectors, particulate smoke removal devices, and wastewater treatment equipment)	155	Inspection and management of environmental equipment (dust collectors and wastewater treatment equipment)		
Work areas internal costs	Expenses to preserve the global environment	214	Energy-conserving equipment (compressors, lighting, air conditioning, etc.)	43	Costs of switching to energy-saving equipment, from halon fire extinguishers to CO <sub>2</sub> extinguishers, etc.		
We	Resource recycling expenses	0		566	Cost of measures to recycle and reduce waste and of processing regular and industrial waste		
Upstre	Upstream / downstream costs			0.4	Analysis related to green procurement		
Costs	Costs of management activities			286	Labor costs related to the EMS and information disclosure (advertising and CSR reports) and the greening and beautification of company grounds		
R&D c	R&D costs		R&D equipment related to environmental preservation	1,704	R&D costs related to environmental preservation		
Costs	Costs of social activities			7	Greening and beautification outside the company		
Environmental remediation expenses		0		139	Cost of soil sampling	Grand total	
Total	Total			2,900		3,935	
(For ref	(For reference) Total from last fiscal year			3,047		4,474	

### Impact on environmental preservation

Indicator	Result for fiscal 2008		
Total CO <sub>2</sub> emissions	311,000 tons		
Reduction of waste	Recycle rate 99.6%		
Reduction in paper purchases	Compared to fiscal 1998 Δ43.4%		
Reduction in Styrofoam purchases	Compared to fiscal 1999 ∆90.1%		

### **Environmental communication**

## Responding to the accidental release of firefighting foam at NTN Mie Corporation

During some piping work at NTN Mie Corporation in June 2008, firefighting foam was accidentally released into a small river nearby, resulting in an investigation by the authorities. The firefighting foam that was released did not have an effect on people or farm products, but it made local residents uneasy and inconvenienced them. This accident caused us to rethink our wastewater channels and how we carry out piping work. We added an emergency gate to contain any future releases.

We were able to gain the understanding of the local residents that we inconvenienced during these procedures. We also required all operating sites to inspect their wastewater channels to make sure that there are containment measures in place.

#### Financial effect of environmental preservation activities

		(iviilion yen/year)
Item	Amount	Details
Profit from recycling saleable materials	458	Profit from saleable materials such as metallic sludge
Reduced costs from energy conservation	151	Reduced costs from energy conservation (air conditioning and illumination)
Reduced waste treatment costs through resource conservation and recycling	294	Benefit of installing grinding swarf briquetting machine
Total	903	
(For reference) Total from last fiscal year	873	

### Strengthening our ties with local residents by discussing our common interest in the environment

Each operating site works to strengthen their ties with local residents by discussing the environment. For example, NTN Casting Corporation has a meeting every year with local residents where they describe the status of their environmental efforts and exchange views with the residents. Any opinions

and requests are then reflected in our environmental improvement activities.

NTN Kongo Corporation held Monozukuri-related tours and gave lessons related to the environment to local elementary school students.



A Monozukuri tour at NTN Kongo Corporation

Social Aspects

**Environmental Aspects** 

## Business activities and environmental impact

## Reducing the environmental impact over a product's entire lifecycle

Our company works to understand the amount of raw materials, energy, and water we use (the input) and our environmental impact (the output) through the entire product lifecycle.

The purchase of raw materials (steel and non-ferrous material) by our domestic sites in fiscal 2008 was 340,000

tons, a decrease of about 15% over the previous fiscal year because of the decrease in production volume during the latter half of the year. Also, the amount of energy and water used were less than the previous fiscal year.

The amount of industrial waste that was landfilled was reduced by 700 tons over the previous fiscal year to 217 tons partly because of the recycling of the metal waste generated by the casting process. The CO<sub>2</sub> emissions were reduced by 12% over the previous fiscal year to 311,000 tons as a result of decreased production and the energy conservation improvements carried out at each operating site.

