

For New Technology Network

**NTN**<sup>®</sup>

# CSR Report 2007

Corporate Social Responsibility Report

**NTN Corporation**

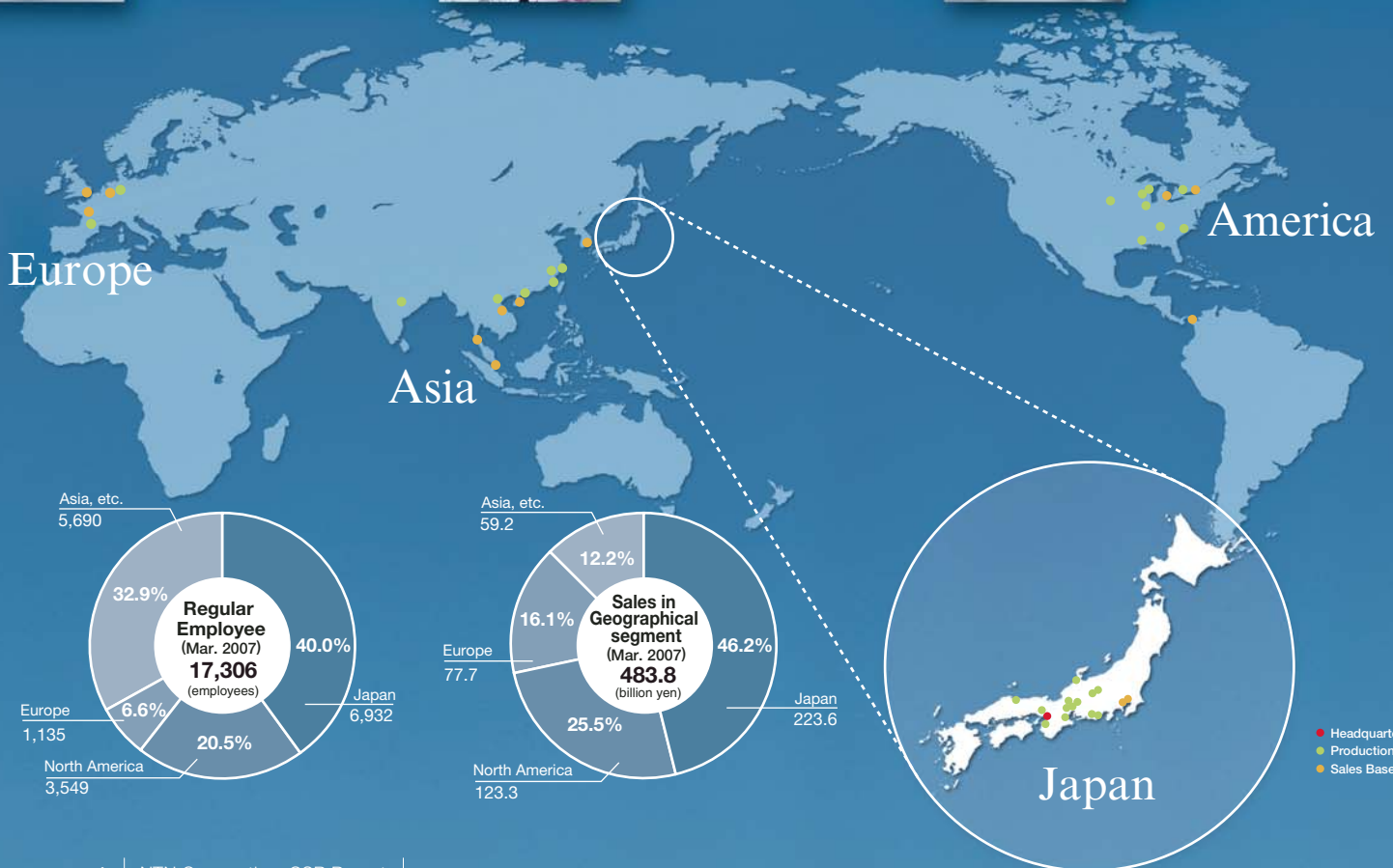


# Corporate Data

Corporate Name	NTN Corporation
Brand Name	<b>NTN</b>
Date founded	March 1918
Head Office	1-3-17 Kyomachibori, Nishi-ku, Osaka, 550-0003, Japan
Representative	Yasunobu Suzuki, President
Number of Employees	5,445 (stand-alone), 17,306 (consolidated)
Fiscal term	March 31st
Capital	¥42.3 billion (as of March 31, 2007)
Net Sales	¥336.8 billion (stand-alone), ¥483.8 billion (consolidated)
Stock listing	The first section 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
Number of Subsidiaries	Japan: 18; Overseas: 31

## List of Main 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 Bearing Service Co., Ltd. / Kyoei NTN 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 Manufacturing India PVT. Ltd. / NTN Bearing-Singapore (PTE) Ltd. / NTN China Ltd. / NTN Bearing-Thailand Co., Ltd. / NTN-Malaysia SDN. BHD. / NTN Korea Co., Ltd.
- North America:** NTN USA Corporation / NTN Bearing Corporation of America / American NTN Bearing Manufacturing Corporation / NTN-Bower Corporation / NTN Driveshaft, Inc. / NTN-BCA Corporation / NTN Bearing Corporation of Canada / NTK Precision Axle Corporation / NTN Sudamericana, S.A.
- Europe:** NTN WaLzlager (Europa) G.m.b.H. / NTN Kugellagerfabric (Deutschland) G.m.b.H. / NTN Transmissions Europe / NTN Bearings (UK) Ltd. / NTN France S.A.



# Editorial Line

NTN started issuing an "Environmental Action Report" in 1999 and upgraded it in 2006 to the "CSR Report," adding social activities.

This year, we incorporate feature articles in the report to introduce social contribution activities in which NTN has engaged. The activities include a case of "creating products for solving social problems," activities in China included as part of "social responsibility associated with NTN's global business expansion," and "events to commemorate the company's 88th anniversary."

In the "Report on Social Activities," topics are arranged by stakeholder so that readers can more easily identify whether the company has fulfilled its responsibility to respective stakeholders. The "Report on Environmental Activities" focuses on NTN's environmental targets up to 2010, thus making it easier for readers to understand NTN's efforts and achievements toward the final targets.

NTN is striving to further improve interactive communication with its stakeholders. We would be most appreciative if you would share with us your opinions by filling out the questionnaire at the end of the report. Thank you for your cooperation.



## ● Period reported

Fiscal Year 2006 (from April 1, 2006 to March 31, 2007)  
(Some subjects report information before and after fiscal year 2006.)

## ● Organizations Included in Report

NTN Corporation and its main affiliates  
(Details are listed in page 1)

## ● Guidelines used for reference

Ministry of the Environment "Environmental Reporting Guideline (2003 edition)" and "Environmental Reporting Guideline (2007 edition)" (latest edition)  
GRI "Sustainability Reporting Guidelines 2002" and GRI "G3 Guidelines"

## ● Schedule for issuing next report

End of June, 2008

## Descriptions of Future Projection

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

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## Automotive

NTN offers a wide variety of vital products for automotive applications such as the engine, suspension, transmission, as well as the body and electric auxiliary equipment.

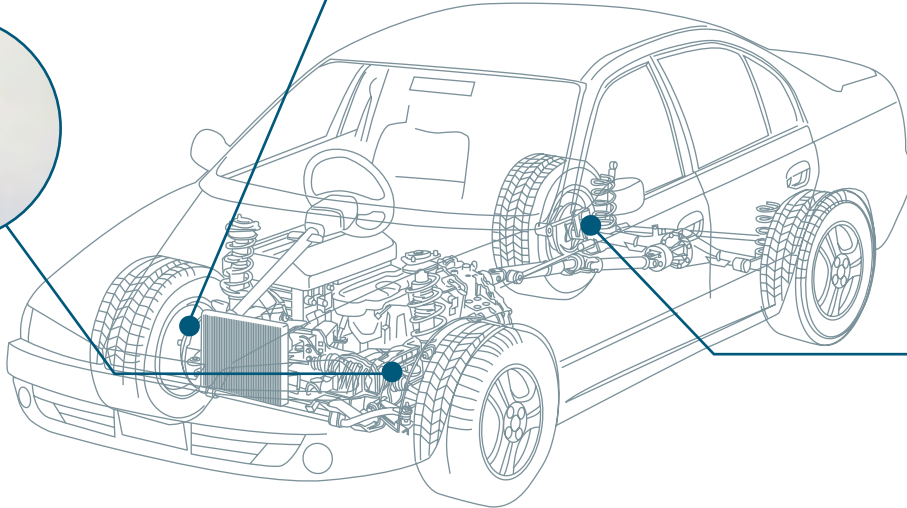
Today, the automotive industry is concentrating its efforts on energy saving and the improvement of safety. Accordingly, NTN is striving to develop technologies for high function, high precision, and weight reduction, as well as new processes and hybrid technologies.

### Constant velocity joints (CVJ)

The CVJ is an important component to transmit the rotational force of an automotive engine smoothly at constant velocity to wheels.

In recent years, weight reduction, power increase and complexity in drive train system are progressing with cars. However, these may become possible factors to may increase noise or vibration. On the other hand, customers are asking for a comfortable ride.

In response to these requirements, NTN is providing the automotive industry with CVJs featuring long life, high function, light weight and compact designs.



## Business Scope

# NTN is supplying products that support “Smooth motion” in various industries, and contributing to environmental conservation and improvement in safety.

NTN offers parts and equipment to all areas of industry through its “High precision processing technology” (to prevent “out of roundness” in rolling elements for bearings) and using research in “Tribology” (the study of friction, wear and lubrication). Throughout the world, NTN responds to severe requirements and expectations from high-tech and other industries through in-house development and production of most products instead of outsourcing.

### Bearings

A bearing reduces energy loss (such as heat generation) due to friction at rotating positions of machines and allows efficient operation. Bearings are classified broadly by their rolling element into ball bearings and cylindrical roller bearings. The roundness of the rolling element is very important for smooth rotation.

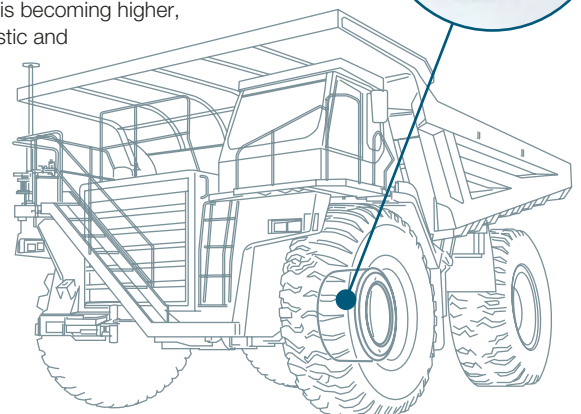
NTN uses its own Tribological research on friction, wear and lubrication to develop a wide variety of high-quality bearings with “out of roundness” limited to the nano-level.

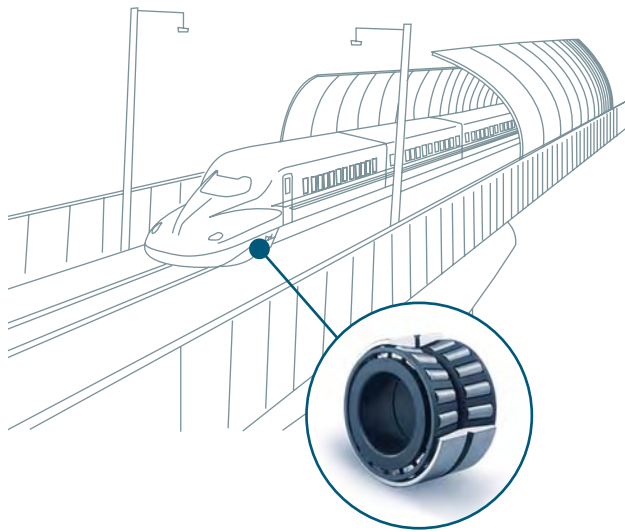


### Industrial machinery (Earth moving equipment, etc.)

NTN bearings have an excellent reputation for high quality and customers appreciate NTN’s short delivery times in response to sudden production increases. They are often used for wheels and driving mechanisms of earth moving equipment, which are essential for infrastructure development.

Recently, projects to develop natural resources and energy are quite active and bearing demand is becoming higher, increasing domestic and overseas sales.





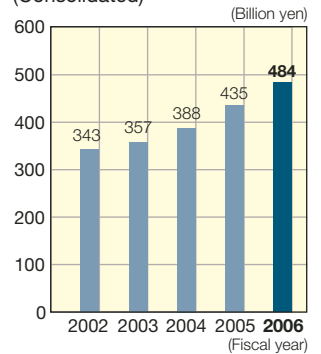
## Railway

NTN bearings are used for passenger trains and freight cars as well as Shinkansen bullet trains. NTN makes every effort to maintain and improve quality under a special management system, since even a minor defect in the large-scale railway transport of people and commodities may result in serious damage.

In the interests of environmental conservation the modal shift to rail transport is increasing and bearing demand is growing worldwide.

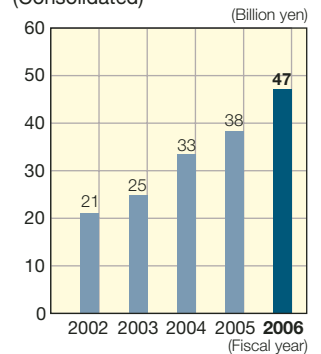
## Sales

(Consolidated)



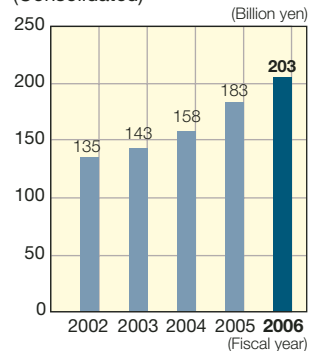
## Operating profit

(Consolidated)



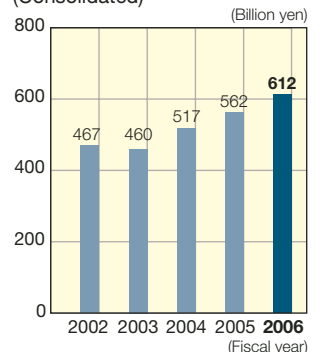
## Shareholders' equity

(Consolidated)



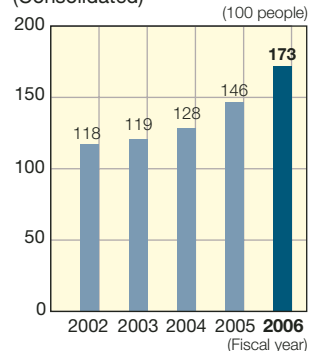
## Total asset

(Consolidated)



## Number of employees

(Consolidated)



## Office Equipment

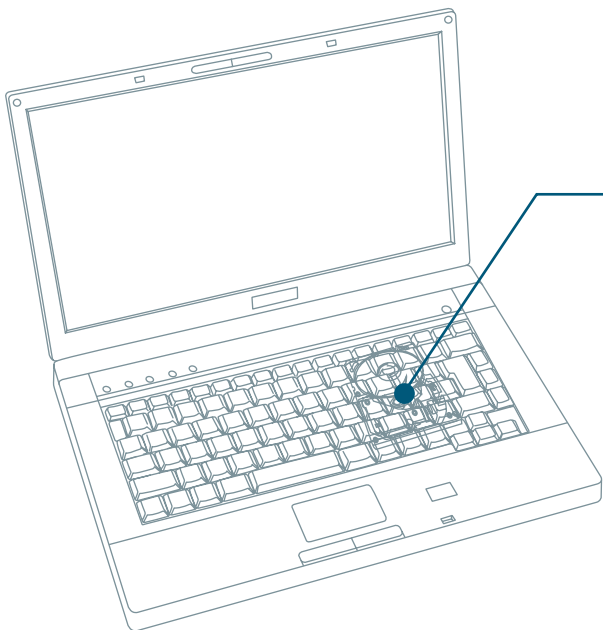
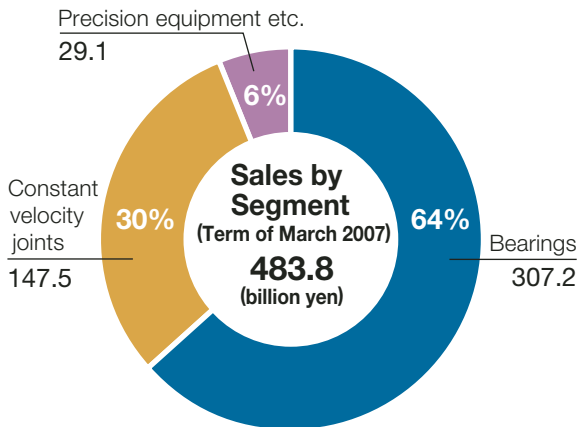
Office equipment industries, in which Japan leads the world market, are our main customer for small bearings and engineered plastic products. These industries are in the vanguard of environmental conservation, and set internal criteria before environmental regulations become effective. NTN develops and supplies products that eliminate or reduce the need for environmentally hazardous substances.

NTN strives for environmentally-friendly product development and encourages recycling.

### Fluid dynamic bearing units

Fluid dynamic bearings that have superior running accuracy and do not cause any run-out in the rotation of motor spindles are used for hard disc drives (HDD) in personal computers, etc.

Lubricating oil is impregnated in NTN fluid dynamic bearings. They have high running accuracy and maintain high reliability for reading data from the HDD and writing data to the HDD.



## Precision equipment

Liquid crystal panels and PDPs (plasma display panel) are becoming larger in screen size and higher in accuracy. At production sites, NTN's liquid crystal repair devices and pattern repair devices (NTN's ultra high precision positioning technologies) are contributing to improvements in productivity.

In addition, NTN is continuously supplying high precision units that are essential for accuracy in the most advanced industries, such as semiconductor production or record storage production, and that are competing with high density products.



## We aim to establish ourselves as a company in which the public can have confidence by enhancing Customer Value, Shareholder Value, Employee Value and Social Value, and also by actively addressing environmental conservation.



### NTN Group strengthens its CSR efforts as part of the business plan targeting increased “Enterprise Value”

Fiscal 2006 was the final year of our Rapid Advance 21, medium-term business plan started in fiscal 2004. The plan aimed to leap the NTN Group forward by achieving targets such as sales of 450 billion yen and operating profit of 42 billion yen on a consolidated basis, and also by linking the corporate actions of employees with increased Enterprise Value.

We are grateful that NTN succeeded in achieving the targets set, while at the same time expanding our global business by increasing business in China, establishing a production company in India, and successfully acquiring business in Europe.

In an effort to further promote the NTN Group CSR activities, we set up the CSR Department at our Head Office, formulated a set of basic policies, established the CSR Committee and implemented CSR-related training programs.

Furthermore, we held a variety of events to commemorate the company’s 88th anniversary. The events included an essay contest among NTN Group employees on the subject “Environmental Conservation” and social contribution activities at many locations to express our appreciation to stakeholders for their support.

### We place emphasis on value for stakeholders: Customers, Shareholders, Employees, and Society

NTN sees CSR as a “core element for management.” NTN places importance on communication with stakeholders. We aim to become a company that is trusted by society by sincerely responding to the expectations, interests, and concerns of

stakeholders, which we learn through communication with them. Viewing such trust as a source of Enterprise Value, NTN will make every effort to increase customer value, shareholder value, employee value and social value.

In order to provide our customers with products of the highest quality available worldwide, we focus our efforts on research and development, strengthen partnerships with suppliers and build quality management structures looking at the total supply chain.

We will carry out intensive IR activities to individual investors as well as to domestic institutional investors to explain NTN’s vision and management strategies so that NTN can be better understood by them.

We promote “HITOZUKURI”<sup>\*1</sup> through sharing practical and technical skills at the “MONOZUKURI”<sup>\*2</sup> manufacturing site, while making efforts to provide a workplace where female employees can demonstrate their ability and respond appropriately to diverse working styles. NTN has set up “Ideal Workshops” at Iwata, Kuwana, and Okayama Works with the aim to help disabled people become financially independent and to expand employment opportunities for them.

In the communities where NTN has its business locations, we develop closer relations with the community through promoting and supporting greening activities and sports. NTN also promotes joint industrial-academic research activities and provides support to reconstruct after devastating disasters. Participating in this wide range of activities, NTN will strive to create Enterprise Value.