### At operating sites in Japan



## **Targets and Results**

Spearheading activities to achieve a harmonious existence with the global environment based on three main points

### **Fundamental CO2 reductions**

. .

The NTN Group has environmental targets to achieve by fiscal 2010 in three areas: preservation of the global environment, creating a recycling society, and maintaining and improving the environmental management system. These targets were set in fiscal 1998, and since then, we have been methodically carrying out environmental activities.

In fiscal 2008, we set "promoting energy conservation and reducing CO<sub>2</sub> emissions," "participating in local environmental activities," and "promoting green procurement" as main goals and we started initiatives in these areas. We believed that reducing CO<sub>2</sub> emissions was the most important issue and our Head Office and production departments worked together on a "CO<sub>2</sub> reduction project" to effect fundamental reductions.

	Purpose		Fiscal 2008 Targets	Fiscal 2008 Results	Evaluation	Page
Preservation of the global environment	Reduce CO2 emissions	Domestic	Achieve total CO <sub>2</sub> emissions <sup>*1</sup> of 352,500 tons/year or less	• Achieved total CO <sub>2</sub> emissions of 311,000 tons/year (Reference: Achieved CO <sub>2</sub> emissions rate* <sup>2</sup> 15.7% lower than fiscal 1997)	0	p. 33
		Overseas	Achieve a 13% improvement in CO <sub>2</sub> emissions rate over fiscal 2006	• 7.5% increase in CO <sub>2</sub> emissions rate over fiscal 2006	$\bigcirc$	_
	Reduce air, water, and ground pollution	Domestic	• Replace 75 halon fire extinguishers with CO <sub>2</sub> fire extinguishers. (with 135 halon units remaining at the end of fiscal 2008)	• Replaced 124 halon fire extinguishers with CO <sub>2</sub> fire extinguishers (with 86 units remaining at the end of fiscal 2008)	$\bigcirc$	-
		Domestic	Reduce the use of substances designated by PRTR law by 33.5% over fiscal 2006	<ul> <li>Reduced the use of substances designated by PRTR law by 39.5% over fiscal 2006</li> </ul>	$\odot$	p. 36
Pre	Participate in local environmental activities	Domestic	<ul> <li>Promote local greening activities (e.g. "NTN Kigyo no mori: (NTN corporate forest stewardship) activities)</li> </ul>	<ul> <li>Signed agreements with local governments in lwata and Okayama and started greening activities</li> </ul>	$\bigcirc$	p. 25
ety		Domestic	Work toward achieving zero emissions with a recycle rate of 99%	Worked toward achieving zero emissions and achieved a recycle rate of 99.6%	$\bigcirc$	p. 35
ng socie	Reduce waste materials	Domestic	Reduce landfill waste to 43 tons/month or less	Reduced landfill waste to 18.1 tons/month	$\bigcirc$	p. 35
Creating a recycling society		Overseas	Achieve zero emissions with a recycle rate of 96.3%	• Worked toward achieving zero emissions and achieved a recycle rate of 92.4%	$\overline{\mathbf{O}}$	p. 35
	Preserve resources	Domestic	Reduce paper consumption by 42.4% over fiscal 1998	Reduced paper consumption by 43.4% over fiscal 1998	$\bigcirc$	-
	Treserve resources	Domestic	Reduce styrofoam usage by 88.4% over fiscal 1999	Reduced styrofoam usage by 90.1% over fiscal 1999	$\bigcirc$	_
	Internal systems	Domestic	Develop a structure to have new operating sites     obtain certification	<ul> <li>We are preparing Kamiina, Hakui, Houdatsu Shimizu (2010), and Bizen (2011) for inclusion in our multi-site certification.</li> </ul>	$\bigcirc$	p. 28
system		Overseas	Obtain ISO certification at NTN-RAB and NTK	NTK was certified in April	$\bigcirc$	p. 28
Maintaining and improving the environmental management system	Promote green procurement	Domestic	<ul> <li>Inform internal and external parties of our Green Procurement Standard</li> <li>Carry out internal audits related to environmentally-hazardous substances</li> <li>Cement the practice of performing incoming inspections using analytical devices</li> <li>Entrench proper management of inventory containing environmentally-hazardous substances</li> <li>Pass all customer audits</li> </ul>	<ul> <li>Analyzed supply chain regarding the Green Procurement Standard.</li> <li>Carried out internal and supplier audits related to environmentally-hazardous substances</li> <li>Introduced analytical devices for incoming inspections</li> <li>Passed all customer audits</li> </ul>	0	p. 36
	Encourage suppliers and vendors to implement environmental management systems	Domestic	<ul> <li>Encourage suppliers to obtain certification such as ISO 14001 and obtain 86% certification</li> </ul>	• Supported suppliers in their efforts to obtain certification such as ISO 14001, achieving 86% certification	$\odot$	_
	Comply with new regulations	Domestic	Comply with REACH (pre-registration)	• Pre-registration complete. Currently engaged in an investigation of SVHC content.	$\bigcirc$	p. 36

\*1 Calculated with the emission factors from each power company in fiscal 2006.

\*2 CO<sub>2</sub> emissions rate (tons/1 million yen) = CO<sub>2</sub> emissions (tons) / Value-added production (1 million yen). (Value-added production is the production output minus the corresponding cost.) O Achieved/In progress C Not achieved

Our total CO<sub>2</sub> emissions in fiscal 2008 were 311,000 tons due to both reduced production in Japan and energy conservation improvements.

Our zero emissions efforts in fiscal 2008 resulted in a recycling rate in Japan of 99.6%, exceeding our target of 99%, but we were not able to meet our overseas zero emissions target. In terms of promoting green procurement, we reinforced our incoming inspections and created a system to manage environmentally-hazardous substances in response to the European Union's RoHS Directive and ELV Directive (see p. 36).

For fiscal 2009, we re-established a target for our CO<sub>2</sub> emissions rate, which is an indicator of production efficiency. We will focus on the emissions rate and on our total emissions target as we work to reduce CO<sub>2</sub> emissions.

En	Environmental targets in fiscal 2009 and fiscal 2010							
	Purpose		Fiscal 2009 Targets	Fiscal 2010 Targets				
nent	Reduce CO2 emissions	Domestic	<ul> <li>Achieve total CO<sub>2</sub> emissions of 250,000 tons/year or less</li> <li>Achieve an 8% improvement in CO<sub>2</sub> emissions rate over fiscal 1997</li> </ul>	<ul> <li>Achieve total CO<sub>2</sub> emissions<sup>*3</sup> to 317,000 tons/year or less</li> <li>Achieve a 25% improvement in the CO<sub>2</sub> emissions rate over fiscal 1997</li> </ul>				
l environr		Overseas	• Achieve a 3% in CO <sub>2</sub> emissions rate over fiscal 2006	Achieve a 15% improvement in CO <sub>2</sub> emissions rate over fiscal 2006				
Preservation of the global environment	Reduce air, water, and ground pollution	Domestic	• Replace 47 halon fire extinguishers with CO <sub>2</sub> fire extinguishers (with 39 units remaining at the end of fiscal 2009)	Completely phase out halon fire extinguishers				
servation			• Reduce the use of substances designated by PRTR law by 38% over fiscal 2006	• Reduce the use of substances designated by PRTR law by 40% over to fiscal 2006				
Pre	Participate in local environmental preservation activities	Domestic	<ul> <li>Promote local greening activities (e.g. "NTN Kigyo no mori" (NTN corporate forest stewardship) activities)</li> </ul>	Promote local greening activities (e.g. "NTN Kigyo no mori")				
		Domestic	• Work toward achieving zero emissions with a recycle rate of 99.5%	• Work toward achieving zero emissions with a recycle rate of 99.5%				
a recycling society	Reduce waste materials	Domestic	Reduce landfill waste to 25 tons/month or less	Reduce landfill waste to 25 tons/month or less				
a recyclin		Overseas	• Work toward achieving zero emissions with a recycle rate of 96.3%	Achieve zero emissions with a recycle rate of 98.3%				
Creating	Preserve resources	Domestic	Reduce paper consumption by 46.2% over fiscal 1998	Reduce paper consumption by 50% over fiscal 1998				
		Domestic	Reduce styrofoam usage by 92.4% over fiscal 1999	Completely phase out styrofoam				
me	Internal systems	Domestic	Prepare systems to certify new operating sites	Have all operating sites around the world obtain ISO 14001     certification				
Maintaining and improving environmental management system	Promote green procurement Domestic		<ul> <li>Ensure full compliance with our Green Procurement Standard</li> <li>Respond robustly to investigations of environmentally- hazardous substances (implement a chemical substances management system)</li> <li>Advance audit of environmentally-hazardous substances</li> <li>Continue incoming inspections</li> </ul>	(This goal will be set at the end of fiscal 2009)				
	Encourage suppliers and vendors to implement environmental management systems	Domestic	<ul> <li>Support suppliers in efforts to obtain environmental certifications and achieve 90% certification</li> </ul>	Have all suppliers obtain environmental certification				
the	Comply with new regulations	Domestic	• Comply with the amended Act on the Rational Use of Energy and the amended PRTR Law.	(This goal will be set at the end of fiscal 2009)				