<sup>\*1</sup> HITOZUKURI is NTN’s concept of a system designed to continuously develop staff who possess essential technical skills and are capable of working in an international environment. By identifying the skills of each individual and passing down various engineering and technical skills, NTN plans to increase its on-site capabilities, achieve world class high quality and low cost operations and shorten its production time.

<sup>\*2</sup> MONOZUKURI is a comprehensive concept of creating value at NTN throughout the entire business process, including marketing R&D, engineering, manufacturing and distribution. MONOZUKURI ensures an even higher level of customer satisfaction thanks to NTN’s competitive advantages in quality, cost, delivery, development and service.

### NTN works to reduce CO<sub>2</sub> emissions and waste materials, and develops eco-friendly products

In recent years, the global economy has been continuing its expansion largely driven by the economic growth in emerging countries such as the BRIC countries (Brazil, Russia, India and China.) However, as the economy expands, it worsens environmental problems. NTN is determined to

reinforce efforts to address environmental issues every time we hear reports saying that global warming is accelerating.

NTN, across its group companies, focuses on developing its unique “eco-friendly products,” which are indispensable for realizing an energy efficient society. NTN is also working to reduce waste materials.

Regarding reduction of CO<sub>2</sub>, we are promoting energy saving by setting up a reduction target for CO<sub>2</sub> emissions at every business establishment in Japan and overseas. Further, at newly-established plants, we are making efforts to reduce the amount of CO<sub>2</sub> emissions through the use of clean energy by installing wind generators and solar power generation panels.

In the reduction of waste materials, for example, NTN has succeeded in substantially reducing waste materials by pioneering the “grinding swarf briquetting machine,” which allows the re-use of grinding sludge generated in the process of manufacturing bearings. NTN not only uses the machine internally, but also sells it in the market. NTN is also working proactively to develop processing machines which allow significant reduction in consumption of oil and compact machines which allow conservation of energy. NTN is delighted to contribute to environmental conservation – the quality of environmentally-conscious management is further enhanced by these products and activities.

In the development of “eco-friendly products,” NTN has been making every effort to launch new technology and products which help reduce energy consumption and CO<sub>2</sub> emissions. Bearings and constant velocity joints are respectively used in the rotating parts of various machines and for transmitting engine torque to wheels. Reducing friction on rotating parts and achieving a high torque transmission ratio conserve energy that, as a result, will lead to the reduction of CO<sub>2</sub> emissions.

In line with these perspectives, NTN is promoting research and development to produce world-class “eco-friendly products.”

### Design, Manufacturing and Sales are working together for MONOZUKURI to enhance quality

NTN provides parts that are incorporated in machines and systems that are necessary to manufacture machinery. These parts and systems affect the performance of the machines and end-products. In other words, the quality of the manufactured goods can be said to be the most important element for NTN’s Enterprise Value.

In order to dramatically increase quality, the ability to visualize from the design phase to all of the subsequent processes in MONOZUKURI is required.

Accordingly, our design departments are continuously implementing “designs that are easy to



understand and manufacture and that prevent mistakes” based on the concept that “design determines everything.” Manufacturing departments are working to “build in” quality and to pass on quality control and quality technology, while sales departments are making efforts to improve customer satisfaction by quickly identifying technological trends and changing needs.

We believe that ensuring MONOZUKURI through unified design, manufacture and sales is the foundation of further trust from our customers and our stakeholders.

### NTN works to create new Enterprise Value

Recently, there have been growing voices demanding businesses to reinforce legal compliance, risk management and internal controls. NTN, understanding these are important CSR issues, started its response in the early stage.

Requests from society regarding CSR change with the times. Therefore, each and every employee is required to have a broad perspective toward society and sense social changes. In other words, we believe CSR requires businesses to take on new challenges at any time to constantly create new Enterprise Value.

NTN started a new medium-term business plan, “Growth through Creativity and Achievements 21,” in fiscal year 2007. “Growth through Creativity and Achievements 21” means to create new Enterprise Value through continued growth and realizing significant achievements.

I would be grateful if NTN can get frank opinions or requests from our stakeholders. We look forward to your continued support.

*Yasunobu Suzuki*

Yasunobu Suzuki  
President



Feature Article 1) Production for Solving Social Problems

# Development of High-Reliability Bearings for Wind Power Generators Toward Expanding Use of Clean Energy

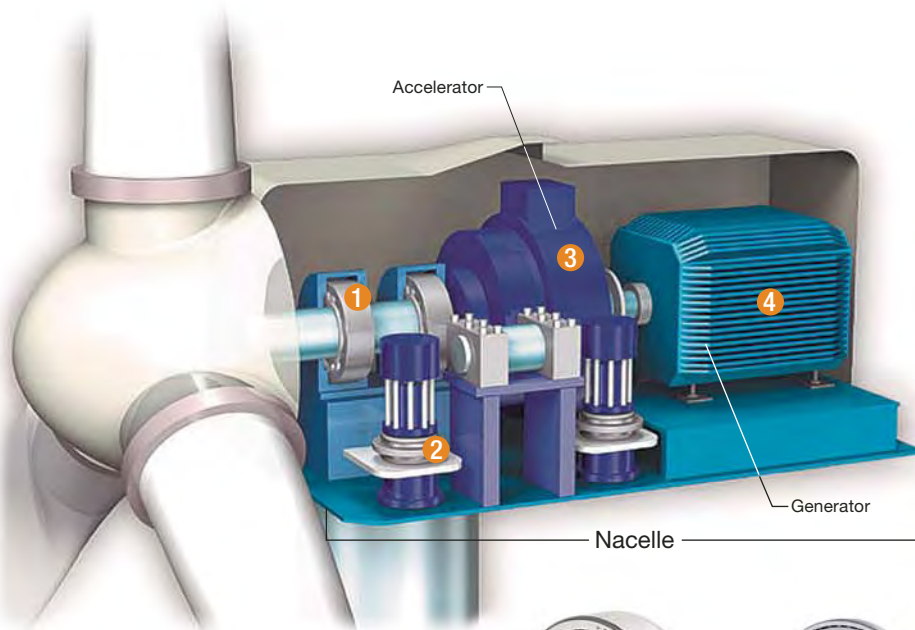
The force of wind is a clean energy that does not discharge CO<sub>2</sub>. NTN contributes to the harmonious coexistence of humans and the global environment by promoting the utilization of clean energy through pursuing improvement in the performance and reliability of wind generators.

## Coexistence with global environment as top issue

To prevent global warming, expanding the use of clean energies is being called for worldwide. Wind power generation is one source. Wind power is energy that does not discharge CO<sub>2</sub> and is widely used in Europe and America where there is much level land and stable winds. In Japan, which has rugged terrain and suffers from typhoons, it is used less. However, with improved facilities and technology, it is attracting attention.

Wind power generation will spread hereafter and worldwide capacity is expected to increase from 60,000 MW in 2005 to 210,000 MW in 2014.

NTN actively strives to develop environmentally responsible products, having "coexistence with the global



Blade



1 Spherical roller bearing for main shaft



2 Angular contact ball bearing for reduction gears



3 Cylindrical roller bearing for step-up gears



4 Insulation bearing for electrical generator







Inspection of bearing for wind generator

environment” as a top management issue. NTN develops and sells bearings for main shafts to support rotation of the blade, step-up gears to increase the rotation of input shafts, drive units to change the angle of the nacelle in line with the wind and the main body of the wind generators.

## Bearings for wind generators durable in high speed rotation

Wind power generators are mostly built in areas far from human dwellings. Windmills are large and are commonly attached at a height so that maintenance is difficult. High reliability and a long warranty are required for the key parts.

In recent years, a high-power, large-sized wind power generator has been in development for greater efficiency of electricity generation. It demands an ultra-sized bearing to endure increased loading.

NTN’s “high capacity roller bearing” responds to the strict needs imposed by wind generators.

Generally, a bearing increases its capacity as the number of rollers increases. Therefore “full complement cylindrical roller bearings” are used in

applications with a high load. However, a full complement bearing is not suitable to high rotation speed since contact of adjacent rollers increases friction. On the other hand, a “cylindrical roller bearings with cage” is suitable to high rotation speed, but due to the smaller number of rollers, the capacity is low.

NTN has tried to develop a bearing, that has high capacity as well as high rotation durability. The breakthrough was the “rolling element separator” that enabled the two contradictory characteristics to co-exist. Placing the plastic separator between the rollers allowed the bearing to have the advantage of both the high capacity full complement type and the high rotational performance of bearings with a cage. This kind of “high capacity cylindrical roller bearing” with the “rolling element separator” attained a rated life\* 1.5 times longer than the conventional bearing.

\* Rated life is the total number of rotations over which 90% of similar bearings under identical conditions can run without fail. It is the standard scale to evaluate bearing reliability.

## Bearing lineup strengthened for wind power generators

NTN exhibited its “high capacity cylindrical roller bearing” with the two advantages of a high loading capacity of full complement type bearings and high rotational performance of cage type bearings at the International Trade Fair “WindEnergy 2006” held in Hamburg, Germany, exhibiting its clear advantage of high capacity and high rotational performance. NTN received high evaluations from many wind power generator manufacturers.

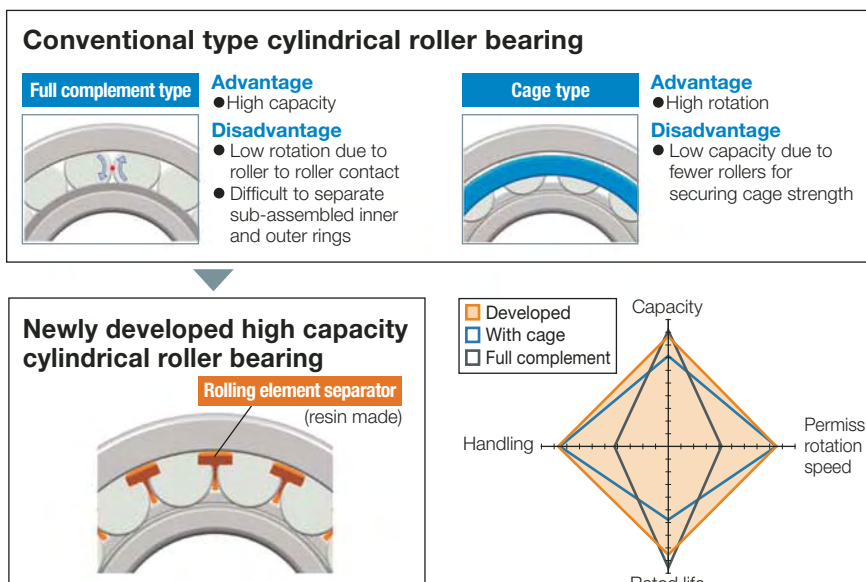
This product will be the centerpiece for NTN to strengthen its lineup of bearings to respond to the demands from wind power generator manufacturers. NTN has a plan to build a production plant for ultra-sized bearings at Kuwana Works to deploy this product not only for wind power generators but for construction machinery that demands high capacity and long life, such as wheel loaders (small power shovels running on tires) and dump trucks.



## New product fulfills to world's requirements at Intl. Trade Fair “WindEnergy 2006”

On May 16 to 19, 2006, International Trade Fair “WindEnergy 2006” was held in Hamburg, Germany, one of the biggest users of wind energy, and NTN exhibited a new product: the “high capacity cylindrical roller bearing” developed for wind power generators.

This trade fair is the third since 2002 and 330 companies from 26 countries exhibited and more than ten thousand experts and interested persons attended. Among them were 4 Japanese bearing makers including NTN and 4 from the West. NTN’s “cylindrical roller bearing” attracted attention from many experts for its innovative feature of more rollers to increase capacity compared to other companies.





## Feature Article 1) Production for Solving Social Problems

# Supplying Key Parts To Improve Environmental and Safety Performance in Automobiles

NTN supplies many kinds of products to automakers. Like the automakers, the important issue for NTN is improving “environmental performance” and “safety performance.” The sense of responsibility that our products directly influence the performance of the final product is leading to various groundbreaking technologies.

## 100 bearings per car support safety and the environment

Bearings are a key part supporting the movement of every machine. In an automobile, about one hundred bearings are used – in the engine, drive train, suspension, transmission, differential, continuously variable transmission, body, electric auxiliary devices, etc. to support smooth motion.

Recently, with the enhancement of safety and comfort features, the number of motors (and thus the number of bearings) has increased.

In 2006, 70 million automobiles were produced in the world. For an automobile, the most important issues are improvement in “environmental performance” and “safety performance.” The ever-increasing automobile has a great impact on the environment, and its performance and quality affects many people – including not only occupants but pedestrians.

Even for bearings used in mass quantities, improvement in environmental performance and safety is required.



High rigidity ultra low torque tapered roller bearing



Measurement of rotational torque



Measurement of torque loss in differential

## Cutting torque in half while maintaining rigidity and life

The most important thing for increasing environmental performance is increasing fuel efficiency.

To increase fuel efficiency, how should bearings be? A tapered roller bearing with high rigidity and ultra-low torque developed by NTN is one answer. This product cuts rotational torque in half while maintaining the rigidity and life equivalent to conventional tapered roller bearings.

Rotational torque is the force necessary to rotate the shaft and the smaller it is, the greater the energy savings and the higher the fuel efficiency.

Generally, tapered roller bearings have higher capacity and higher rigidity than ball bearings, but have the disadvantage of higher rotational torque.

To overcome this disadvantage, NTN focused on the lubricating oil. Lubrication is essential to reduce rolling friction in order to prevent seizure, but it is the source of "stirring resistance." It is derived from the fact that the lubricant retained between the rollers and the cage is stirred by the rollers to bump against the stationary cage,

creating resistance and disturbing the smooth rotation of the rollers.

NTN development staff investigated the optimum shape of a bearing to minimize the stirring resistance and finally devised a specially-shaped cage to make the oil flow easily to reduce resistance. This new type of cage achieved the very low torque that is half that of conventional tapered roller bearings.

Diffusing the load by increasing the number of rollers, thereby decreasing the load per roller leads to higher rigidity and longer life, directly increasing the safety performance of the automobile.

NTN maintained the bearing life and rigidity equivalent to the conventional bearing by increasing the number of rollers and by increasing fatigue strength through special heat treatment.

## Bearing and sensing technologies combine to make it intelligent

The high rigidity, ultra-low torque tapered roller bearing is a bearing that decreases rotational torque to half while keeping the life and rigidity equivalent to the conventional bearing.

This product is used in a driving unit such as a transmission or differential where high load is applied, contributing to higher fuel efficiency in the automobile. Further, it can be used in industrial machines such as construction machines, transportation machines or hydraulic equipment where high loading is applied. It is expected to exhibit the same power-saving effect as in the automobile.

NTN will seek to enhance the "intelligence" of constant velocity joints or hub unit bearings as well as increase fuel savings, long life and reliability by integrating rolling bearings and load sensing technology (such as antilock brake system), thus improving the environmental and safety performance of automobiles.



## "Split type" needle roller bearing improves fuel efficiency by 3% for crankshafts and camshafts

NTN has developed a low friction needle roller bearing for the support of crankshafts or camshafts in automobile engines resulting in a sharp decrease in torque.

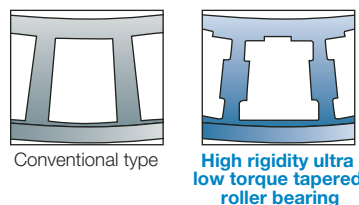
As a supporting member for the concave portion of a shaft, a split type "sliding bearing" (slid by means of oil) is conventionally used. By substituting a "rolling bearing," we can decrease friction greatly. However it was considered difficult to split the rolling bearings.

However, NTN devised a split type outer ring and needle (longitudinally long roller) type bearing, assembled by enhancing the accuracy of processing. Torque decreased by 90% for starting the bearing and by 50% for rotation, resulting in improvement of 3% (10.15 mode) in fuel efficiency.

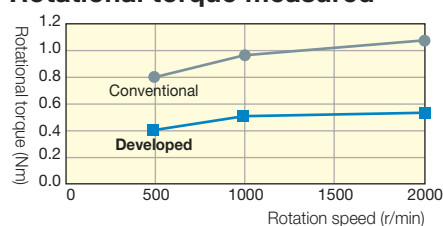


High rigidity ultra low torque tapered roller bearing

### Shape of cage pocket

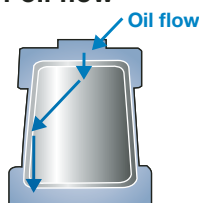


### Rotational torque measured



For practical rotation speed of 500-2000r/min, torque decreases **half** that of the conventional.

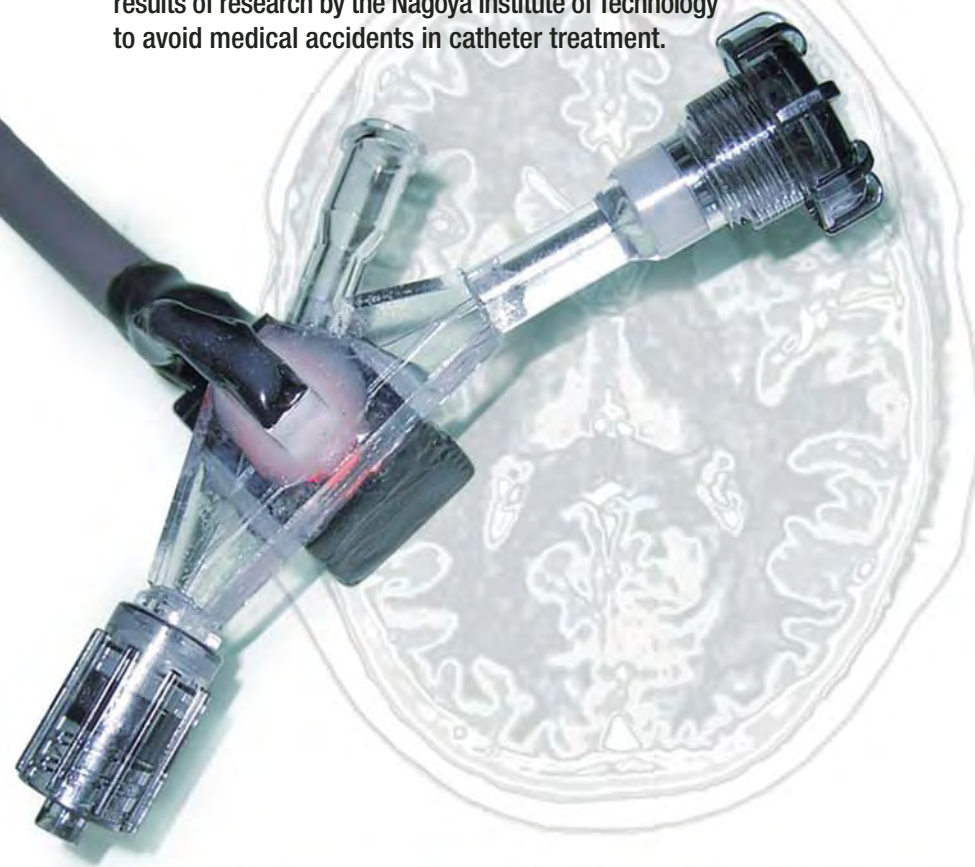
### Image of oil flow



# Force Sensor for Cerebral Aneurysm Treatment Reduces Trauma of Patients and Surgeons



NTN technology is also contributing in medical fields. NTN and the Nagoya Institute of Technology announced the development of the world's first "Force sensing system for cerebral aneurysm treatment" in March 2007. This is a fusion between technology cultivated by NTN and the results of research by the Nagoya Institute of Technology to avoid medical accidents in catheter treatment.