\*3 Calculated based on local power company's target emissions factors for fiscal 2010.

Top Message

## **Reducing CO<sub>2</sub> Emissions**

The goal of our "CO<sub>2</sub> reduction project" is to meet the company-wide reduction targets for 2010

## Implementing large-scale energy conservation improvements at our primary operating sites

## Our CO<sub>2</sub> reduction project finds new energy conservation opportunities in our plants

Most energy consumed in NTN plants is by facility requirements such as compressors, air conditioning, and lighting, so we utilized various subsidies to carry out large-scale energy conservation improvements.

In April 2008, we started our "CO<sub>2</sub> reduction project" to find and implement new measures to reduce CO<sub>2</sub> emissions from our plants. This project is led by the heads of the Monozukuri centers at our primary operating sites. The Production Engineering R&D Center and the Head Office's managing departments were also involved in implementing various measures over the year. The project involved discussing how to obtain and disseminate information on the newest energy conservation technology, how to exchange information about energy conservation improvements and equipment purchases going on at the various operating sites, and how to report this information to other operating sites. The newest heat treatment facilities were also toured and external experts were invited to explain new technology.

### Improving energy conservation

As part of this project, NTN Kongo Corporation participated in the "Japan Voluntary Emissions Trading Scheme" (JVETS) in fiscal 2009, in which we received subsidies to make improvements for air conditioning and oil-cooling devices, resulting in an expected CO<sub>2</sub> reduction of 3,000 tons/year. This system provides subsidies for energyconserving equipment on the condition that CO<sub>2</sub> emissions are reduced by a certain amount. Any variances from the target reductions are bought and sold as emissions credits by the participating companies.

In recent years, we have introduced high-efficiency compressors at Iwata Works through independent Energy Service Company (ESCO\*), which currently carry out most energy conservation improvements in

A thermal storage tower for the new air conditioning system installed at Okayama Works

plants. We expect a reduction in CO<sub>2</sub> emissions of 4,000 tons/year. In addition, at Okayama Works, we received subsidies from the Ministry of Economy, Trade and Industry to replace the air conditioning there with the newest thermal storage air conditioning system, and we expect a reduction in CO<sub>2</sub> emissions of 1,000 tons/year.