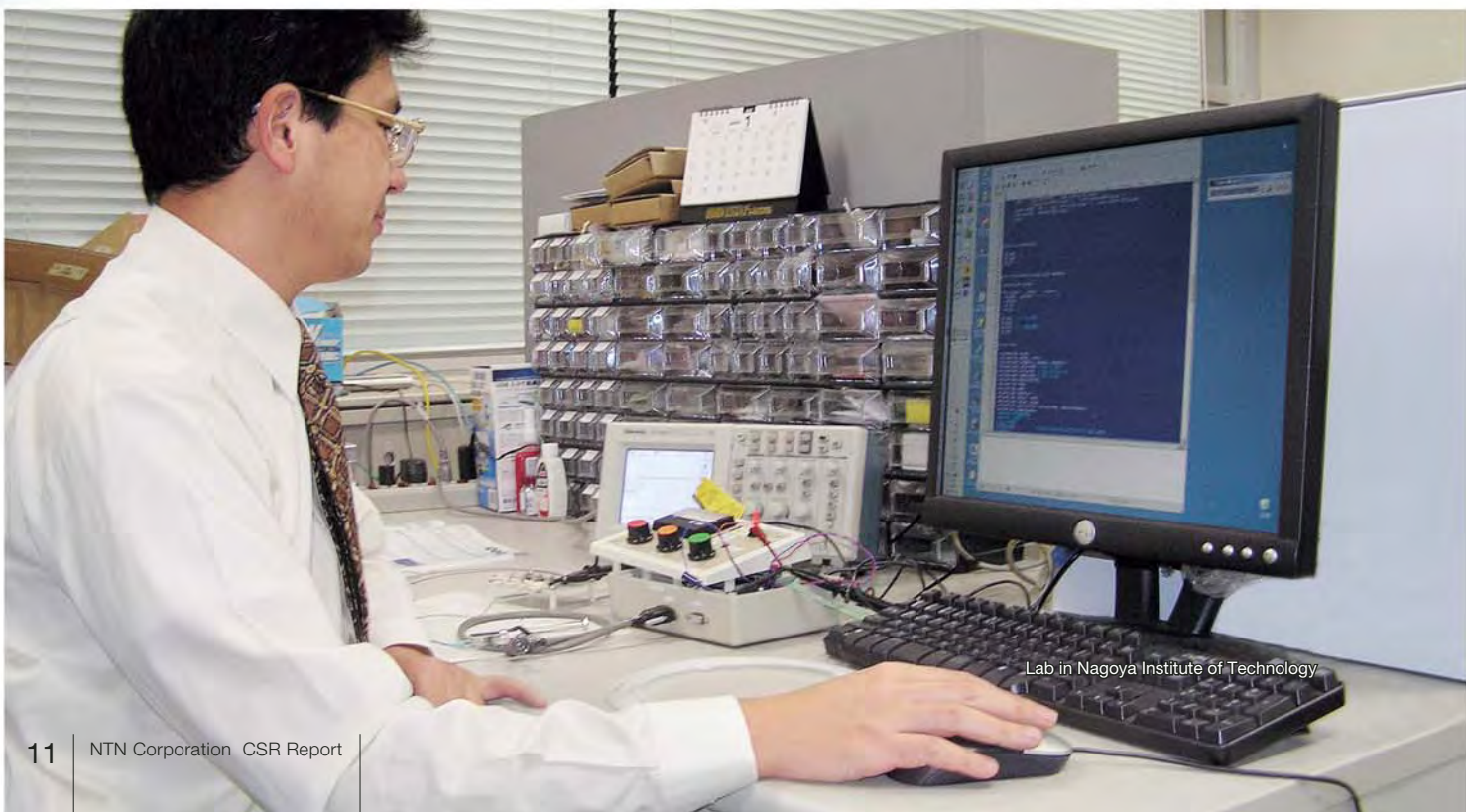
## NTN technology also contributes in the medical field

NTN developed an artificial heart assist blood pump in 1991. This product applied a magnetic bearing floating an impeller which is also used in semi-conductor manufacturing equipment where even a little amount of dust is not allowed. Making use of mechatronics technology (such as a sensor, an actuator and a control) completed the pump. NTN's original technology used in industrial equipment proved to be useful in treating intractable diseases.

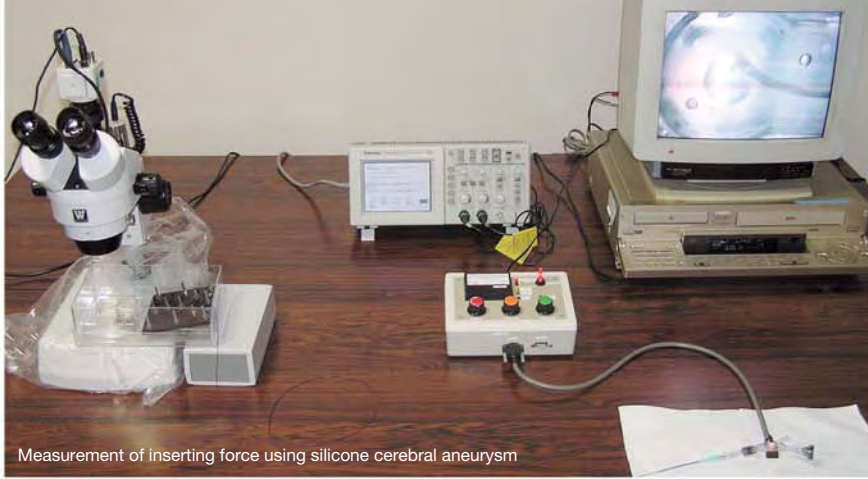
NTN currently collects the latest information from medical equipment manufacturers, university hospitals and medical departments to investigate further our role in the medical field.

## Creating a safer catheterization treatment

A major trend in modern medical science, especially in surgery, is "minimally invasive operations," that is, making incisions as small as possible and reducing the patient's trauma as much as possible. A typical example is a catheter treatment, where a tiny tube



Lab in Nagoya Institute of Technology



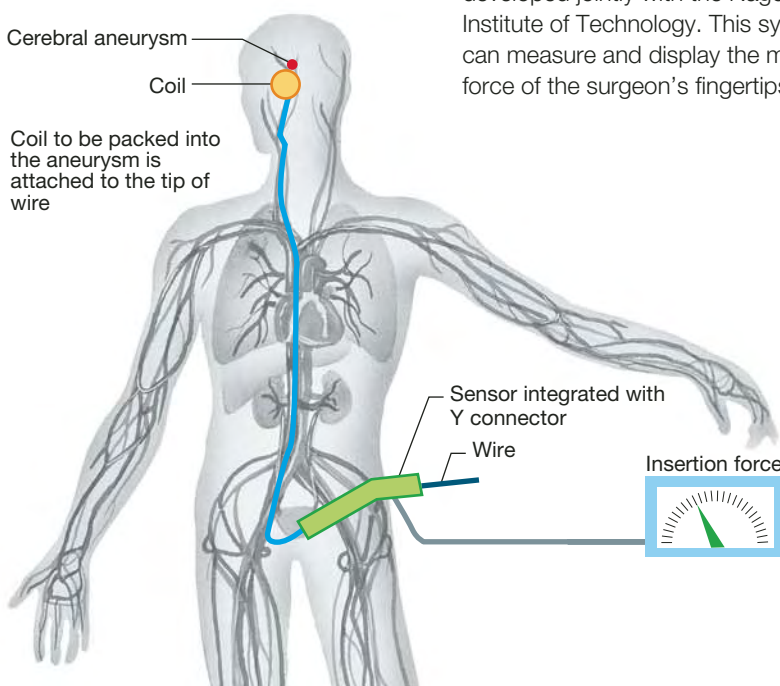
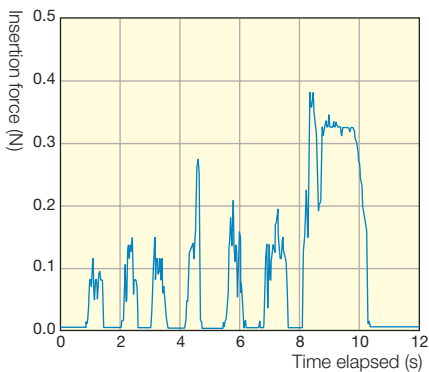
Measurement of inserting force using silicone cerebral aneurysm

is inserted into a blood vessel to treat disease inside a body by passing various devices or medicines through it.

Catheter treatment uses a smaller incision than a surgical operation with a scalpel, reducing the load for the patient. For the doctor, a high degree of technical skill handling medical devices is required.

Because an inexperienced doctor may induce a medical accident, requiring further measures. NTN thus began research and development on catheter operations.

### Insertion force measured by sensor



## Force sensing system for cerebral aneurysm treatment

While the catheter operation is used for various diseases, NTN focused its attention on the treatment of cerebral aneurysms. It is the main cause of subarachnoid hemorrhage, which has been increasing, and requires high technical skill.

In cerebral aneurysm treatment, there are methods of using catheters and of cutting the skull. The catheter treatment is increasing because it does not leave an external wound. In the West, catheterization is used 50% of the time, but in Japan it is currently about 20%. Japan's catheterization rate is expected to increase to 50%.

NTN worked jointly with the research team of Prof. Fujimoto of the Nagoya Institute of Technology, who is well acquainted with medical technology and was the first to tackle the problems in this procedure. The most critical issue was the technological skill to insert a very thin wire into the catheter with minuscule force so as not to rupture the aneurysm. For this, significant experience and skill is needed.

This was the world's first sensing system for cerebral aneurysm treatment developed jointly with the Nagoya Institute of Technology. This system can measure and display the minute force of the surgeon's fingertips being

applied to the very thin wire by optically detecting the curvature of the wire. It uses a sensing technique that NTN has cultivated in the development of mechatronics equipment.

With this system, the surgeon can perform the operation safely, confirming the appropriate insertion of the wire. Additionally, as the force applied by a surgeon can be monitored, the system allows more surgeons to easily learn and perform the operation.

Further, it is compatible with conventional devices and hygienic due to being non-contact and disposable.

Catheters are used in many medical cases besides cerebral aneurysms. NTN plans to apply this system to various other medical treatments. NTN will deploy its technology in the medical field to help maintain and improve the health of the general public.



Prof.  
**Hideo Fujimoto**  
Nagoya Institute of  
Technology  
Graduate School

### Cooperative development with NTN assures "Best treatment through the optimal technique"

Minimally invasive operations, such as catheterization, which reduce trauma for patients, is becoming more prevalent in the medical field.

However, minimally invasive operations impose burdens on the surgeon and need very advanced technology. Quantification of a surgeon's skill and training methodology are needed to solve this problem.

The recent linking of NTN's favorite technology with the past achievements and strength of our lab. has resulted in the cooperative development of a sensing system for cerebral aneurysm treatment. This new technology pays attention to the tactile feeling of a surgeon's finger and is expected to apply not only to cerebral aneurysm treatment but to many other fields. With this system, I believe we can realize the best treatment through the optimal technique.

# Treating Employees and Local People Right – in China and in the World



A fundamental idea of the NTN Group, having 49 companies and more than 17,000 employees worldwide, is treating people right. We think that it is our social responsibility as a global enterprise to give consideration to employees and people where we are located.

## NTN-RAB (Changzhou)

**Location:** Changzhou, Jiangsu **Product:** Rocker arm bearing  
**Start of Production:** February 2004

## Shanghai NTN Corp.

**Location:** Shanghai **Product:** Hub-unit Bearing  
**Start of Production:** June 2003  
Half-finished product for constant velocity joint  
Ball bearing  
Torque limiter

## Office of General Manager – China Region, Shanghai Rep. Office

**Location:** Shanghai  
**Start of Office:** April 2003

## NTN-NIDEC (ZHEJIANG) Corp.

**Location:** Pinghu, Zhejiang **Product:** Fluid dynamic bearing unit  
**Start of Production:** March 2003

## Guangzhou NTN-YULON Drivetrain Co., Ltd.

**Location:** Guangzhou, Guang **Product:** Constant velocity joint  
**Start of Production:** June 2003



## Social responsibility accompanies global expansion

NTN declares “improvement in market presence” as its long-term vision toward 2010. To achieve this goal, we aim to 1) have a strong market presence and be No.1 in the world in key products that are unmatched by competitors; 2) have a presence in the five major markets: Japan, the Americas, Europe, Asia and China; and 3) be a global corporation being good to people and contributing to society.

NTN entered the markets in North America and Europe in the 1970s and established a production base in Asia in the 1990s to manufacture and sell bearings, constant velocity joints, precision equipment, etc. NTN recognizes the social responsibility accompanying this global expansion and thinks that it is most important not only to comply with laws and regulations as a member of the local community, but to celebrate the thinking, culture and practices of local people.

## Shanghai NTN also treating people right

### A base of strategic supply for the world market

Vigorous China has transformed from “the world’s factory” to “the world’s market” and is expected to grow economically while awaiting the big events of the Beijing Olympics in 2008 and the Shanghai International Expo in 2010.

In China, NTN has sited a supply base for products, semi-finished products and parts, establishing Shanghai NTN as its first Chinese production base in 2003. Now, it is operating to supply strategic commodities to strengthen NTN’s price competitiveness in the world and to enhance NTN’s presence in the expanding Chinese automobile market.

Of Shanghai NTN’s sales in 2006, 70% is for half-finished and finished products sold to the NTN Group and 30% is finished products that go directly to customers (direct sales users).



View of NTN Shanghai



Factory entryway



Dining room in NTN-NIDEC



Production in Shanghai NTN

More than 90% of the sales to the NTN Group are parts for constant velocity joints, and by supplying such strategic commodities, NTN Shanghai is contributing to the growth of the entire NTN Group including four Chinese production sites.

**Attaching importance to the education/training of employees**

At Shanghai NTN, employees are increasing in number to enhance production power to cope with the expansion of the Chinese market (1,020 persons as of March 2007). In addition, because many experienced workers are needed for production, we stress the training of employees.

Various plans have been implemented such as basic education at hire, fundamental education on safety, inspection and measurements, OJT at each workplace, training in Japan or by engineers dispatched from Japan, outside training,\* etc., based on the annual training plan.

\*Training such as safety control, fireman, drainage, heat treatment, chemical control, training by machine manufacturers and internal auditors for ISO 14001 and TS16949 are performed by outside companies.

**Environment where we can work with security**

NTN Shanghai, for thorough control of safety and health, organized a safety committee as in Japan and appointed a

full-time safety professional. We also have various activities such as making every December “safety month” and posting it on the bulletin board and holding a competition about safety knowledge in order to improve safety awareness.

Thinking that raising employee satisfaction is necessary to improve the will to work and consciousness of safety and the environment, we give annual questionnaires about “satisfaction” to employees and installed an opinion box in the cafeteria to listen to the voice of employees. Once we had dissatisfaction on a caterer in the opinion box and we corrected the lunch. We are deepening communication and friendship through short trips or having lunch with local and Japanese employees.

**To local suppliers**

For local suppliers, we conduct site inspections at manufacturing sites, 100% inspection by machine at delivery and periodic auditing.

We request each supplier to make delivery on the 20th of each month and to bill on the 25th, and we make payment at the end of the next month.

**Concern for local environment**

To preserve the local environment, we treat waste water, collect waste by type and restrict noise levels, based on the ISO 14001 environmental management system and we do environmental audits each year.

**Making much of “People” at all local sites**

In China we have three production sites other than Shanghai NTN: Guangzhou NTN-Yulong, NTN-NIDEC and NTN-RAB (Changzhou).

Their local contribution activities have just begun, NTN-NIDEC implemented a cleaning activity near the office on January 2007. Guangzhou NTN-Yulong plan to provide tuition for poor students starting in 2007.

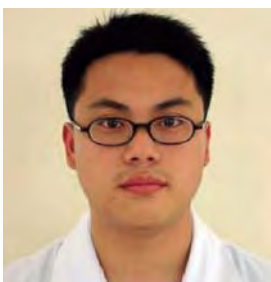
NTN wants to contribute to local people in China and in the world.



View of office in Shanghai NTN



Local cleaning activity by NTN-NIDEC



**Jin Xu**  
Shanghai NTN Quality Eng.  
Dept. Production Eng.  
Section

**I relish the corporate philosophy of NTN to make much of “People”**

NTN is a top level bearing manufacturer and a huge multinational enterprise. At NTN, I am presently in charge of introducing new equipment and maintaining and controlling existing equipment as a member of the Production Engineering Section. The meticulous control methodology of Japanese enterprises is well known in China. Chinese employees were initially doubtful and dissatisfied with it. However, owing to efforts by top management, improvement in the work environment progressed rapidly under the Japanese-style control method, and now it is established as the corporate culture of Shanghai NTN.

With the founding of the labor union, the distance between the company and employees narrowed at once, I feel. I understood the company is very concerned with the physical conditions, family life, spirit and lifestyle of individuals. All employees feel NTN’s effort to spread and enhance NTN’s philosophy of “making much of people.”



## Feature Article 3) Memorial Works for 88th Anniversary of NTN's Founding

# NTN Hosts Various Activities Thinking of the Environment and Local People

### Essay contest called for proposals on safeguarding the environment

NTN celebrated the 88th anniversary of its founding in March 2006. In Japan a special birthday celebration is held for a person who becomes 88. Then NTN developed various memorial works for the 88th anniversary throughout all groups.

As a part of this celebration, essays on specific environmental proposals were requested from group employees. Seventy were submitted. The President's Award, the most excellent, was given to Ms. Mika Kohara of the New Product Development Dept. for her essay entitled "A Proposal of Technology and Commodities which NTN Should Introduce to Preserve the Environment."



**Mika Kohara**

New Product Development Dept.

Thank you for giving me this award. Thinking of the environment and taking action to benefit it is very important not only to maintain our life right now but to maintain the lives of our children for the next generation.

I hope all essays submitted will foment environmental measures to be promoted by NTN and give an opportunity to think more deeply about the environment.



Photo of awardees

### Themes of awarded internal essays

	Awardee	Title of essay
President Award	New Product Development R&D Center New Product Development Dept. Mika Kohara	A Proposal of Technology and Commodities which NTN Should Introduce to Preserve the Environment
Excellent Award	NTN USA Corporate Environmental, Health and Safety Kevin Bulatek	Protecting the Environment through "The Ichiro Principle"
	Production Engineering R&D Center Equipment Development Dept. Shozou Gotou	Contribution to Preventing Global Warming by Steel Dust Solidification Technology
Award	New Product Development R&D Center Mechatronics Research Dept. Hiroshi Isobe	New Technology for Hub Unit Bearings to Help Prevent Global Warming
	NBCA NTN Automotive Center, CVJ Business Unit Paul Tervo	Save Money and the Environment – Overseas Packaging Change
	Kuwana Works Personnel and General Affairs Dept. Masayuki Hiramatsu	The Concept of the "NTN Hometown Forest" and the Global Environment
	Environment Management Dept. Masayuki Yamazaki	On the Possibility of a Recycle-type Production System – The Future of NTN's "Environmentally-advanced Enterprise"
	Industrial Sales HQ Osaka Sales Office Koji Aoyama	Environmental Activity in the Sales Area: A Proposal on Evaluating the Environmental Contributions of Controlled Sales



## Kuwana Works addressed activity rooted in local area

As a part of 88th anniversary memorial events, each location of our company held their own activities to contribute to local areas, such as planting vegetation.

NTN has also engaged in social exchanges with local groups and in social contribution activities, and will promote broader activities in the future in conjunction with local areas.

### List of local contribution in 88th memorial works

**Procurement HQ** : Commemorative tree planting for affiliates  
**Kuwana Works** : Phlox subulata planting and letters by 650 persons "NTN 88 Celebration"  
 Practice of "clean operations"  
 Presentation of grand piano to Kuwana City (planned)  
 Wind-instrument contest for 88th Anniversary  
 Concert at rest home for the aged  
 Holding boys baseball tournament

**Iwata Works** : Donation of "cottage, tea stall and wood wall" to Mitsuke Square (planned) and sidewalk blocks to Futagoduka Park (planned)  
**Okayama Works** : Joint tree planting with Bizen City  
 Presenting care and welfare vehicle (planned)  
**Takarazuka Works** : Presentation of hybrid solar street light  
**Nagano Works** : Cherry tree planting Kayano Plateau  
**NTN Fukuroi Corp.** : Planting of 88 cherry trees



Letters formed by persons celebrating 88th anniversary



Tree planting activity with affiliated companies

## Examples of local contribution activity at Kuwana Works

### Maintaining the local environment

#### Tree planting of Phlox subulata

As part of the 88th Anniversary in March 2007, Kuwana Works, which has been planting Phlox subulata for 3 year plans since 2006, presented 9,000 plants (300m<sup>2</sup>) of Phlox subulata, (twice that of 2006) to Kuwana City and 230 employee volunteers planted them in Harima Central Park.



Phlox subulata planting

### Promoting sports and culture

#### Wind-instrument music contest

On March 22, 2007, a contest was held for wind-instrument music clubs in schools in Kuwana city. The chairman and adviser of the wind-instrument league was asked to be the judge and Kofu middle school won the award for the most excellent.

We will make further efforts to promote music in local areas.



Wind-instrument music contest



### General explanation of bearings published for the development of industry

On May 25, 2007 "Understanding Bearings" was issued from Kogyo Chosakai Publishing, Inc. This is a general explanation of bearing technology, written by 10 employees of NTN putting their hearts and souls into it as a part of 88th anniversary.

Kogyo Chosakai issues many technical books and said, "There are many technical books on bearings, but no book is an easy explanation for new engineers. Please write such a primer." An editing team was organized and we expect it will contribute to the development of the bearing industry.

### Social welfare

#### Concert at rest home for the aged

We planned a concert by the Kuwana String Orchestra in the "Heart" rest home for the aged and held it on March 2, 2007 with attendance by 140 tenants.

We also donated nursing utensils and received a letter of thanks from the head of the facility.



Concert at rest home

#### Boys baseball tournament

A boys memorial baseball tournament was held in July 2007, inviting hard rubber ball teams.

This tournament began with the wish of bringing-up sound youth and growing amateur sports. The 20th event was held this year with 16 teams. The number of teams was doubled as part of 88th memorial celebration.



Boys base ball match to compete for NTN Flag

# CSR Structure Established and Full-scale Activities Started

NTN's corporate group established a CSR structure as part of its management plan in fiscal 2006, aimed at "Increasing corporate value." Considering the "Employee Code of Conduct" and the "Business Code of Conduct" as two supporting pillars, our CSR activities started full-scale. We distributed CSR guidebooks to every board member and every employee.

## NTN's conceptual framework

### Corporate Philosophy

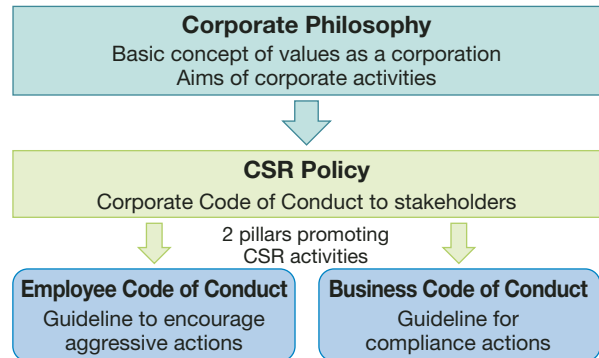
**We shall contribute to an international society through creating new technologies and new products.**

**For New Technology Network:  
Connect through new technologies**

1. Creation of original technologies
2. Offering technologies with added value and services that are suitable for each customer and end user.
3. Improvement of employees' standard of living, distribution of fair returns to stockholders, and contribution to a society based on the steady growth of our business.
4. Promotion of globalization and formation of a corporate management system, which are essential for NTN as a leading international company.

## CSR Policy

1. **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.
2. **Customers:** We shall strive to develop new technologies and new products, as well as to provide safe and reliable products.
3. **Business partners:** We shall engage in fair and free competition, and at the same time establish excellent partnerships with our business partners.
4. **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.
5. **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.
6. **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.
7. **Society:** We shall make every effort to interact meaningfully with society on a local level, and to engage in activities that contribute to society.
8. **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.



### Establishment of CSR basic policy

CSR involves all the stakeholders of the company and its scope is widening.

Also, it is important for the promotion of CSR activities that the corporate policy be disclosed both inside and outside the company and that every employee takes concrete action at their work site.

Accordingly, we defined NTN's "CSR Policy" to clarify the essential points as basic concepts. The newly established "Employee Code of Conduct" was distributed to all the board members and employees of NTN Group companies.

We already established the "Business Code of Conduct" in 2003 that must be complied with by the board of directors and employees. In December 2006, the Business Code of Conduct was revised to correspond with the CSR policy (see p. 20) and with the Employee Code of Conduct were regarded as two pillars.

CSR activities are company-wide efforts by everyone in all departments and at all operation sites in order for the NTN Group to be needed by society. The structure promotes positive activities, and the activities reflect the interests of stakeholders. We aim to be a corporation that is trusted by society.

### Employee Code of Conduct

1. We respect social ethics and act as good members of society.
2. 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.
5. 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.

## Corporate governance

### One of our most important issues for management

Regarding the strengthening and enrichment of corporate governance as one of our most important issues, we are striving to improve management transparency by disclosing information swiftly and accurately as well as pursuing greater efficiency and soundness in our management.

We employ an auditor system; auditors monitor the board's execution of business operations. The independence and objectivity of the corporate auditors are assured by employing three outside auditors among the four auditors (Standing: 2, Part-time: 2), comprising the audit team.

In May 2006 when Japan's new corporation law was enacted, the corporate internal control policy was established. It defines a structure to ensure proper operations by employees as well as by the board of directors and auditors.

#### Board of Directors Meeting

Makes decisions related to fundamental management policy and significant items, and supervises the board's execution.

#### Audit Team

Composed of four auditors (three of whom are outside auditors). The auditors team audits the board's execution of business operations and works to maintain and improve the transparency and fairness of the management structure.

#### Business Strategy Committee

Composed of the board of directors and designated executive officers. The Business Strategy Committee determines management strategy and measures based on the policies determined by the board of directors.

#### Executive Officers Meeting

The executive officer structure was introduced to slim down the board of directors and to make swift decisions.

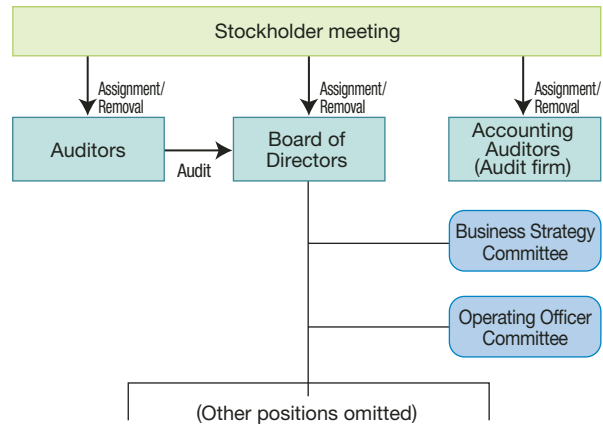
## Creation and activities of CSR promotion structure

### CSR Committee as a Promoter

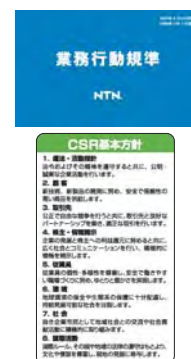
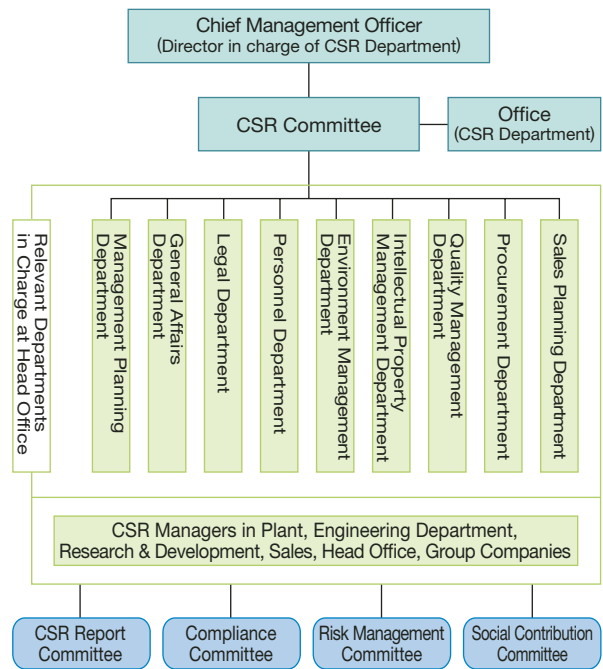
In April 2006, we established the CSR Department and created a structure to promote CSR activities, assigning a director as the chief management officer and started CSR activities in full scale. This new structure assigns a CSR manager to each department under the "CSR Committee" and aims to implement CSR activities on a day-to-day basis.

Also, in order to deepen the understanding of CSR and integrate it into daily business operations, NTN distributed approximately 7,500 "CSR Guidebooks" that introduce many examples and "Response Cards" in December 2007 to the board of directors and employees at NTN and its domestic group (including employees temporarily transferred to overseas sites). Furthermore, in January to March 2007, explanatory meetings on the CSR Guidebook were held for managers (616) of NTN and its domestic group companies at 22 operating sites.

### Corporate Governance Structure Chart



### CSR Committee Organization Chart



Left) "CSR Guidebook"  
Compiled focusing on instilling the corporate philosophy and clarifying compliance  
Right) "Response Card"  
For use at meetings, etc. in production departments

## Compliance management structure

### Clarifying compliance criteria for board of directors and employees

In 1997, we established the "Corporate Code of Conduct," which declared NTN's dedication to its responsibilities to customers and stockholders, NTN's respect for the human rights of employees, its aim to contribute to society and NTN's environmental conservation as well as NTN's compliance with both the letter and the spirit of laws and the maintenance of fairness in corporate conduct. Also the "Employee Code of Conduct" was established to encourage employees to comply with laws and corporate regulations, to take responsible actions and to serve society's interests. In 2003, the Corporate Code of Conduct and the Employee Code of Conduct were united to further strength compliance and the Business Code of Conduct was established as a matter of mandatory compliance for the board of directors and employees.

In fiscal 2006, after preparing the CSR Policy (specifying the corporate social responsibilities) and the new Employee Code of Conduct, the Business Code of Conduct was revised to clarify the nature of compliance criteria for the board of directors and for employees.

### Reorganization toward management structure centered on the CSR Committee

Since 1997, the Corporate Ethics Committee has taken charge of ensuring compliance at NTN.

In July 2006, the CSR promotion structure was formed and the compliance management structure was reorganized under the newly established CSR Committee. The CSR Department is in charge of investigations and analysis of compliance risks, The Legal Department is for education and help-line management concerning laws. The Personnel Department is for drafting and enforcement of personnel policies and measures etc. Accordingly, a comprehensive judgment of the NTN Group's compliance situation is made under this structure.

Furthermore, from December 2006, the Compliance Group of the CSR Committee has promoted compliance management and its management duty was transferred from the Legal Department to the CSR Department.

### Compliance Audit

The compliance status regarding laws and corporate ethics is audited by the Internal Audit Group of the CSR Department.

The audit was formerly conducted by the Legal Department. In the past five years, no major problems were observed although minor improvements were directed. In 2006, the security export control operation (concerning Japan's foreign exchange law) at the International Trade Department was audited and no violations were found.

### CSR / Compliance Education

At NTN and its domestic group companies, training on CSR, compliance and corporate legal work are conducted as part of newly hired employees' training and as managers' training after promotion.

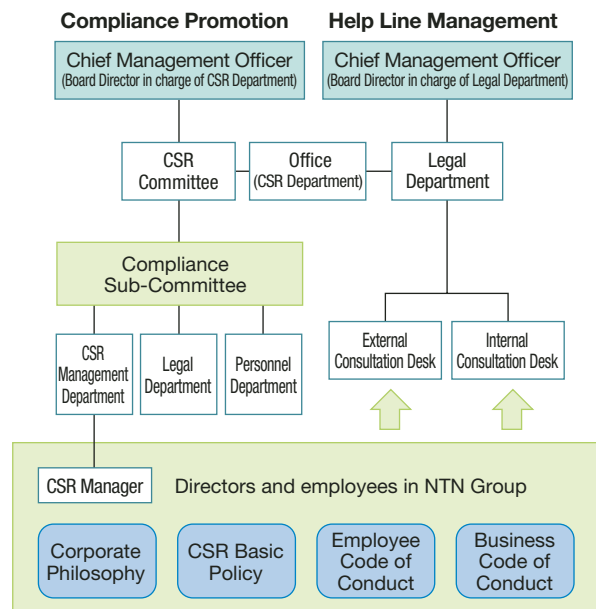
In 2006, "CSR / Compliance Education" and "Corporate Legal Work Education" were conducted for employees having worked for two years. Explanatory meetings on compliance were held for all managers.

In 2007, an electronic "Compliance Message Board" for self study concerning compliance will be developed and put into use.



Explanatory meeting to managers about the importance of CSR and compliance.

## Compliance Committee and Help Line Management Structure



## Help desk for inquiry/consultation/reporting

### Available not only for NTN employees but also for suppliers

At NTN and its domestic group companies, in the case that any directors and employees find or foresee illegal or suspicious conduct, NTN has made available since May 2003 the Operation Code of Conduct, Corporate

## ■ Business Code of Conduct

### 1. Compliance with laws and norms

We shall do our utmost to act according to high principles as corporate employees and as socially responsible adults by complying with laws, our internal rules and the ethical norms of society.

#### Code for business activities

- |   |   |                              |
|---|---|------------------------------|
| 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 |                              |
| 7. Proper labeling and specification          | 8. Respect for intellectual property rights                     |                              |
| 9. Proper control of confidential information | 10. Ensuring security by strengthening export controls          |                              |
| 11. Compliance with industrial laws           | 12. Compliance with corporate accounting principles             |                              |

#### Code for co-existence with society

13. Compliance with international rules    14. Promotion of environmental conservation    15. Positive contribution to society

#### Code for ensuring a positive work environment

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

#### Code for corporate employees

- |   |  |
|---|--|
| 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 |

regulations and help lines that the person may consult directly through telephone, fax or e-mail without going through organizational lines. Two routes are available: our Legal Department is an internal desk and our corporate lawyer serves as an outside help desk. Both routes are operated so as not to be detrimental to those who contact the desks.

In April 2006, a whistleblower protection law, specifying that dismissal due to disclosing information in the public interest is illegal, was enacted.

In response to this, our suppliers were informed of the opening of our Help Line, "CSR Guide Books" were distributed, describing how to use the Help Line and everyone was informed about compliance at explanatory meetings.

## ■ Compliance status regarding laws and corporate ethics

### Making our attitude clear aiming at eradication of drunk-driving

If laws or corporate ethics are violated, our Legal Department investigates the case and reports to the director in charge of the Legal Department and the Compliance Group of the CSR Committee. The Compliance Group shall study countermeasures and corrective actions based upon the report and deploy them.

In fiscal 2006, there were no problems in operations, but there were two violations of the Road Traffic Act outside of business activities (property damage and an accident due to driving under the influence of alcohol). Concerning these, the Personnel Department informed the NTN Group in Japan and

reinforced the corporate attitude about eradicating drunk-driving by adding a new regulation: "Serious violations of working regulations shall result in a disciplinary discharge."

## ■ Risk management and confidential information management

### Strengthening preventative management of risk

In 2001, we established the Emergency Management Center\* to manage the response and countermeasures when risks arise. Risks relating to quality, the environment, natural disaster and compliance are emphasized.

In March 2007, the "CSR activity management rule" was revised to strengthen preventative risk management and the Risk Management Group under the CSR Committee was established.

\* Emergency Management Center: Responsible for receipt of emergency information, study of proper counter measures, reporting of emergency information, establishing of emergency Headquarters, document retention and education.

### Management of Confidential Information

For proper management of information, a "confidential information retention rule," "electronic confidential document handling rule" and an "information security countermeasure procedure" were prepared and circulated to all operating sites and affiliates.

When confidential information is taken outside the company, permission of the department manager must be obtained. For electronic media, use of UBS memory with a password is required. No incidents have occurred under this system.

# Report on Social Aspects

The company group recognizes its responsibility to all stakeholders and endeavors to abide by that responsibility in its corporate activities.

- 22 Responsibility to Customers
- 25 Responsibility to Suppliers
- 26 Responsibility to Employees
- 29 Responsibility to Shareholders
- 30 Responsibility to Local Communities



# Aiming to Provide Optimum Quality and Service

The company made “improvement of corporate value” as the basic policy for the medium-range management plan. One part gives importance to customer satisfaction – provision of optimum quality and service. In 2006, we promoted continuous activity to ensure customer satisfaction as well as to maintain safety and quality.

## Basic quality policy

### Quality improvement for customer satisfaction

This company thinks the most important thing for customers is to maintain and improve quality.

Under NTN’s “basic quality policy,” we pursue appropriate quality for customers from three points of view, “applicable quality,” “competitive quality” and “economic quality.”

### Basic Quality Policy

Pursuit of appropriate quality satisfying performance and specification requested by customers

- Quality applicable to the various requests of customers (applicable quality)
- Superior quality in the marketplace (competitive quality)
- Quality profitable to the enterprise (economic quality)

## Quality control policy for 2006

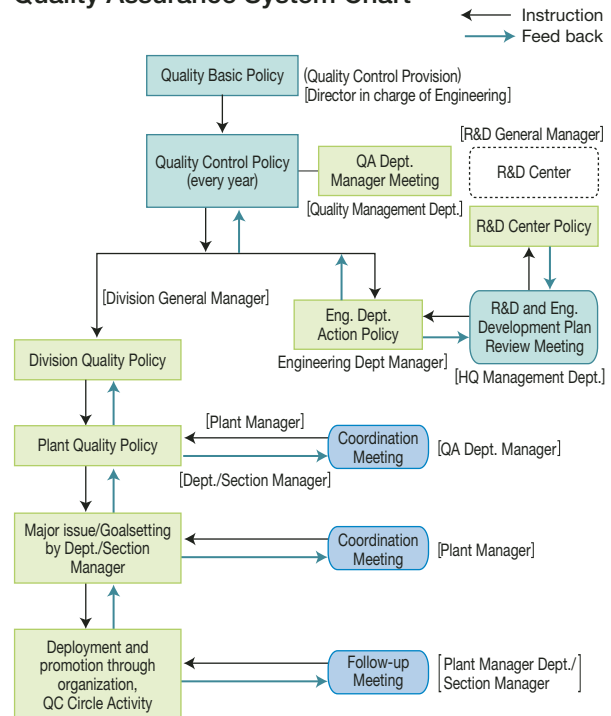
### Aiming at top quality with zero claims

Based on its basic quality policy, the company determines an annual “quality control policy” in the Engineering, Production and Sales departments.

The Policy and details for each department for 2006 are as shown below.

In 2006, for manufacturing quality that satisfies

## Quality Assurance System Chart



customers, the annual theme was “Quality is NTN’s brand power. We will achieve zero claims and attain No.1 global quality by building quality into the manufacturing process.” The theme was posted and engaged in by the NTN group.

We set a new theme for 2007, aiming at further improvements in quality.

### Quality Control Policy for 2006

#### Engineering : “Design determines all” will be continued

Continued from 2005, this concept aims at claim prevention at the root source, with enhanced verification at the design stage, with drawings conforming to production needs. We promote the following views: 1 ) to understand the performance demanded by customers and service conditions, 2 ) robust design\* aimed at eliminating claims in the market, 3 ) designs easy to understand, easy to manufacture and difficult to mistake.

#### Production : Prevention of claim recurrence and ensuring quality of new products

For newly launched products, to improve quality through building quality into the product and preventing claim recurrence, we promote the following points, 1 ) reorganization of the domestic quality control system, 2 ) construction of a global quality control system, 3 ) handing down of quality-oriented technology and skills, 4 ) guidance to affiliated companies.

#### Sales : Provide what the customer demands

To satisfy customers, we promote, 1 ) better evaluation of and knowledge of what satisfies customers 2 ) knowing customer requirements and communicating them.

\* robust design: design not affected by variations in production and the environment during service.

## Quality management system

### Quality management system conforming to international standards

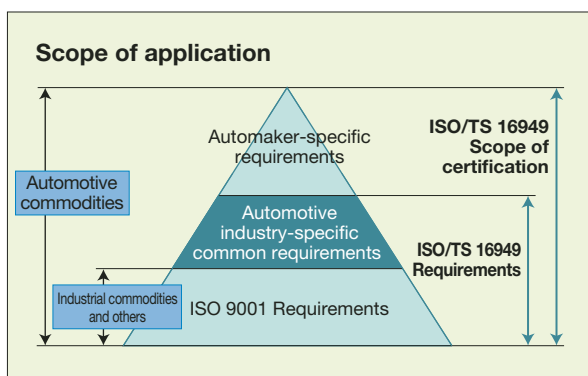
NTN has devised a quality management system conforming to the requirements of ISO 9001:2000 in all business divisions. Moreover, in business divisions manufacturing automotive products, we also acquired ISO/TS 16949:2002 certification\*.