Through these activities, we expect a reduction of approximately 20,000 tons of CO<sub>2</sub> by the end of fiscal 2010. In fiscal 2009, project members will continue to spearhead these efforts in each workplace. Going forward, we will also implement energy conservation technologies at our overseas operating sites.



ESCO: ESCO businesses invest in the equipment and renovation costs required to conserve energy, enabling ESCO contractors to achieve energy conservation without the need to shoulder the initial investment.

High-efficiency screw compressor at lwata Works



\* Based on the yearly CO<sub>2</sub> emissions factor from the local power company

Taking responsibility for our plant's large environmental impact

Kenji Horizumi Iwata Works Head, Monozukuri Center



Approximately 30% of the CO<sub>2</sub> emitted by the entire company comes from Iwata Works, making it imperative for us to implement energy conservation measures. Our latest improvement was high-efficiency compressors. All of us at Iwata Works will also carry out accessible, small-scale energy conservation activities.

# Top Message

# Social Aspects

## CO<sub>2</sub> reduction targets and the introduction of natural energy sources

### Drastic reduction in total CO<sub>2</sub> emissions

To achieve the company-wide limit of "317,000 tons in total CO<sub>2</sub> emissions from all domestic sites by 2010" (a 10% reduction from fiscal 2007), we are carrying out energy conservation improvements in our plants and making use of natural energy sources.

In fiscal 2008, these efforts, on top of the reduction in production in the latter half of the year, reduced our total CO<sub>2</sub> emissions 311,000 tons, which was below the 2010 CO<sub>2</sub> reduction target. Because there is a possibility that production could rebound, however, we did not change the 2010 target and will look at what happens in 2009 before reviewing this target again.

To help reduce the CO<sub>2</sub> emitted by the NTN Group, we have been actively using natural sources of energy to generate wind and solar power. In fiscal 2008, we installed a 94kW solar power generator at Kuwana Works and a 62kW solar generator at Mie Corporation. To date, we have installed 10 solar generators, 14 wind power generators, and 13 hybrid generators that harness both wind and solar energy. These generators correspond to a reduction of 290 tons/year in CO<sub>2</sub> emissions.

We also participated in a trial of the Japan Voluntary Emissions Trading Scheme, which was started by the government in 2008. In this system, participating corporations set voluntary targets for total CO<sub>2</sub> emissions or as a CO<sub>2</sub> emissions rate for one year from 2008 to 2010, and then

engaged in emissions trading to achieve these targets. The NTN Group is participating in this scheme and has set CO<sub>2</sub> emissions targets for fiscal 2010 for our primary operating sites.



The solar power generation system at Kuwana Works' Extra-Large Bearings Plant 3



For reference: CO<sub>2</sub> emissions rate (original 10 operating sites)  $_{2.0\,\Gamma}$ 



## Reducing the impact of logistics on the environment

## Reducing CO<sub>2</sub> emissions by encouraging a modal shift and environmentally-friendly driving

99.8% of the NTN Group's product output is shipped by truck and all of this is left to logistics companies. Our yearly product output is approximately 90 million ton-km, which means that we are a "Designated Consigner" (ship 30 million ton-km of cargo a year) under the amended Act on the Rational Use of Energy of 2005. In the medium- to long-term, we are required to improve our average annual energy use rate by 1%. The NTN Group had set a target: Reduce CO<sub>2</sub> emissions from logistics (per distance driven) by 12% over fiscal 1998 levels by fiscal 2010. NTN worked to raise awareness of environmentallyfriendly driving at logistics companies and to encourage them to switch to low-pollution vehicles.

In addition to these efforts, in fiscal 2008, the target that we set was a 1% reduction over fiscal 2007 (13,400 tons), and we worked to make a modal shift to rail shipments and to modify the way that containers for export are stacked to reduce the amount of cargo. The downturn in the economy also reduced shipments, resulting in a total reduction of 12,000 tons, which was a 10% reduction from 2007.