By operating such a management system and stressing continuous improvement, we prevent nonconformances and provide products that can be relied on by customers.

\* ISO/TS 16949:2002: The highest quality standard system incorporating specifications established by American and European manufacturers based on ISO 9001:2000.

### Highest quality certification in the automotive industry

The company acquired certification of ISO/TS 16949:2002 in its 5 domestic business divisions in 2004 and has



### Major customers who require conformity to ISO/TS 16949:2002, sites and commodities

Customer	Customer-specific requirement	Site in charge	Commodity
Ford	Ford Motor Company Customer-Specific Requirements For Use With ISO/TS 16949	Kuwana Works	Cylindrical roller bearings for automobiles
		Iwata Works	Belt-tensioners
		Okayama Works	Axle bearings
Daimler Chrysler	Guideline for Quality Assurance in Product Realization (Europe)	Iwata Works	Ball bearings for automobiles Needle roller bearings for automobiles
		Kuwana Works	Ball bearings for automobiles Cylindrical roller bearings for automobiles
		Okayama Works	Tapered roller bearings for automobiles Axle bearings
		NTN Kongo Corp.	Ball bearings for automobiles
	Customer-Specific Requirements for use with ISO/TS 16949 (US)	Nagano Works	Autotensioners
GM	Customer Specific Requirements For Use With ISO/TS 16949	Iwata Works	Needle roller bearings for automobiles

expanded it to 10 sites including 9 overseas business divisions.

Under this quality management system, which satisfies requirements for automotive products, we are continuously addressing the prevention of nonconformities and troubles in the supply chain and the reduction of quality variation and waste to provide the highest quality product to automobile manufacturers worldwide.

## User support system

### The importance of information provision and direct communication

NTN, as part of promoting an “increase in customer satisfaction by providing the highest quality and service,” allocates fulltime sales personnel and sales engineers for major customers and sales agents so as to be able to directly respond to all requirements. As to basic product information, we distribute product catalogues and handbooks by product and provide technical information directly.

We seek to increase opportunities to hold exhibitions of products at customers’ facilities and for engineers to go and hear directly from customers. In 2006, we held 8 exhibitions at customers’ facilities. The results of questionnaires after exhibitions have been favorable and we are judging that we have been successful.

For questions and claims from customers after delivery, we have a system to receive them at each branch and respond quickly to them.

## Response to major problems

### Sales, Quality Assurance and Engineering/Research divisions combine

For any major quality problem, the company has a system that will immediately organize a special emergency structure across the Sales, Quality Assurance and Engineering/Research divisions to handle and settle it as soon as possible.

In 2006, we had no major quality problems.



## Appropriate control and protection of customer information

### Thorough education of employees

Since the establishment of confidentiality rules in 1991, the company has endeavored to make it known to employees to protect information obtained from customers.

To those who are transferred or dispatched to departments handling much customer information, we explain our policy of how to respond based on confidentiality rules as introductory training. In 2006, 54 people assigned to the Sales Division were trained on confidentiality rules and document control.

As a result, there were no violations of proprietary information procedures in the company or at affiliates.

## Asking affiliates for cooperation

### Addressing quality improvement with suppliers

This company holds annually quality audits or “affiliate quality improvement meetings” with business partners (suppliers) from whom we receive parts and materials. At affiliate quality improvement meetings, the top management of affiliates are invited to participate and the results of activities are presented.

In 2006, under the theme “Quality shows NTN’s brand power to customers,” 128 companies participated. Quality improvement successes were presented by 3 companies with customers participating and giving lectures on quality.



Awards Ceremony for successful results



Affiliate quality improvement meeting

### Educating sales agents on product technology

The company uses a Sales Agent System and organized a Domestic Sales Agent Association consisting of 65 companies. NTN periodically holds exhibitions and training courses. It also educates about product technology in order to improve the understanding of the construction and performance of products and how to handle them.

In 2006, we held a domestic sales agent meeting and conducted a technological class at that meeting as well as at each area. We received favorable evaluations and judged that certain results were obtained regarding technological understanding. In the future, we plan to continue and enhance this technological class.



Domestic Sales Agent Meeting Awards Ceremony for overall excellence

From left: Daijiku Co.  
Nitto Shokai Co., Ltd.  
NTN President Suzuki  
Toamec Inc.  
Hamasho Corp.

## Contact windows for customers

### Aiming to improve customer satisfaction

Communications from customers are received through telephone as well as through the internet homepage and the sales agent order system (e-Wings). A system has been prepared so that the person in charge of the contact window immediately responds to any communication.

The company included “brand power improvement” in its medium range management plan, and to realize this, is especially promoting the improvement of customer satisfaction as the most important activity. As one project, a system was constructed so that a fulltime sales person and engineer are assigned to respond directly to inquiries from major customers and sales agents. We strive to hold exhibitions or engineering seminars at customers’ facilities to increase the opportunities for NTN engineers to hear from customers.

# Creating a Good Partnership with Suppliers

The company is striving to create a good partnership with suppliers through clarifying its basic policy of procurement and developing and maintaining fair transactions with suppliers.

## Basic procurement policy

### Improving corporate value together with suppliers

Our basic policy of procurement is to improve corporate value long-term together with suppliers through procuring better and cheaper products from the world while assuring quality (including impact on the environment) and performing just and fair transactions.

The procurement strategy of this company is to realize the most appropriate procurement while continuously improving quality and technology, by attaching great importance to long-term relationships while fostering mutual trust and cooperation with commission agents who are positioned to be strategic partners.

### Procurement policy of 2006 and the summing up

NTN's procurement policy for 2006 is "to maintain stable delivery quality" and "decrease procurement costs." We continuously worked on VA\*1 and VE\*2 together with suppliers.

As a result, we have improved our quality further and reduced costs. In 2007, to strengthen the activity, we will promote cost reductions throughout all processes from raw material to products at suppliers' production sites.

\*1 VA (Value Analysis): Systematic control method for changing design or specifications, reviewing alternate products, etc. to achieve the best balance between performance and cost.

\*2 VE (Value Engineering): A series of methods to enhance relative value of products by factor analysis and review of product value and cost.

### Opening of Supplier Meeting

This company holds Supplier Meetings to explain production to major suppliers twice a year (in March and September).

In the March 2007 meeting, suppliers were evaluated on various aspects such as production (increased production), cost, VA/VE, certifications such as ISO 9001, ISO 14001 etc., and 8 companies received an award.

In addition, the 4 basic policies of CSR



Luncheon at Supplier Meeting

procurement was explained in order to share the idea of CSR. We gave them guidance regarding the acquisition of environmental certification as specific assistance.

## Basic Policy on CSR Procurement

1. To pursue stable procurement for best quality/cost and prepare for market fluctuations.
2. To improve corporate value for both sides through mutual cooperation.
3. To create trust with affiliated companies by observing rules, regulations and social precepts.
4. To comply with social duties (such as preservation of the global environment) through procurement activity.

## To maintain fair and appropriate relationships

### System to implement fair transactions through auditing

This company created a "voluntary audit manual for subcontractors" in 1997 and created a system to audit internally and ensure fair transactions. In addition, in November 2001, we issued the "Control manual for raw material procurement" for the purpose of respecting suppliers' interests and performing fair transactions based on the principle of faith and honesty as we have selected, contracted with and evaluated suppliers.

As of March 2007, the company has 1,294 domestic suppliers in total and 409 companies are subject to the subcontract law (the Act against delay in payment of Subcontract Proceeds etc. to Subcontractors).

Based on the voluntary audit manual for subcontractors, Procurement HQ audits each plant on payments and found no improper transactions in 2006.

## Contact window for suppliers

### Operation of help line for suppliers

With NTN's public interest whistleblower protection system established in April 2006, we made a system that receives communications from suppliers and linking to NTN's Help Line (see p. 19) for public interest reporting.

# Respect Diversity and Create a Safe and Easy-to-Work Workplace

NTN supports these measures so prosperity materializes for all. NTN aims to create an evaluation system that allows diverse individuals to demonstrate their ability, to provide equal opportunity in employment, to provide a safe, healthful and comfortable working environment and to support career planning and personal development.

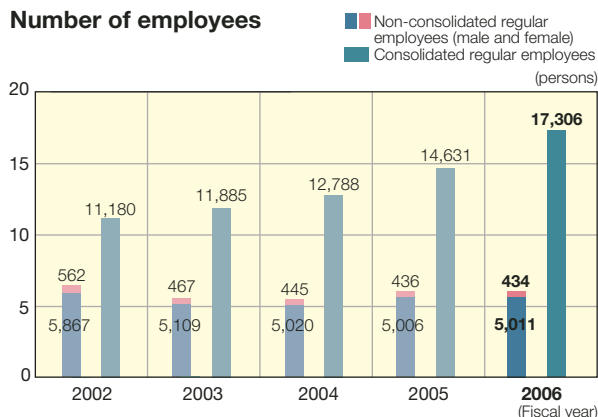
## Employee circumstances

### Increased employees for succession of technology and skill

With business expansion at home and abroad and just before the retirement of the baby-boom generation, the company increased consolidated employees by 2,675 from the previous year, securing persons to succeed to core technology and skills.

As a means to retain persons for succession of skills, we introduced a system for temporary employment from 2005 and employed persons for an effective term of 6 months, mainly for production. As of March 2007, this company has 172 persons and 184 persons consolidated (an increase of 78 and 80 respectively vs. previous year). Also we have a system where a temporary employee who has worked over one year and is recommended by the workplace may become a regular employee. In 2006, 82 persons (89 in consolidation) became full-time.

### Number of employees



## Basic policy of employment and protection of diversity in the workplace

### Creation of a workplace respecting human rights

NTN and related companies defined the basic policy of employment in a Labor Agreement in 1982 that “for the cause of nationality, belief or social rank, we shall not discriminate on wages, working hours and other working conditions.” NTN also declared the respect of human right as a major principle.

We think that holders of diverse thoughts and senses of value will stimulate each other and bring dynamism and originality to the corporation. For that, we must prepare a working environment to improve productivity and employee satisfaction, where various able persons can display the most of their ability. It is also important to allow a variety of working styles for making use of their various abilities.

Based on this concept, we strive to create a just and fair workplace environment where human rights are respected and no discriminating acts such as sexual harassment exist. Such an attitude is defined in the CSR basic policy. To become aware of this policy, all are instructed thoroughly, for example, at new manager training on labor management or newcomer training.

With business globalization, we do not admit any child labor nor forced labor, and request the same from suppliers.

Female employees are 8.0% and female managers are as yet few, but are increasing.

We will bring up personnel adapted to their qualities so that they can play active roles in various workplaces and we will expand opportunities for females to work.

## Basic policy for personnel affairs

### Just and fair performance evaluations and employment decisions

As to payment for the employees, as the basic policy, corporate performance is reflected in bonuses and individual performance is reflected in raises or promotions through the personnel performance evaluation system.

Evaluation criteria to determine pay and position is based on implementation of just and fair performance evaluations and determination of treatment according to NTN’s “personnel performance evaluation manual.”

Payment is systemized with a combination of person-based wages and performance based wages. In Japan, the person-based wage is determined by age, whereas the performance-based wage is determined using a wage table based on the assessment according to the personnel performance evaluation manual.

A comprehensive evaluation is made by several evaluators from various points of view. We endeavor to practice just and appropriate performance evaluations.

## NTN supports job and family balance

### Enriching the system to help balance family and career

NTN tries to enrich various systems to support employees who aim to balance job and family.

In Japan in 2006, we introduced a reemployment system (the momback system\*) for female employees who resigned their job due to childbirth or childcare. We increased half-day vacations available in January 2006 to enable male and female employees to utilize paid holidays for child care purposes.

We also have a nursing holiday system that allows a one-year leave of absence and one person is utilizing this system now.

We are now designing a new welfare program to begin in 2008 to assist childcare and nursing.

\* momback system: by registering at resignation, reemployment is possible as demanded once a working environment is arranged.

### Outline of Assistance System for child raising

	This company	Designated by law
Hospital visit leave for pregnant female	Officially admitted	—
Leave before childbirth	6 weeks with pay	Without pay
Leave after childbirth	6 weeks with pay	Without pay
Childcare leave	Guaranteed bonus of 150,000 yen minimum	Without pay or bonus
Childcare time	Twice a day with pay (1 hour each time)	30 min/each time without pay
Exemption from overtime	Until child enters elementary school	"Best efforts" obligation from 3 years old

\* There are also measures to reduce overtime, exemptions from midnight shift and system of leave for nursing.

## Reemployment system

### System to ensure technology, skills and special knowledge are handed down

The company has operated a reemployment system for employees including related companies from 1982. In 2006, we started a reemployment system for those in their early 60s and we reemploy persons irrespective of the kind of work under two courses: "certain transfer" and "dynamic vigor."

The certain transfer course is to pass down technology, skill and special knowledge and to guide the younger employees who inherit them. The course

"dynamic vigor" is to perform conventional duties while making the most of cultivated technology, skill and special knowledge.

In 2006, 79 qualified persons are in this system and more than 77% of the applicants are reemployed.

## Employment of the disabled

### Addressing employment of the disabled in the "dream workshop"

As the main policy for employment of the disabled, we strive to surpass the official rate of disabled employment and to ensure all employees play an active role in the workplace. In addition to NTN's standard workplaces, we opened a dream workshop in 2004 in three plants, creating a workplace specially adapted for the disabled.

In 2006, our employment of the disabled is 82 persons, including 6 in "dream workshops." This is a 1.98% employment rate for the disabled, compared to the official rate of 1.8%.

Hereafter we will try to expand the kinds of jobs and increase the number of persons participating to expand employment opportunities for the handicapped.



Operation of packaging in "Dream Workshop"

## Occupational health and safety

### Improvement in occupational health and safety

In order to assure safety and health in the workplace and provide an environment comfortable to work in, we set and execute a "safety control plan" every year.

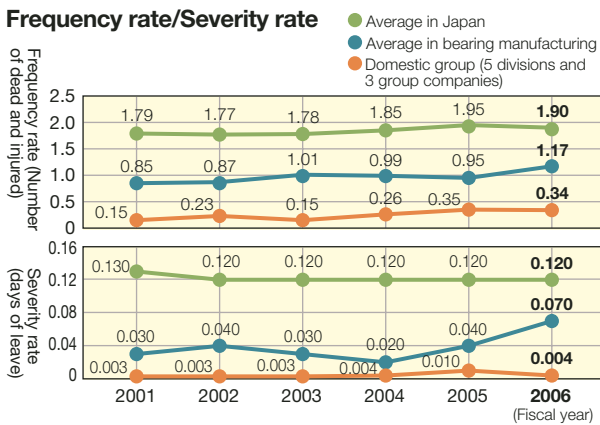
In 2006, we set "preventive control measures" as the major target and addressed important issues such as 1) acquiring company-wide safety and health management system certification (OSHMS); 2) implementation of risk assessments; and 3) strengthening of mental health measures.

We acquired the OSHMS certification for seven domestic divisions in April 2007. Based on the OSHMS

system, we plan to improve the level of health and safety.

Our risk assessments involve investigating and identifying dangers based on an analysis of past labor accidents and preparing work instructions to decrease risk levels.

In the health and safety control plan for 2007, the eradication of labor accident at non-stationary works and the firm establishment of OSHMS are important items for implementation.



**Supporting health and safety at affiliated companies**

We support suppliers in business areas such as technology, the environment and health and safety.

We implemented a training course on joint health and safety, patrols and accident cases, under the national “Group Health and Safety Assistance Project,” for two companies doing business with the Iwata Works in Shizuoka Prefecture.

**For physical and mental health**

To help each employee manage their own health, NTN not only promotes regular physical examinations but also encourages preventive health measures such as early detection of cancer and appropriate measures for lifestyle-related diseases.

For mental health, we set up counseling areas at each location where all can consult with a counselor. We implemented the “MINI diagnostic exam” which can diagnose melancholia, panic disorder or obsession neurosis. Further we are “noticing” and “listening” in the workplace, and promoting mental health education.

We assist employees with personal care and educate managers on mental health.

**Rewarding job-related inventors**

**Rewards for job-related and un-related inventions**

We encourage employees to develop patents and to improve NTN’s technological competitiveness. We attribute patents and judge their potential worth through our “patent control program” and “patent reward program.” There is no upper limit for the reward. Inventions to be kept as trade secrets may also receive a reward.

In 2006, NTN paid awards for 2,233 patent applications, 191 registrations and 32 awards for achievements.

**Reducing overtime**

**Interviews by industrial physician started**

In order to prevent overworking employees, we monitor working hours and holidays worked. Those who have overworked contrary to the agreement on overtime and working holidays, are issued a warning when their working hours go over the limit.

In 2006, excessive working hours per employee were 15.3 hours on average, reduced slightly from 16.2 hours in 2005. From March 2007, all whose working hours exceed 60 hours per month and those whose working hours exceed 45 hours as proposed by themselves or their supervisors are interviewed by an industrial physician.

**Communication window for employees**

**Evaluation by interview and utilization of help line**

A biennial interview with general employees is held to make an agreement between them and their supervisors on their evaluation and goalsetting for the next term. Interviews are conducted based on the personnel performance evaluation manual and by multiple persons to maintain fair evaluations.

A help line (see p. 19) was established as an internal and external window for all employees to be able to report such issues as human rights violations, sexual harassment and other harassment.

# Fair and Rapid Disclosure of Information to Enhance Enterprise Value

NTN will strive to timely and properly disclose information and to forge good relations with all of our shareholders and investors in order to earn their trust and a fair valuation in the market.

## Information disclosures

### Timely disclosure and enhanced communication

NTN is working to provide our shareholders and investors with fair, timely and rapid disclosure of information in compliance with relevant rules and regulations.

In investor relations (IR) activities, we are making efforts to provide our shareholders and investors with performance results, financial positions, management strategy, and NTN's vision for the future as accurately and clearly as possible. At the same time we are working to further improve communications with shareholders and investors by incorporating their feedback into our management system.

At the annual shareholders' meeting held on June 29, 2006, we gave due consideration to such items as exhibiting our products and making business presentations on panels to create a relaxed atmosphere that makes shareholders feel free to ask questions.

We will further study the annual shareholders' meeting to determine a date that is more convenient for to attend and to make meeting materials that are easier to understand.



Shareholders' Meeting



Product-exhibiting Space

## Evaluation of firm by external organizations

### NTN stock is included in SRI funds and SRI indices

NTN is acknowledged to be a company that proactively lives up to its social responsibilities and is included in well-known SRI (socially responsible investing) indices. NTN has also been named a select company by Morningstar in Japan, and by FTSE4Good and ETHIBEL overseas.



## Shareholder returns

### Optimized return to shareholders

NTN considers returning profits to shareholders a principal management policy. For the medium and long-terms, NTN's goal is to provide a steady and sustainable dividend payment, which is determined according to its consolidated earnings and dividend payout ratio.

The annual cash dividend for the fiscal year ended March 2007 was ¥16 per share (compared to ¥11 for the fiscal year ended March 2006).

## Communication with shareholders

### Communication with investors and analysts

NTN held four conferences with institutional investors and analysts to explain its performance results in 2006. In addition, NTN also held "small meetings" and plant tours separately with certain groups of analysts. For individual investors' convenience, we transmit IR information on the company website as well as in a presentation at an event targeted to individual investors.

### SRI Fund

- Japanese Stock SRI Fund (STB Asset Management Co., Ltd.)  
A fund investing in "Japanese companies that are addressing CSR positively"
- Family Friendly (Mitsubishi UFJ Asset Management Co., Ltd.)  
A fund investing in "companies that offer diversified and flexible working conditions amenable to career and family life"
- Asahi Life Social Responsible Investment Fund "ASUNOHANE" (Asahi Life Asset Management Co., Ltd.)  
A fund "evaluating companies on the basis of the environment, employment, response to customers, social contribution and corporate ethics from the stakeholders' standpoint"

### SRI Indices

- MS-SRI (Morningstar Japan K.K.)  
"The first socially responsible investing index, which includes 150 companies of excellence listed in Japan"
- EFTSE4Good {FTSE International Limited (England: Joint venture company between the London Stock Exchange and The Financial Times)}  
"Evaluate corporations from the standpoints of environmental sustainability, social issues and relationship with stakeholders"

# Active volunteerism as a Good Corporate Citizen

The NTN Group volunteers for community programs where NTN has operations. In 2006, NTN held a variety of programs to commemorate its 88th anniversary (see pp. 15–16).

## Supporting voluntary activities

### Promoting charitable activities

NTN has pledged to “contribute to society” in its corporate philosophy and CSR policy. The basic policy is that activities that contribute to society should be participated in on a voluntary basis, choosing the most appropriate program out of the many issues faced by society. NTN sees such participation as an “investment in society.”

In regard to emergency disaster response and fostering the environment and culture, NTN promotes cooperation with appropriate partners, such as local communities and non-profit or non-governmental organizations to solve public concerns. NTN also participates in benevolent activities that our industry or the general business world engage in.

NTN also encourages its employees to participate in such activities, as taught in the Business Code of Conduct, such as contributing through work, charitable activities and support for educational and cultural causes. NTN supports its employees’ voluntary activities.

NTN participates in a broad range of activities such as local greening projects, public service projects, amicable coexistence with local communities, supporting local education and the support of academics, sports and culture.

## Assuring the safety of the local community

### Crime-prevention and traffic safety activities

NTN and its group companies cooperate with traffic safety and crime-prevention campaigns to better communities with improved security and safety.

In 2006, NTN’s main office in Nishi-ward, Osaka joined the Business Protection Council within the jurisdiction of Nishi Police Station in Osaka prefecture. Exchanging information regarding issues such as billing fraud and its countermeasures, NTN cooperates with the police to eliminate any type of crime and violence.

As part of a traffic safety campaign, Kuwana Works (Kuwana city, Mie prefecture), had several employees participate in monitoring drivers on the street once a month. Okayama Works participated in a similar activity.

## Communication with local communities

### Answering questions from the local community

Communication with neighbors is done by each business location. For example, a complaint was lodged at Iwata Works in May 2003 by nearby residents about factory noise during night operations. The Iwata City Government, which notified Iwata Works of the complaint, sent environmental officers to examine the situation. The investigation showed no legal violation by Iwata Works, but recommended certain countermeasures. Iwata Works responded on the same day by closing the shutters and then quickly installing sound insulation to improve the situation. A series of NTN responses satisfied the neighbors. NTN takes care not to cause problems regardless of whether we are legally required to act.

NTN will continuously work to fulfill its responsibility as a member of local communities by listening earnestly to the voices of people in the community.

### Annual local summer festival

#### Okayama Works

In August 2006, “NTN Okayama Summer Festival,” now established as the local’s summer event, was held.

3800 people including NTN employees and their families, local residents and guests enjoyed various events and snack booths.



### Sponsoring cross-cultural experience event (USA)

#### NTN DRIVESHAFT, INC. (NDI)

NTN, together with other Japanese companies operating in the community, sponsored and participated in “Ethnic Exposition 2006” held over two days in October 2006. Interaction with people from different countries was promoted by introducing Japanese food and culture.



### Donation of school supplies to elementary school (Thailand)

#### NTN MANUFACTURING (THAILAND) CO., LTD. (NMT)

NTN donated elementary school supplies bought with money collected from its employees and unwanted books. NTN will continue to support the children who are willing to learn but are in a difficult situation for economic reasons.





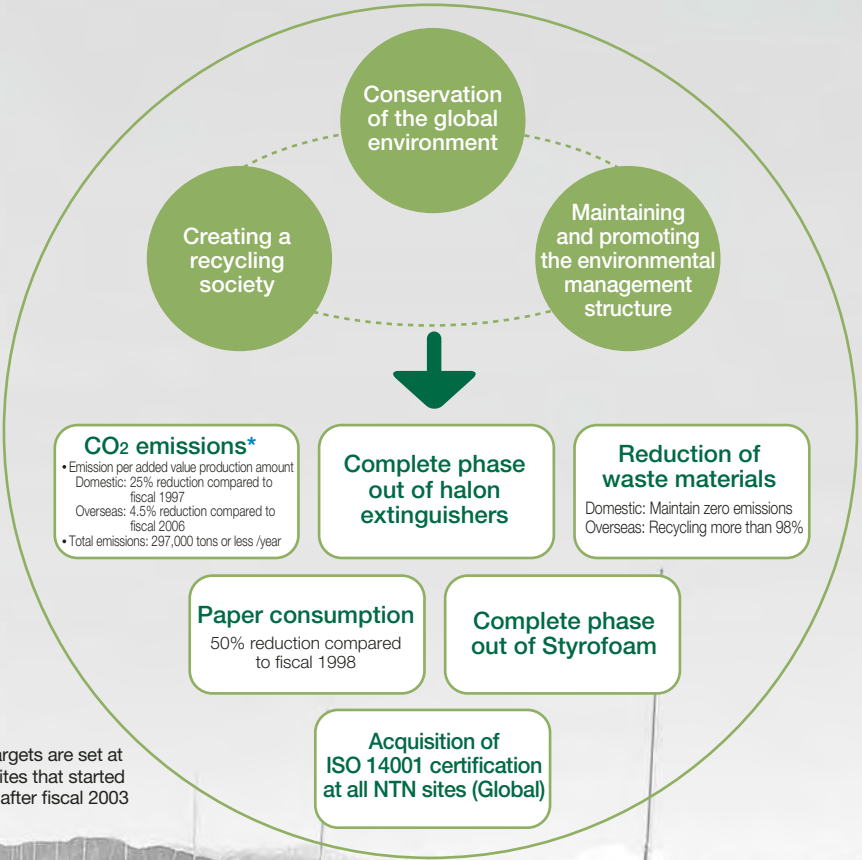
Wind Power Generator at Export Center (Kuwana)

# Report on Environmental Aspects

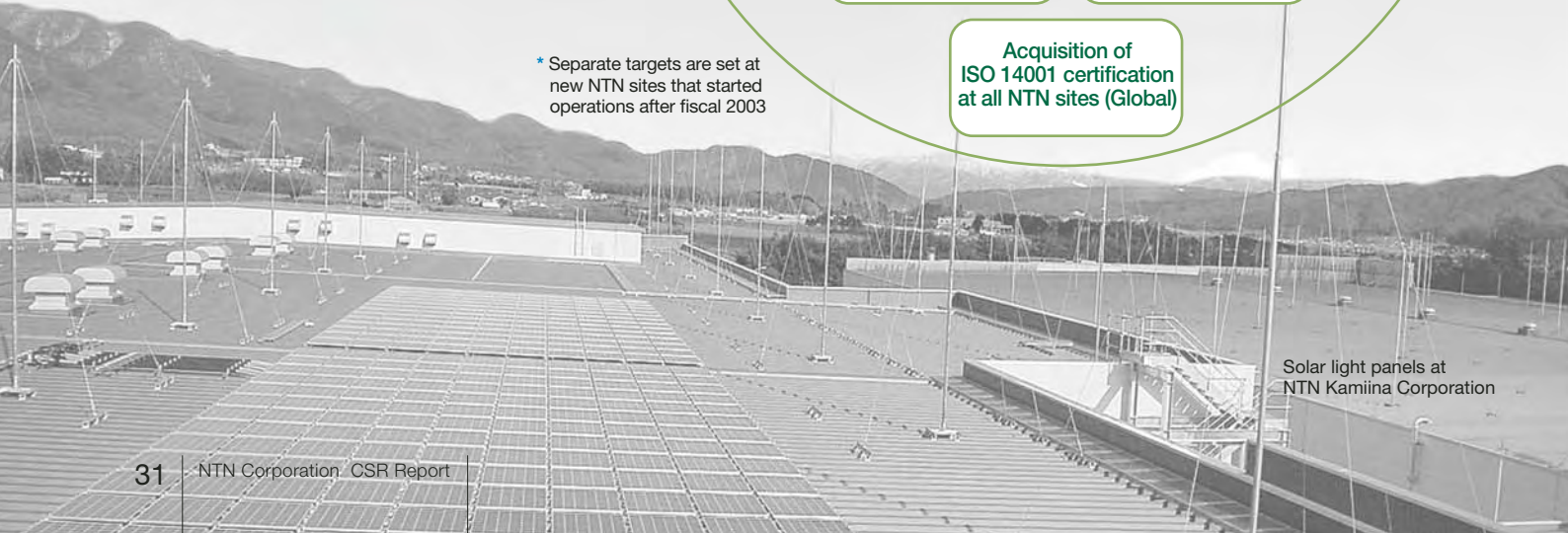
Emphasizing conservation of the environment, our group aims to create a sustainable society while defining our environmental targets for 2010.

## NTN Environmental at Targets toward 2010

- 32 Environmental Management
- 35 Targets and Results
- 37 INPUT & OUTPUT
- 38 Conservation of the Global Environment
- 41 Creating a Recycling Society
- 42 Maintaining and Promoting the Environmental Management Structure
- 44 R&D Efforts to Reduce Environmental Impacts
- 45 Site Reports
- 47 Environmental Performance Data



\* Separate targets are set at new NTN sites that started operations after fiscal 2003



Solar light panels at NTN Kamiina Corporation



# Toward a Harmonious Co-existence with the Global Environment

The NTN group established our Basic Concept and Action Guideline, aiming at a harmonious co-existence with the global environment, and we are making every possible effort to fully develop a structure and environmental management activities in order to realize our objectives.

## Basic Concept

Advocating harmony with the global environment is our most important issue and we will make constant efforts to contribute to the harmonious development of society, while aiming to reduce environmental impacts and create a recycling society.

## Action Guideline

In connection with its manufacture and sales of bearings, constant velocity joints and precision equipment, the NTN Group will comply with the following guidelines, which state our commitment to continuously reduce the impact of our products and business activities on the environment, and to maintain a safe environment for the future.

1. NTN will contribute to world-wide energy conservation by developing and providing eco-conscious products using tribological technologies and high precision processing technologies.
2. NTN not only will comply with the requirements set forth in applicable governmental laws and regulations but also with customers' requirements and internal standards, as NTN deems necessary.
3. Beginning at the research, development and design stage, NTN will endeavor to reduce environmental impacts.
4. In its purchase of raw materials, parts and equipment, NTN will take into account protection of the environment, preservation of resources and more efficient use of energy. In its production and sales activities, NTN will endeavor to reduce energy consumption and waste generation while promoting recycling.
5. NTN will endeavor to implement production methods and distribution systems that have less environmental effect in terms of pollution, waste and use of resources and energy.
6. NTN will conduct environmental audits and will maintain and improve corporate environmental management systems.
7. NTN will cooperate in programs for environmental protection conducted by national and local government entities and will actively participate in regional environmental activities.
8. NTN will conduct environmental education. NTN will promote improved awareness of this Environmental Policy and environmental protection to all persons working on behalf of the NTN Group.

April 1, 2007  
Osamu Wakisaka  
Chief Environmental Management Officer  
Senior Managing Director  
NTN Corporation

## Environmental conservation structure

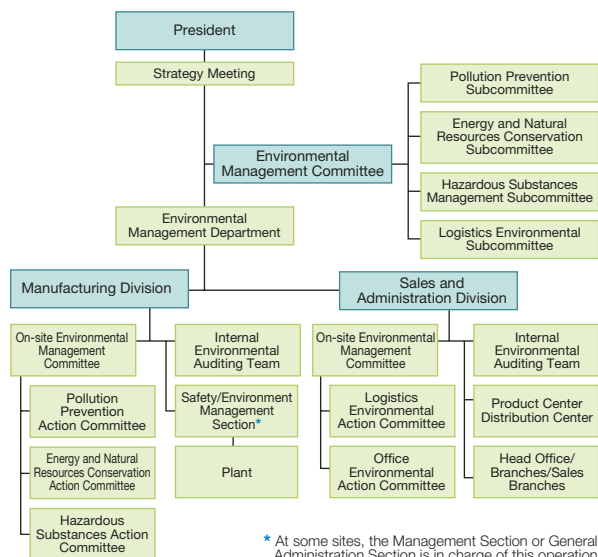
### Environmental Management Committee promotes activities as a central body

Creation and maintenance of the best environmental conservation structure is one of the important social responsibilities for the corporation.

Our group established the Environmental Conservation Committee in 1993 in each department at the Head Office and in the Engineering, Production, Sales and Logistics Departments. Company-wide environmental conservation activities started.

In 1998, the committee was renamed the Environmental Management Committee. The management scope was clarified and targets were set regarding pollution prevention, energy conservation, environmental conservation, materials management and environmental impact reduction in logistics, etc..

## Structure Chart



## Environmental management system

### Environmental management structure strengthened at each global operating site

We have been working to obtain ISO 14001 certification at every site since fiscal 1996. To efficiently carry out unified environmental management at all NTN Group companies, we have obtained multi-site certification for 14 sites: the Head Office, all the production sites and the R&D division. Eight related companies manufacturing finished products as well as manufacturers NTN Kinan Corp. and NTN Tado Corp. also obtained certifications. Thirteen overseas sites have obtained certifications so far.

In October 2006, a surveillance audit of the

multi-site certification was conducted and passed. Items that were pointed out by the audit had been checked at other sites and corrected if necessary.

We will be working to obtain ISO 14001 multi-site certification by 2010 for all the NTN Group companies including part processing companies. Based on this policy, NTN Kamiina Corp. and NTN Bizen Corp. began efforts last year to obtain simplified environment certifications such as “Eco-stage” (see p. 42) as a preliminary step to obtaining ISO 14001.

In fiscal 2007, we will seek ISO 14001 certification on the following schedule to ensure further improvement of the management structure at global business sites, as well as transferring NTN Kinan Corp. and NTN Fukuroi Corp. to the multi-site certification.

### Certified operating sites

Area	Operating site		Year/Month Obtained		Registration	
	Company Name	Plant Name	Year	Month	No.	Agency
Japan	Multi-site certification obtained collectively		1999	11	JSAE176	JSA
	(Included sites) Kuwana Works, Iwata Works, Okayama Works, Takarazuka Works, Nagano Works, NTN Kongo Corp., NTN Mikumo Co., Ltd., NTN Engineering Plastics Corp., NTN Powder Metal Corp., Hikari Seiki Ind. Co., Ltd., NTN Casting Corp., NTN Omaezaki Corp., NTN Mie Corp., The Head Office					
	NTN Tado Corp.		2005	3	JSAE1058	JSA
	NTN Kinan Corp.		2004	10	JSAE947	JSA
U.S.A.	American NTN Bearing Mfg. Corp.	Elgin Plant	2000	6	111994	LRQA
		Schiller Park Plant	2000	9	112115	LRQA
	NTN-Bower Corp.	Macomb Plant	2000	6	111998	LRQA
		Hamilton Plant	2000	6	111999	LRQA

Area	Operating site		Year/Month Obtained		Registration	
	Company Name	Plant Name	Year	Month	No.	Agency
U.S.A.	NTN-BCA Corp.		2000	7	A8699	UL
	NTN Driveshaft, Inc.		1999	12	A8478	UL
Canada	NTN Bearing Corp. of Canada, Ltd.		1999	7	287	KPMG
Germany	NTN Kugellagerfabrik (Deutschland) G.m.b.H.		1999	6	201167-2	LRQA
France	NTN Transmissions Europe		2003	1	19479	AFAQ
Thailand	NTN Manufacturing Thailand		2003	3	31634	TÜV
China	NTN-NIDEC (Zhejiang) Corp.		2005	1	02005E10013ROL	CNAB
	Guangzhou NTN-Yulon Drivetrain Co., Ltd.		2005	4	104043247	TÜV
	Shanghai NTN Corp.		2005	7	CH05/0489	SGS

### Operating sites expected to be certified

Area	Operating site	Year/Month Obtained	
		Year	Month
Japan	NTN Kinan Corp.	2007	10
	NTN Fukuroi Corp.	2007	10
U.S.A.	NTK Precision Axle Corp.	2008	3

Area	Operating site	Year/Month Obtained	
		Year	Month
Thailand	NTN-NIDEC (THAILAND) Co., Ltd.	2008	3
India	NTN MANUFACTURING INDIA PRIVATE LTD	2009	3
China	Changzhou NTN-Guangyang Corp.	2009	3

## Environmental auditing

### Conducting internal audits and cross-audits

In addition to ISO 14001 assessments by external organizations, we conduct “internal audits” by operating sites, as well as “cross-audits” done by a separate operating site.

A cross-audit is an opportunity to learn useful things and to improve the environmental management system as well as to enhance the environmental awareness of employees. In fiscal 2006, six operating sites were audited with a single finding concerning noise.

Equipment noise was reduced accordingly. An internal audit was conducted at every operating site and there were no serious findings.

## Response to environmental risks and emergencies

### Responding quickly to emergency situations

We have a structure to respond quickly to emergency situations such as earthquake, fire, explosion and flood. Such may have serious effects on the environment both inside and outside the company.

Each operating site complies with the “Emergency management rules” and the “Pollution prevention management rules” etc. Instructions for responding to emergency situations involving equipment that may relate directly or indirectly to the environment are prepared. Through these arrangements and daily training, negative effects on the environment can be minimized.



Training for emergency situation

## Environmental accounting

### Results in fiscal 2006

In fiscal 2006, a total of 4,575 million yen was spent on environmental equipment and other expenses. This generated a financial effect of 476 million yen, 100

million yen more than in fiscal 2005. This is mainly due to the expansion of recycling and energy conservation from installation of the grinding swarf briquetting machine.

[Accounting standard for environmental accounting:

- Applicable period: April 2006 to March 2007
- Organizational scope: All operating sites in Japan that obtained ISO 14001 (multi-site) certification]

### Environmental conservation cost

Unit: Million yen/year

Classification	Equipment Investment		Investment Cost		
	Amount	Details	Amount	Details	
1) Cost of in-factory facilities (Environmental conservation cost for limiting environmental hazards caused by business activities)	Pollution prevention costs	139	Environmental equipment (dust collector, particulate smoke removal device, wastewater treatment equipment)	126	Maintenance, inspection, and management of environmental equipment (dust collector, particulate smoke removal device, wastewater treatment equipment)
	Global environmental conservation expenses	135	Energy conservation equipment such as new inverters (Motor, illumination, air conditioning), equipment for natural gas	73	Equipment cost and peripherals for changing to inverters (motor, illumination, air conditioner) and natural gas
	Resource recycling expenses	61	Grinding swarf briquetting machine, recycling of waste, equipment to reduce waste	512	Grinding swarf briquetting machine, waste material recycling/reduction measures, general industrial waste treatment
2) Upper stream/down stream expenses	0		5	Green procurement (plant base cushioning material)	
3) Management activity expenses	0		271	Labor cost for EMS, disclosure of information (advertising, CSR report), greening and beautification of company grounds)	
4) R&D expenses	1,077	R&D equipment related to environmental conservation	2,030	R&D costs related to environmental conservation	
5) Social activity expenses	0		4	Greening and beautification outside the company	
6) Environmental remediation expenses	0		142	Soil remediation	
Grand total	1,412		3,163		
(Reference) Grand total for previous year	1,193		3,433		

### Impact on environmental conservation

Indicator	Result for fiscal 2006
CO <sub>2</sub> emission rate	20.1% reduction compared to fiscal 1997
Reduction of waste	Recycle rate: 98.7%
Reduction in paper purchases	30.9% reduction compared to fiscal 1998
Reduction in Styrofoam purchases	81.0% reduction compared to fiscal 1999

### Financial effect of environmental preservation activities

Unit: Million yen/year

Items	Amount	Details
Profit from sale of valuable materials by recycling	171	Profit from sale of saleable materials such as metallic sludge
Deduction of expenses by energy conservation	143	Cost reduction through energy conservation (air conditioning, illumination)
Reduction of waste treatment cost by resource conservation or recycling	162	Benefit from installing grinding swarf briquetting machine
Grand total	476	
(Reference) Grand total for previous year	376	

## Environmental communications

### Internal environmental education

In fiscal 2006, we educated employees at various levels and in various departments.

1. General explanatory education on environmental issues to newly hired employees/younger employees (done twice)
2. Education on environmentally hazardous substances to employees in the R&D and Engineering Departments (done twice)
3. Education on revised contents of internal regulations to persons in charge of environmental affairs at each operating site
4. Education on environmentally hazardous substances to all employees at domestic production sites as an activity of the Environment Month

We previously provided environmental education primarily for general employees but will extend such education to executives and managers.