## **Reducing Waste Generation and Conserving Resources**

Developing recycling devices and reducing waste to help create a recycling society

### NTN receives award for resource recycling technology and systems

### The Electric Arc Furnace (EAF) dust recycling system jointly developed with another company, is recognized with an Encouragement Prize

The technology resulted from a project called "Creation of a briquetting device and recycling system for EAF dust" and was developed jointly with EAF steelmaker Daiwa Steel Corp. The idea was recognized with an Encouragement Prize in the "Resource recycling technology and systems" category by the Clean Japan Center, a foundation affiliated with the Ministry of Economy, Trade, and Industry.



This award system was established to recognize and increase the number of companies and effort working to reduce, reuse, and recycle waste. It is difficult with EAF dust to make environmental improvements and reduce cost simultaneously, but through this jointly-developed technology, our two companies were able to contribute to creating a recycling society.





Formerly of the Equipment Development Department Production Engineering R&D center

Solving industrial problems to contribute

to environmental preservation

Shozo Goto

Recycling EAF dust was an issue that has long plagued the EAF steel production industry. As we worked on the grinding swarf briquetting technology, we were able to devise a low-cost recycling method for EAF dust.

### Zero emissions

## Achieved zero emissions with a domestic recycle rate of 99.6%

Since fiscal 2008, the NTN Group has defined zero emissions no more than 1% of total waste going to landfill. In fiscal 2008, we worked to achieve zero emissions with a recycle rate of 99% for our domestic group companies and 96.3% for our overseas group companies. Our domestic group companies were able to reach the target, achieving a 99.6% recycle rate, but our overseas group companies achieved a recycle rate of 92.4%.

Domestically, we worked not only to increase our recycle rate but also to reduce the amount of landfill waste, working to decrease this waste to 43 tons/month or less. We looked at the slag generated in the casting processes of NTN Casting Corp., which had been disposed of as industrial waste, and worked to recycle the steel portion of this slag, which reduced NTN's domestic landfill waste to 18.1 tons/month, far below the target.

## NTN's Head Office receives a letter of appreciation from the Mayor of Osaka for its efforts to reduce garbage

In October 2008, NTN's Head Office was given a letter of appreciation as a "company distinguished for continuously reducing garbage" from the Mayor of Osaka.

We have continued to reduce waste based on ISO 14001 activities through waste reduction activities such as reducing paper usage as well as by sorting and recycling garbage. Going forward, we will work to reduce garbage at not only at the Head Office building, but throughout the entire company.



## **Managing Chemical Substances**

Complying with laws and regulations and ensuring proper management

## Managing environmentally-hazardous substances throughout the entire supply chain

### Green procurement and customer audits

The NTN Group has established a "Green Procurement Standard" and is working with suppliers to preserve the environment and improve the environmental performance of products.

Promoting green procurement was a priority for our environmental activities policy in fiscal 2008. Particularly to comply with restrictions, laws, and regulations related to environmentally-hazardous substances such as the European Union's RoHS Directive\*1, ELV Directive\*2, and REACH\*3, we have created analytical systems for incoming parts and materials, and specialized internal auditing systems for environmentally-hazardous substances. We have trained 55 auditors who will carry out internal audits related to environmentally-hazardous substances throughout the NTN Group; we have also started to monitor suppliers.

On the other hand, we also respond positively to requests for customer audits. In fiscal 2008, eight operating sites received audits related to the management of environmentally-hazardous substances. Every site passed. One of the customers, Konica Minolta Business Technologies, Inc., audits all suppliers, and sites that obtain a good score are recognized as a "Certified environmental collaboration site." All five NTN operating sites that were audited received this certification. Going forward, seven internal auditors were trained and certified by Konica Minolta Business Technologies and will be carrying out self-directed audits to renew this certification.