### Environmental communication to third parties

In order to publicize NTN's environmental activities, we are working aggressively to inform the public through expos, advertisements in newspapers and magazines, cooperation and participation in various events and displays at the Head Office and each operating site.

In July 2006, taking an opportunity at the "5th environmental forum" organized by Kawachinagano-city, Osaka-prefecture, the home town of NTN Kongo Corp., our booth introduced our environmental activities and products. Also, from August, an exhibit about NTN's recycling activities has been exhibited in the basement of the Head Office. The exhibit featured the waste sand and waste slag discharged during production process at NTN Casting Corp. that is used as construction materials.



Environmental advertisement in the NIKKEI BUSINESS DAILY

# Promoting Activities to Achieve Targets in Three Areas

In fiscal 2006, we continued our efforts from the previous year by setting targets in three areas: “Conserving the global environment,” “Creating a recycling society” and “Maintaining and promoting the environmental management structure.”

## Results in fiscal 2006 and targets for fiscal 2007

### Targets in three areas and promotion activities

We established environmental targets in the areas of “Conserving the global environment,” “Creating a recycling society” and “Maintaining and promoting the environmental management structure” and are working toward these goals.

### Conserving the global environment

In fiscal 2006, seven items (six domestic, one overseas) from the previous fiscal year, were set as targets.

The target of a 20% reduction in CO<sub>2</sub> emissions

(per added value production) compared to fiscal 1997 at all domestic operating sites was achieved by implementing an energy conservation project at Iwata Works and other projects. Overseas, eight operating sites (out of 13) achieved the target of a 2% reduction compared to the previous fiscal year.

As a result of continuous efforts from the year 2000, chlorine-containing coolant that is used in grinding or pressing operations to manufacture bearings was replaced with an alternative at Iwata Works, completing the phase out for the NTN Group.

The fiscal 2006 target for eliminating halon extinguishers that contain ozone destroying substances was achieved and we are following the plan toward complete elimination in 2010.

### Environmental results in fiscal 2006

Objective	Target	Result	Evaluation*	Page	
Conservation of the global environment	Reduce CO <sub>2</sub> emissions	Domestic CO <sub>2</sub> emission rate*2: 20% compared to fiscal 1997	CO <sub>2</sub> emission rate: 20% reduction compared to fiscal 1997	☺	P38
		Development of Energy conservation diagnosis (promotion of energy conservation issues for major Works, extension to other sites)	Renovation work for energy conservation completed in Iwata. Same project is under way at other sites.	☺	P38 P39
		Overseas CO <sub>2</sub> reduction rate: 2% compared to previous year	8 of 13 sites achieved the target of 2% reduction compared to previous year.	☺	P38
	Prevent air, water and ground pollution	Domestic No. of halon extinguishers replaced with CO <sub>2</sub> types: 125 units	No. of halon extinguishers replaced with CO <sub>2</sub> types: 170 units (364 remaining)	☺	P39
		Elimination of coolants with chlorine	Coolants with chlorine: totally eliminated	☺	P39
		Response to Soil Contamination Countermeasures Law	Decontamination at Kuwana (5 of 6 sites completed)	☺	P39
	Participation in regional environmental preservation activities	Domestic Participation in regional green activities (all the companies)	Kuwana, Iwata, Nagano, Mikumo, Kinan et al.	☺	P40
Creating a recycling society	Reduce waste materials	Domestic Promote zero emissions: recycle rate*3 98%	Recycle rate in all sites incl. NTN Casting: 98.7%	☺	P41
		Overseas Promote zero emissions: recycle rate 94%	Recycle rate: 92.5%	☹	
	Protect resources	Domestic Paper purchase in weight: 31% reduction compared to 1998	Paper purchase in weight: 30.9% reduction compared to 1998	☺	
		Styroform: 84% reduction compared to 1999	Reduction of Styroform: 81.0% reduction compared to 1999	☹	
Maintaining and promoting the environmental management structure	Promote green procurement	Domestic Respond to EU directives	Complete response to EU directives. Replacing hazardous substances even in non-subject products.	☺	P43
		Domestic Establish and promote green procurement policy	Completed (Environmental management standards specifying revision/deletion of the green policy were also revised)	☺	P42
		Domestic Respond to customer audits	Responded and complied with customer audit	☺	P43
	Promote environmental management of the supply chain	Domestic Support suppliers' acquisition of ISO 14001 etc. (promote installation of Eco-stage entry version)	Of 281 primary suppliers, 227 obtained certifications. 13 suppliers obtained Eco-stage entry versions.	☺	P42
	Respond to new laws	Domestic Respond to revised Energy Conservation Law (extend to logistics companies)	Collecting logistics data for Yes/No judgment on specific shippers.	☺	

\*1 Symbols for evaluation: ☺ Achieved/promotes ☹ Pending

\*2 CO<sub>2</sub> emissions (ton/million yen)=CO<sub>2</sub> emissions (ton) / Sales of value-added production (million yen)

\*3 Recycle rate (%)=(1- Final amount disposed (ton) / Total amount discharged (ton) ) x 100

### Creating a recycling society

In fiscal 2006, we worked toward achieving four targets (three domestic, one overseas) that were based on efforts in fiscal 2005. As for zero emissions\*, the total recycling rate at all domestic operating sites was 98.7%. This was the first time that all domestic sites (incl. NTN Casting Corp.) achieved a 98% score (zero emissions). Overseas results, however, were 1.5% below target.

In fiscal 2007, we will further improve the recycling rate at NTN Casting Corp. and NTN Mikumo Corp. and aim at 99% recycling rate at every operating site.

\* At NTN, a recycling rate of 98% or more is defined as zero emissions.

### Maintaining and promoting the environmental management structure

In fiscal 2006, five targets (all domestic) were established based on efforts in the previous fiscal years. As a result of our efforts in supporting our business partners to obtain ISO 14001 or other certifications, 227 of NTN's 281 main business partners obtained certifications. We

supported small companies in particular to obtain certifications under our planned "Eco-stage entry version" (see p. 42), and 13 companies obtained certification.

In fiscal 2007, concrete numeric targets and deadlines were set based on the results and efforts of prior years. One new item is to enrich the ISO 14001 multi-site certification structure, and we will work for further improvement of overall environmental management.

In response to the EU's ELV and RoHS directives (see p. 42), we promoted green procurement. Going forward, we will also work to reduce hazardous substances according to our original management criteria in other applications in addition to electrical, electronic and automotive applications. Also, to respond to Japan's Amendment to the Law Regarding the Rationalization of Energy Use, we will promote energy conservation for shipping cargo.

### Environmental targets in fiscal 2007 and fiscal 2010

Objective		Targets in fiscal 2007		Targets in fiscal 2010	
Conservation of the global environment	Reduce CO <sub>2</sub> emissions	Domestic	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emission rate: 22% reduction compared to fiscal 1997</li> <li>Reduction of total CO<sub>2</sub> emission: 261,000 tons per year</li> </ul>	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emission rate: 25% reduction compared to fiscal 1997</li> <li>CO<sub>2</sub> total emission: 297,000 tons or less per year</li> </ul>	
			<ul style="list-style-type: none"> <li>Implementation of energy conservation diagnosis results (Large-scale energy conservation measures at major Works promoted, horizontal development to overseas plants)</li> <li>NTN Mie receives NEDO energy conservation diagnosis.</li> </ul>	—	
			Drastic reduction of air leaks	—	
	Overseas	CO <sub>2</sub> emission rate: 1% reduction compared to fiscal 2006	CO <sub>2</sub> emission rate: 4% reduction from fiscal 2006		
	Prevent air, water and ground pollution	Domestic	<ul style="list-style-type: none"> <li>No. of halon extinguishers replaced with carbon dioxide extinguishers: 125 units (239 units remaining at the end of fiscal year)</li> <li>Respond to Soil Contamination Countermeasures Law</li> </ul>	Phase out of all halon extinguishers	
Participation in regional environmental preservation activities	Domestic	Participation in regional green activities (through all companies)	—		
Creating a recycling society	Reduce waste materials	Domestic	Promote zero emissions: achieve recycle rate of 99% (improve recycle rate at NTN Mikumo and NTN Casting)	Continue zero emissions	
		Overseas	Promote zero emissions: recycle rate of 94% (improve recycle rate in North America and NMT)	Achieve zero emissions: recycle rate 98%	
	Protect resources	Domestic	Paper purchase in weight: 38.5% reduction compared to fiscal 1998	Paper purchase in weight: 50% reduction compared to fiscal 1998	
			Styroform purchase in price: 85% reduction compared to fiscal 1999	Complete phase out of Styroform purchase	
Maintaining and promoting the environmental management structure	ISO 14001 multi-site Certification	Domestic	<ul style="list-style-type: none"> <li>Integrate NTN Fukuroi and NTN Kinan to ISO 14001 multi-site</li> <li>Obtain preliminary environmental certifications at NTN Kamiina and NTN Bizen</li> </ul>	Acquisition of ISO 14001 certification at all sites (global)	
		Overseas	NNTC and NTK obtain ISO certifications		
	Promote green procurement	Domestic	Promote elimination of hazardous substances in products not subjected to EU (RoHS, ELV) directives	—	
			Ensure NTN green procurement standards		
			Respond to customer audits		
Promote environmental management of the supply chain	Domestic	Encourage and support suppliers to obtain ISO 14001 certifications etc.: certification acquisition rate 95%	Acquisition of certification at all suppliers		
Respond to new laws	Domestic	Respond to revised Energy Conservation Law (Establishment and implementation of energy reduction plan as cargo owner)	—		

# Grasping the Entire Picture of Environmental Impact

To understand environmental impacts, it is essential to grasp all the effects of business activities on the environment precisely. NTN is striving to grasp environmental impact over the entire life cycle of products.

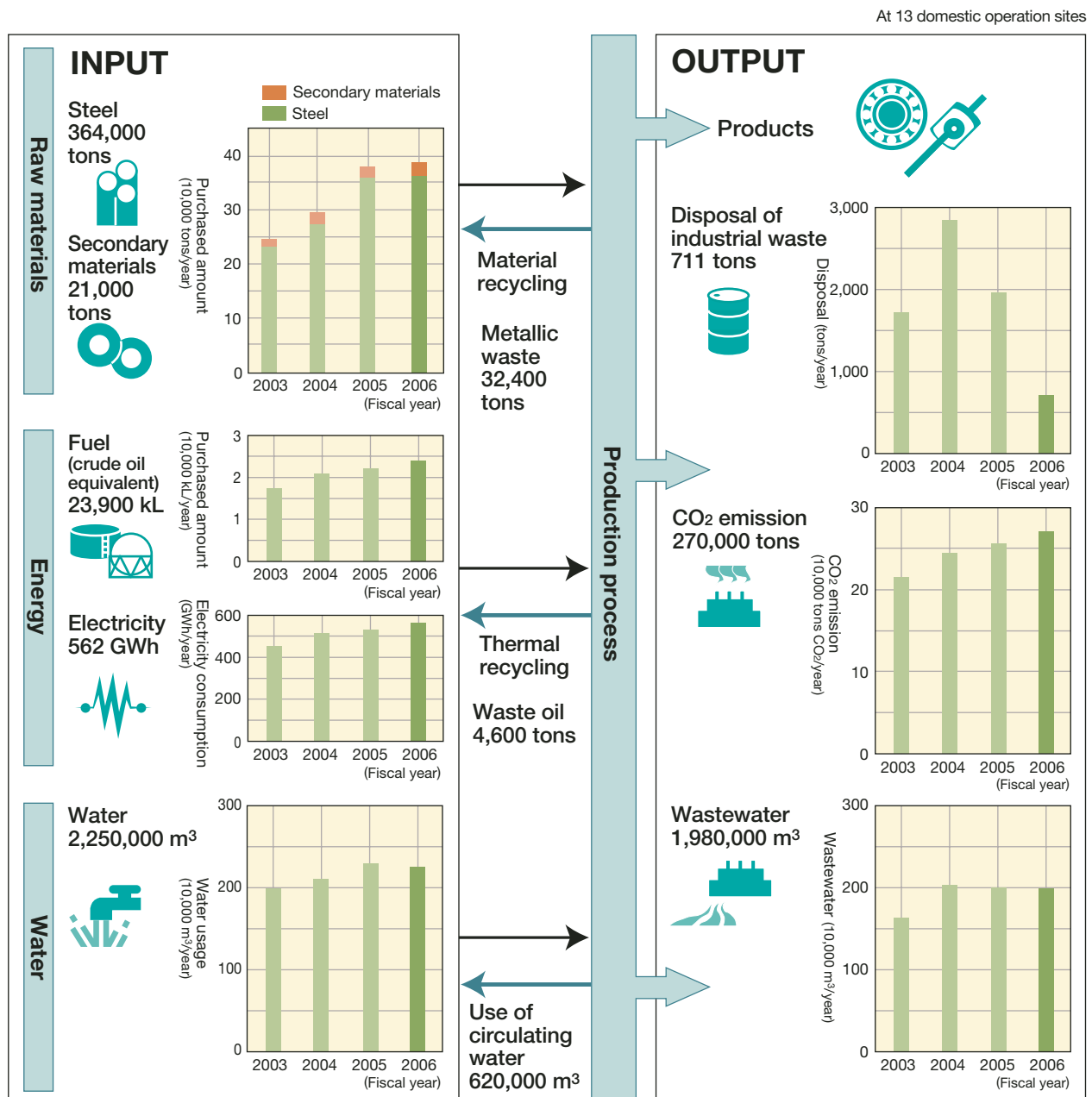
## Business activities and environmental impact

### Big reduction in amount of industrial waste despite increase in production

In fiscal 2006, the total amount of raw material usage (steel and secondary materials) in the whole NTN Group was 385,000 tons. Although production increased due to

the pace of NTN's business expansion, raw material usage remained almost the same as that of the previous fiscal year due to resource conservation activities.

Also, the amount of industrial waste disposed was greatly reduced.



# Important Steps to Address the Prevention of Global Warming

We are promoting the prevention of global warming, emphasizing energy conservation measures at production sites and the utilization of natural energies.

## Reducing greenhouse gases

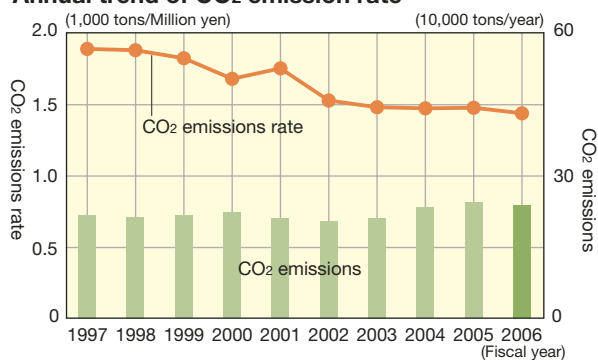
### Ensuring energy conservation measures at production sites

In Japan, most of the CO<sub>2</sub> that causes global warming is generated by production activities. Accordingly, energy conservation at production sites is the most effective measure in reducing CO<sub>2</sub> emissions.

NTN is promoting efficient production at every operating site (domestic and overseas) and is pushing energy conservation measures such as fuel changeovers for heat treatment furnaces, integrated operation of compressors and air conditioning equipment and use of inverter lighting equipment. Also, to enhance energy conservation awareness among employees, we are promoting even small energy conservation activities such as switching off unnecessary lighting during rest breaks. Furthermore, we are aggressively pushing the use of natural energies like wind and solar.

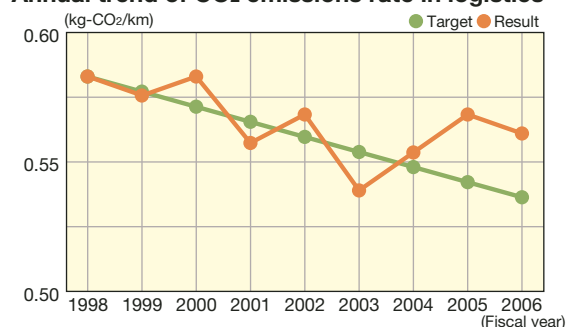
In domestic operating sites, we established a target of “25% reduction of CO<sub>2</sub> emissions in 2010 from

### Annual trend of CO<sub>2</sub> emission rate



\* Excludes entities organized after fiscal 2003.

### Annual trend of CO<sub>2</sub> emissions rate in logistics



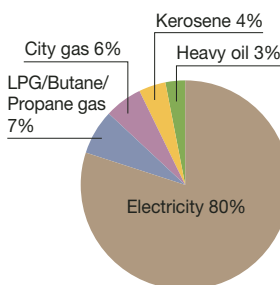
fiscal 1997,” nearly double the industry’s target of a 13% reduction\*. The Japan Bearing Industrial Association (JBIA), to which we belong, established that target as part of the voluntary activity plan of the Japan Economic Federation.

In fiscal 2006, a target of a 20% reduction compared to fiscal 1997 at our domestic operating sites was set and achieved (20.1% reduction). In fiscal 2007, in addition to the conventional target of CO<sub>2</sub> emissions rate (22% reduction), we will work for a new target: total CO<sub>2</sub> emissions less than 260,000 tons.

On the other hand, in fiscal 2006, overseas operating sites set a target of a 2% reduction compared to the previous fiscal year at each site, and eight of 13 sites achieved the target. In fiscal 2007, a target of 1% reduction compared to fiscal 2006 was set for all overseas operating sites in seven countries.

\* Japan Bearing Industrial Association defines 1997 as the baseline year since some companies of JBIA had difficulties in obtaining CO<sub>2</sub> emission amounts in 1990 (the baseline year of the Kyoto Protocol).

### NTN’s CO<sub>2</sub> emissions by energy source



### Annual energy consumption

Electricity	562 GWh
Oil	
Heavy oil	3,450 kL
Kerosene	3,870 kL
Gas	
LPG/Butane/Propane gas	6,660 tons
City gas	7,330,000 m <sup>3</sup>

## Efforts to conserve energy

### Aggressive use of energy conservation diagnostics

We are aggressively working toward a drastic reduction of CO<sub>2</sub> at our whole company. NTN will also receive an energy conservation diagnosis under a grant from NEDO (an independent administrative agency – “New energy/National organization of Advanced Industrial Science and Technology”).

NTN receives information and advice from energy experts for drastic energy conservation, and refurbishment of our plants’ equipment is performed as needed.

**Refurbishment for energy conservation at Iwata Works**

In autumn of 2006, equipment to utilize waste heat for power generation was introduced at Iwata Works (Iwata-city, Shizuoka-pref.), NTN's main plant that accounts for approx. 30% of our total energy usage. Warm wastewater is transferred to the adjacent CVJ plant through the pipe line, then used for heating in winter via a heat exchanger. By this, a reduction of approximately 1,600 tons of CO<sub>2</sub> was accomplished in one winter and fuel expense for kerosene boilers was reduced.



Wastewater pipeline and heat exchanger

**Aggressive use of wind and solar power generation**

We are working aggressively to use natural energy. We have installed wind and solar power generators when installing equipment.

As a result of these investments, NTN's rating output of natural energy totaled 210kW (Solar: 190kW; Wind 20kW), and the power generation is 243MWh/year. The reduction in CO<sub>2</sub> is 168 tons/year. This is almost the same reduction as would be obtained by 47ha (the area of 36 Tokyo Domes) of forest. NTN's total of 190kW of solar power generation is ranked 38th among approximately 1,000 domestic companies\*.

NTN plans to achieve CO<sub>2</sub> emissions of less than 297,000 tons in 2010 (emission rate 25% reduction compared to fiscal 1997). NTN will work to achieve this target using an appropriate balance of natural energy use and energy conservation measures at each plant.

\* This is according to published rankings on accumulated values by companies with a rating output of solar power, that were installed based on NEDO "Solar power generation field test project" (results from 1998 to 2005)



Solar light panels at NTN Fukuroi Corp.