- \*1 RoHS Directive: This directive prohibits the use of designated hazardous substances in electrical and electronic devices.
- \*2 ELV Directive: This directive aims to limit hazardous substances from vehicles by mandating recyclable materials.
- \*3 REACH: This regulation deals with the Registration, Evaluation, Authorization, and registration of Chemical substances.



An audit by Konica Minolta Business Technologies, Inc.

### Our response to REACH

## We have finished pre-registering the targeted chemical substances

REACH is a European Union (EU) regulation that came into effect in June 2007 that requires manufacturers and importers to register and evaluate the safety of chemicals in any product in the EU. The NTN Group exports over a ton of chemical substances in the form of grease to the EU each year, so we created a list of all chemical substances used in 19 varieties of grease and confirmed that all of our manufacturers have been pre-registered.

In October 2008, the European Chemicals Agency announced a list of 15 substances of very high concern (SVHCs) that are carcinogenic, tend to bioaccumulate, etc. Starting June 2011, if a company imports products into the EU containing 0.1% SVHCs and these SVHCs total 1 ton or more, REACH requires this company to report these products. Because there is a possibility that rubber seals and grease contain these substances, NTN investigated the documentation related to these substances at companies that supply us with these products.

## Reducing substances designated by the PRTR Law

### Working to find substitutes for a complete phase-out

The NTN Group works continuously to reduce the amount of designated chemicals that we emit into the environment and ship-substances that we are required by the PRTR Law to track and report. To this end, our fiscal 2008 target was to achieve a 33.5% reduction over the fiscal 2006 level in the use of these substances, and our fiscal 2010 target is a 40% reduction. In fiscal 2008, we were able to meet our target with a 39.5% reduction.

Though there are many substances that need to be reported, the substances that NTN uses the most are aminebased additives used in grinding fluids and anticorrosion agents. We have been working toward completely phasing out these substances, starting in applications where such a change will not affect quality. In fiscal 2008, we almost completely phased out these amine-based additives and they are currently used only in one location. We plan to next reduce the use of xylene by regenerating used cleaning fluid (kerosene), which contains xylene.

## **Developing Environmentally-Friendly Products**

Reducing environmental impact is a high-priority issue of our R&D

### **NTN receives Automotive Component Award for dramatic** reduction in weight and size

### A dramatic 50% reduction in weight and size to reduce the environmental impact of vehicles

The "constant velocity steering joint" (CSJ) that we developed as a light, compact, and highly-functional automotive product was awarded the "Automotive Component Award" of the "2008 Super Monozukuri Manufacturing Awards" held by the Conference for the Promotion of Monozukuri and the Nikkan Kogyo Shimbun Ltd.

These awards focus on parts and materials that are a source of competitiveness in the field of Monozukuri. NTN's part was selected from a field of 94 applicants.

Constant velocity joints are parts that transmit rotational motion even at severe angles. The product recognized here is the world's first ball-type constant velocity steering joint, which is approximately 50%

lighter and more compact than conventional constant velocity steering joints, reducing the environmental impact of vehicles.

### A compact, high-strength design that maintains sharp steering

### Kenta Yamazaki



The CSJ is based on a ball-type constant velocity joint and features NTN's unique pre-loading mechanism eliminate the tiny gaps inside the joint to provide a backlash-free, high-strength product with smooth rotation. It can function at a wide angle and gives flexibility when designing the layout of steering systems.

### **Emphasizing environmentally-friendly** design at the R&D stage

Believing that environmentally-friendly technology is indispensable to the world, we are redoubling our efforts to increase product life while reducing weight, torque, friction, and energy loss

NTN believes that environmentally-friendly technology is

absolutely necessary to preserve the global environment and we are engaged in product R&D with a high priority on reducing environmental impact. Our R&D aims to increase product life, and reduce weight, torque, friction, and energy loss in our primary products including bearings and constant velocity joints.

Of the products developed from fiscal 2006 to 2008, 60% of them were environmentally-friendly products.

### Our primary environmentally-friendly products

### Longer life

#### A new type of spherical roller bearing that lasts five times longer than conventional products

We developed this spherical roller bearing for industrial machinery. It lasts five times longer than conventional products and is standardized as the "Ultage series." It is a new series of bearings that meets all requirements including long life, high speeds, and improved ease of handling.



### Reduced weight

#### An "Ultra-high load capacity tapered roller bearing" that contributes to improved fuel economy

We have developed an "Ultra-high load capacity tapered roller bearing" for automotive transmissions and differential gears that lasts as long and is just as rigid as conventional bearings but is significantly lighter and more compact. It is 58% lighter, 17% smaller in diameter, and 25% thinner, and contributes to improved fuel economy.



### Lower torgue and friction

A "Low torque sealed ball bearing" with an 80% lower rotational torque

As the demand for improved vehicle fuel economy increases, there is a greater need for more efficient transmission bearings, so we developed the "Low torgue sealed ball bearing," which has 80% less rotational torque. This bearing's seal prevents the entry of foreign matter, helping maintain the lower torque.



# CSR Management

# Environmental Aspects

## **Third-Party Opinions**

### NTN Corporation's CSR Report : A third-party opinion

### Katsuhiko Kokubu

### Carrying out CSR activities through business

Unlike making a charitable contribution, it is important that CSR activities be part of a company's business activities. Thus it is commendable that NTN is spearheading CSR activities based on NTN's new medium-term business plan. The Features section of this report explains in detail how NTN is contributing to the environment and to society both in Japan and overseas through its primary product, the bearing, and emphasizes your social values as a corporation. By contributing to society through business activities, NTN's CSR is in step with world trends, which I think is vital. I believe that contributing to society through business activities and consistency between management or the business and implementation of CSR activities is an issue that will become increasingly important.

### Implementing CSR management

NTN has put together a guidebook based on your CSR Policy, and has built a solid foundation for CSR Management that includes compliance management and risk management. Moreover, the Social Aspects section of this CSR Report details NTN's relationship with primary stakeholders (customers, suppliers, employees, shareholders, and local communities). NTN does not appear to have targets related to its stakeholders, but I believe that incorporating targets related to society will enable NTN to take its CSR to the next stage of development. To do this, it is important that NTN systemizes its current efforts and breaks them down as much as possible into quantitative targets (e.g. raising employee satisfaction levels, investment in human resources education, etc.), and to report on progress toward achieving these ends. Having all employees involved in CSR activities as part of the management cycle for such efforts is also critical.

### Strengthening efforts to reduce environmental impact

As part of its environmental preservation activities, NTN sets ambitious goals for itself that NTN works actively to meet. In particular, NTN has set targets for total CO<sub>2</sub> emissions, which is highly commendable. In terms of reducing the generation of waste and protecting resources, NTN has met its quantitative target this fiscal year with the exception of your overseas operating sites. NTN should be lauded for progressively improving results. In terms of the environment, the establishment of long-term targets for the year 2020 is currently being discussed, but these targets will also affect individual corporations. I believe that it is important that NTN establish a long-term vision for the reduction of greenhouse gases as soon as possible and to link this vision to concrete actions.

### The CSR Report as a communication tool

This CSR Report is a powerful communication tool to reach out to company stakeholders. NTN's report has a major focus on employees, but perhaps the range of stakeholders could be broadened and at the same time, perhaps a system of dialogue with stakeholders would be better. CSR can be thought of as a window to society, and I believe that actively seeking out and listening to outside views and reflecting what NTN hears in the way the company is run will become increasingly important.



### Katsuhiko Kokubu

Professor, Graduate School of Business Administration, Kobe University. A leading researcher of environmental management accounting and CSR accounting.







The energy consumed to print and bind this CSR Report was generated from wind power.

### **NTN Corporation**

For inquiries or further information about this CSR Report

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