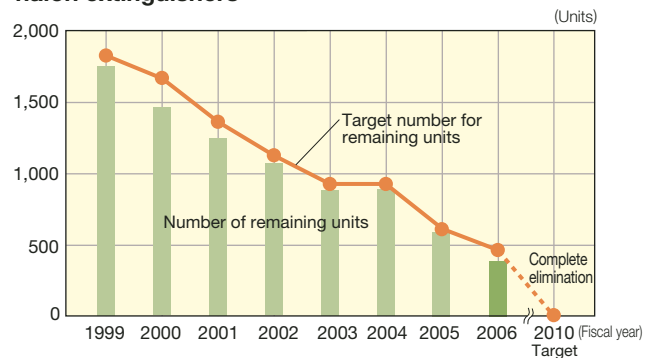
**Efforts to prevent air pollution**

**Eliminating halon extinguishers and coolants containing chlorine**

Halon extinguishers are widely used for fire suppression of electricity-related equipment, but decompose the ozone layer because they contain bromine chlorofluorocarbon. For this reason, the NTN group planned to entirely eliminate halon extinguishers in 1998 and is working to replace them with alternative extinguishers. In fiscal 2006, 170 units were replaced and remaining 364 units are scheduled to be entirely replaced by 2010.

Also, we set a voluntary target to completely eliminate coolants containing chlorine used in grinding and pressing processes in fiscal 2000. As a result of our efforts, the last equipment was replaced in 2006 with an alternative coolant.

**Annual trend of number of remaining units of halon extinguishers**



**Efforts to prevent ground pollution**

**Decontaminating ground pollution at Kuwana Works**

In November 2002, at Kuwana Works (Kuwana-city, Mie-prefecture), slight VOC (volatile organic compound) contamination was discovered in a well. This finding was not a violation of the Soil Contamination Countermeasures Law, but we are voluntarily working to decontaminate this site.

As a result of a detailed investigation of the whole area in Kuwana Works, ground pollution was found at three locations including the well mentioned. Decontamination work at two locations has been completed and the remaining one is almost within the environmental regulation specification. We will continuously monitor the VOC concentration and work for complete decontamination.



## Participating in environmental conservation activities

### Cleaning pavements

#### Head Office (Osaka-city, Osaka-prefecture)

In March 2006, the Environment Management Committee made a plan to “Clean the pavement on Yotsubashi-suji Street using corporate volunteers.” On the 1st day of June during “the month of environment,” the 1st cleaning activity was conducted for the pavement surrounding the Head Office.

On that day, participants from each department in the Head Office conducted the early morning cleaning, such as picking up cigarettes butts. Subsequently, the cleaning activity was conducted at the beginning of every month as an activity for all employees in the Head Office.



Cleaning activity in neighborhood of Head Office

### Employees promote “satoyama”-recovery greening activity in neighborhood participation

#### Iwata Works (Iwata-city, Shizuoka-prefecture)

All employees at Iwata Works are working on an “all-employee district greening project.”

In five years, 2,200 azalea trees were planted on “satoyama” (semi-natural areas located adjacent to populated areas that were traditionally cared for and utilized by local residents) in the neighborhood and benches made from the thinned woods were installed. Also, we are continuing to work with the local people for the beautification and cleaning of the mountains in the neighborhood (for example, by cutting the grass periodically). In 2007, it was named “Interaction Common” and a 1.4ha wide common intersecting with nature has come into being.

Also, the Shizuoka Greening Promotion Association presented a certificate of appreciation to Iwata Works as a large donor. Fiscal 2007 will be the 6th year for the employees’ participation in “Green Fund Raising” to make a donation for planting expenses and similar causes.



Grasscutting at a neighborhood mountain

### Teaming with local government for forest improvement project

#### Nagano Works (Kamiina-gun, Nagano-prefecture)

Nagano Works is supporting a program of “Forest sponsorship,” in which cities, towns, villages and companies work together for the recovery of a forest.

The Works supports the improvement of a forest (approx. 20ha), coordinating with Komagane-city. In May 2006, 60 employees participated in the grasscutting work.

We will continue to cooperate in the forest recovery and through the forestry experience become friendly to forests and open space and learn the value of the natural environment.



Grasscutting work

### Planting activity in the park

#### NTN Mikumo Corporation (Matsuzaka-city, Mie-prefecture)

In March 2006, as part of a local greening activity, employees of NTN Mikumo Corp. and their families planted about 60 trees at the Matsuzaka Chubudai Park. A letter of appreciation was presented to our company from Matsuzaka-city.

We will continue to donate trees every year.



Commemorative picture after planting

### Initial planting in the forest

#### NTN Kinan Corporation (Nishimuro-gun, Wakayama-prefecture)

NTN Kinan Corp. stated its plan to plant 2,000 broadleaf trees in a 1 ha forest named “Nagomi-no-mori (Harmonious forest)” over the next 10 years.

This is part of the “Corporate forest” project promoted by the local government and we are working together with the “green thumb team” organized by local children and local people.

In February 2007, a planting was organized and over 100 employees, their children and local persons planted trees.



Planting young trees

# Creating a Recycling Society

For the effective use of limited resources, we are emphasizing “Improving the recycling rate” and “Reducing usage of container packaging,” and are producing steady results.

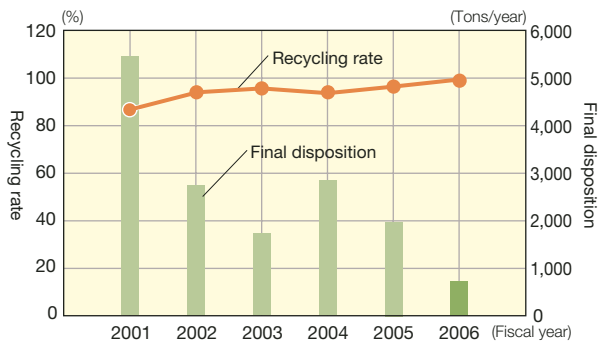
## Activities in fiscal 2006

### Toward Zero emissions

The NTN group is aiming at zero emissions for the whole group. One large obstacle was that there was no recycling method for waste sand and slag produced during the casting process at NTN Casting Corp.

In fiscal 2006, NTN Casting Corp. together with the local Tatenui Construction Cooperative Union developed an effective method to use waste sand and slag as paving material for roads, and increased the recycling rate to 85.0% (the previous fiscal year was 67.5%). As a result of that success, the overall recycling rate for the NTN group became 98.7% and the goal of zero emissions was achieved. For fiscal 2007, we increased the target to 99% and are working to increase recycling.

### Annual trend of recycling rate and final disposition at the whole NTN Group



\* Including data of NTN Casting from fiscal 2004 (because of addition to ISO 14000 multi-site certification)

### Promoting NTN use of new briquetting equipment

We developed a grinding swarf briquetting machine to re-use metallic waste (grinding sludge) mixed with grinding coolant that is generated in the bearing manufacturing process. We gained favorable reviews with the machine from both inside and outside the company. In the last fiscal year, a new high-performance machine with better capabilities was developed and we began sales inside and outside the company.



New grinding swarf briquetting machine (NTN Kamiina Corp.)

Our operating sites are using the new machines to further improve the recycling rate. Both Kuwana and Okayama Works already installed two machines, and NTN Mie Corp. and NTN Kamiina Corp. one machine each.

### Separation of waste oil and wastewater recycles resources

NTN DRIVESHAFT, INC. (NDI) was generating 814,000 U.S. gallons\* per year (2005 results) of waste oil and wastewater in its manufacturing processes in the past, and relying on certified industrial waste disposers. The introduction of a new wastewater treatment system allowed NDI to separate the oil and water.

As a result, a 49% (399,000 U.S. gallons) reduction of waste oil and wastewater was achieved and treatment costs also decreased. The separated water and oil are re-used within the company and it helps conserve resources.

\* U.S. gallon=3.8 liters

## Reducing packaging material usage

### Improvement of container collection rate

In fiscal 2006, with wooden pallets, steel box pallets or plastic containers for transportation and storage of products, we worked to improve the collection rates and to curb new purchases by managing the quantities shipped to customers. As for shipping external packing boxes for overseas plants, cardboard packaging was changed to a returnable steel box.

By this change, the collection rate of pallets and plastic boxes was improved from 92% in the previous year to 95%. Aiming at a 100% collection rate, we will strengthen the management structure at distribution sites and manufacturing plants, as well as ask logistics companies for their cooperation.



Cardboard packaging



Steel returnable box

# Creating an Environmental Management Structure for the Entire Supply Chain

As part of a manufacturer's social responsibility, we are creating an environmental management structure and strengthening the management of environmentally hazardous substances for not only NTN, but also for the entire supply chain.

## Supporting supplier certifications

### Expanding environmental management systems to small companies

To expand the circle of environmental management systems to suppliers, we are requesting our main suppliers to obtain environmental management system (EMS) certifications of ISO 14001 and "Eco-stage"\*1 for medium sized companies, and providing them with support to acquire the certification.

As part of our efforts, we planned and suggested "Eco-stage entry version"\*2 that is an abridged version of Eco-stage for small companies, and since 2005, we have supported the certification process. In the entry version, minimum requirements for environmental management are defined as a primary purpose and the cost to obtain the certification is less than the conventional certification. In fiscal 2006, former NTN employees supervised suppliers with less than 15 employees to establish appropriate targets for improving defect rates and other management aspects. As a result, 13 companies obtained the Eco-stage entry certification through March 2007.

And 227 of 281 suppliers (81%) have obtained the environmental management certifications of ISO 14001. We requested the remaining suppliers to work aggressively and are encouraging all the suppliers to obtain certification by the end of fiscal 2008. We established a system to present environmental awards to suppliers who work aggressively to obtain the certification and achieve remarkable results.



Assisting company to obtain Eco-stage entry certification

\*1 Environmental management system of Eco-stage association: Mid-sized, limited liability company

\*2 We presented to the Eco-stage association the concept of a cheaper, secondary certification for companies with less than 15 employees. It was adopted as a trial level of EMS certification.

## "Green Procurement"

### Management of environmentally hazardous substances

We are making efforts to produce products that do not negatively impact the environment. All procured parts and materials for production are subjected to our Green Procurement program. Suppliers' cooperation is essential for Green Procurement and we are striving to involve the entire supply chain management, from initial sources up to material makers. Also, we are promoting our purchase system, paying attention to the environment, and supervising initial sources since many of our initial sources are small and medium sized companies.

To respond to the regulations on environmentally hazardous substances of the E.U. ELV directive (End of Life Vehicles Directive) \*1, RoHS directives (Electrical and Electronic Directive) \*2 and customers' green procurement criteria, we conducted explanatory meetings for suppliers and requested a reduction of environmental impacts at the stage of material procurement and the stage of production. Also, we requested suppliers to conduct internal environmental audits and when necessary, we visited them to verify the results of the audit and to supervise.

In November 2006, we established an internal engineering standard of "Limited use of environmentally hazardous substances for raw materials and parts." In the standard, NTN's criteria on hazardous substances and description methods on drawings are specified.

\*1 ELV (End of Life Vehicles) directives: Substances subject to regulation are mercury, cadmium and hexavalent chromium. Enacted in July 2003. (Only hexavalent chromium for rustproof surface finishing was prohibited from July 2007)

\*2 RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) directive: Substances subjected to regulation are polybrominated biphenyls and polybrominated diphenyl ether in addition to the substances of the ELV directive. Enacted in July 2006.

## Response to hazardous substances regulation

### Response completed prior to the effective date

NTN has completed its response to the ELV directive for vehicles and the RoHS directive for electrical and electronic equipment on environmentally hazardous substances prior to the effective date of those directives.

However there are still some products not yet in accordance with some customer-specific requirements. We will approach these customers and promote the switch to other products under the ideals of CSR and eliminating corporate risk.

## Revision of environmentally hazardous substances management standards

### Review and enhancement of the entire hazardous substances management structure

We established “Environmentally hazardous substances management standards” in 1998 to properly manage such substances. Due to increasing demands from customers regarding hazardous substances, our standards were reviewed entirely.

The following are the main points of the revision.

1. Addition of new concepts required for environmentally hazardous substances management.
  - The same treatment shall be used regarding substances applied to sub-materials (rinsing oil, preservatives etc.) in production that are not specified on drawings.
2. Clear descriptions of customer requirements, including:
  - Establish a new provision on “Education and Training on Hazardous Substances Management”
  - Establish a new provision of “Management of Suppliers”

In the meantime, the Environmentally Hazardous Substances Management Manual (a part of the above) that defines actual operations, was also revised.

## Environmental audit

### Customers' audits

NTN is actively responding to customers' audits concerning hazardous substances. In fiscal 2006, we were audited by three customers. We received high appraisals for items such as NTN's “System for review at the development stage” and “Hazardous substances avoidance based on analysis” among other items.

NTN Powder Metal Corporation, for example, was audited in March 2007 by Panasonic Communications Co., Ltd. and received a 96.5% conformity rate (an “A” ranking).

Utilizing such results, we will work for further improvement in our management of environmentally hazardous substances.



Customer audit at NTN Powder Metal Corporation

# Research and Development Directly Benefiting Environmental Conservation

Bearings and CVJs are “Eco products” that decrease energy loss due to friction. We are working on technological developments to contribute to further energy conservation by improving the performance of our products used in various equipment worldwide.

## Products responding to the environment

### Research and Development focusing on reducing environmental impact

We are working for R&D with main products of bearings, CVJs and others, focusing on long life, light weight, low friction and high efficiency that directly contribute to conserving the environment.

We are also aggressively working on the recycling of industrial waste, such as grinding swarf briquetting equipment and steel dust briquetting equipment.

Most of our R&D expense in fiscal 2006 was spent on long life, light weight, low torque and high efficiency themes that contribute directly to energy conservation.

### [ Main R&D results ]

**Long life:** Long life tapered roller bearing—steel fatigue life is extended by a special heat treatment refining the crystalline structure.

**Weight reduction of main products:** Ultra-lightweight hub bearing for small cars.

**Low friction:** Ultra-low torque tapered roller bearing—rotational torque was remarkably reduced by low friction that resulted from improvements in the bearing cage pocket (hole) enhancing oil lubrication.

**High efficiency:** EBJ and EUJ series CVJ—torque transmission efficiency was improved by means of increasing the number of balls from six pieces to eight.

## Railroad Journal Bearing Unit with longer maintenance intervals

Bearing demand in railroad applications is increasing substantially in China where the railroad network is expanding in response to economic growth; and in the EC market where higher-speed railroad networks are being promoted along with European integration. These bearings are key control components that directly affect safe running and require high reliability. Also, for cost reduction, extending maintenance intervals has been an important issue.

NTN has developed a new “high speed bearing unit” that allows a doubling of the maintenance period to 1.2 million km run (from the conventional 450,000–600,000 km) by using new technologies, including a plastic specialized cage, a spacer with rubber lip and a new configuration seal. Recently, this bearing was adopted in the Chinese market.

Railroads have been viewed in a favorable light

as mass transportation vehicles that consume low energy and are environmentally friendly. We contribute bearings as a key component to railroads that have less environmental impact by balancing safety and economy.



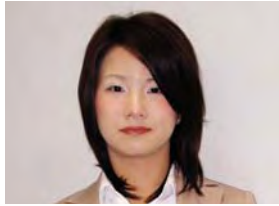
New high-speed railroad journal bearing unit

## Site Reports (Comments from environmental managers)

Environmental managers talk about each department's efforts on the environment. At this time, we introduce the Environmental Management Department (Head Office) that set the new environmental targets along with the new medium-term management plan; NTN Fukuroi Corporation, a new addition to the NTN Group; NTN MANUFACTURING (THAILAND) Co., LTD (NMT), which has received good appraisals on their environmental efforts; and NTN DRIVESHAFT, INC. (NDI), which achieved remarkable results from recycling efforts.

### Head Office (Osaka-city, Osaka-prefecture)

In 2010, you will see an environmentally-advanced NTN.



**Toyoko Saka**  
Environmental  
Management Department

#### **NTN disclosed its new medium term management plan. What kind of plans were included for the environment?**

The emphasized issues for the next three years are (a) Reduction of CO<sub>2</sub>, (b) Achievement and continuation of a recycling rate of 99% or more, (c) Acquisition of ISO certifications at all NTN operating sites in Japan and overseas, (d) Improvement of hazardous substances management (including the supply chain), (e) Improvement of internal

environmental education, and (f) Development of local greening activities. These efforts are targeted towards the Kyoto Protocol, improvement of the environmental management structure, strengthening the management of hazardous substances and improvement of NTN's environmental reputation.

#### **What kinds of efforts are being made to promote environmental activities at overseas sites?**

We will increase opportunities for exchanging information as well as aggressively introduce energy conservation technologies / recycling technologies from Japan. For doing this, we think it is important to improve the level of staff in charge through periodic interactions with overseas plants.

#### **What actions are taken towards suppliers?**

We will ask all the suppliers to acquire environmental certification. We will support

suppliers to obtain certification, and propose that all suppliers obtain certification by the end of fiscal 2008.

#### **What will the status of the entire NTN Group look like in 2010?**

We have clear concrete numeric targets for 2010. For example, in plants, 25% reduction of CO<sub>2</sub> emissions compared to fiscal 1997 and total emissions of 297,000 tons or less per year, in logistics, 12% reduction of CO<sub>2</sub> emissions per kilometer compared to fiscal 1998, and at all overseas operating sites, 4.5% reduction of CO<sub>2</sub> emissions compared to fiscal 2006. Zero emissions will be achieved not only in Japan but also overseas, and the Green Procurement structure will be further improved.

Through these efforts, NTN's brand image will be established as "an environmentally advanced company." Also, we would like to establish our position as a company that emphasizes social contributions, through greening activities.

### NTN Fukuroi Corporation (Fukuroi-city, Shizuoka-prefecture)

Aiming to be the world's No.1 CVJ plant, while improving the environmental awareness of every employee.



**Tomomi Sugaya**  
Administration Department

#### **What is the role of NTN Fukuroi Corporation in the NTN Group?**

Our operation started in 2006 as one of members of the NTN Group, which is aiming to be a top global maker of constant velocity joints (CVJs). We are the 3rd CVJ plant in Japan and supply parts for CVJs to Iwata, Okayama and overseas CVJ plants. We aim to become the world's No.1 CVJ plant in all aspects – productivity, quality and delivery.

Also, we are an environmentally

friendly plant, adopting a state-of-the-art technology of "hardened steel turning" that eliminates the grinding process and uses no oil. It also utilizes the natural energy of wind power and solar power.

#### **What affects the environment in production processes?**

There is waste cooling water that is generated by the heat treatment process and noise that is caused by the production equipment (although at a very low level). For this reason, we periodically check environmental measurements and ensure the proper monitoring and management of relevant equipment.

#### **In fiscal 2007, NTN Fukuroi Corp. will be integrated into the ISO multi-site certification. What kinds of issues do you have on this matter?**

Improving the environmental awareness of employees is the 1st issue, because our

plant is quite new and there are many inexperienced employees. Therefore our environmental management committee and the environmental staff will conduct environmental training. We are trying to improve environmental awareness among all employees by displaying NTN's environmental policy and environment-related posters, and by saving electricity and segregated waste collection.

#### **What are the new targets and ambitions for the future?**

We would like to expand our activities not only in our work site but also by individuals or in homes toward preventing global warming. Also we are thinking of environmental conservation, such as through greening activities.

## NMT (Thailand)

Certified as an excellent plant by the Thai Industrial Ministry and improved environmental awareness of employees.



**Anan Kunthataworn**  
Administrative General Manager

### What has been done to improve the environmental awareness of employees?

In fiscal 2006, a company training course – an essential item in the 2004 edition of ISO 14001 – was developed. All employees attended both an orientation and company training to improve their awareness on waste management, wastewater management, energy conservation and air pollution management. After the training, a comprehensive test was conducted and

persons who failed the test were re-trained to improve their environmental awareness.

### It is said that NMT was highly evaluated by the Thai environment authority. What efforts were focused on the environment in 2006?

Programs were implemented to improve employee comprehension concerning two environmental targets: “5% reduction in electricity consumption” and “3% reduction in waste disposal expense.” Also, projects based on 5S activities and fringe-benefit concepts were implemented. As a result of these efforts, in May 2006, NMT was certified as one of “999 excellent companies” by the Thai Industrial Ministry and the environmental awareness of employees was enhanced. All employees became proud of their plant and working environment. It is believed that these results greatly influenced the continuation of 5S activities and the improvement of working conditions and additional fringe-benefits.

### It is said that the Thai investment committee (BOI)\* will encourage corporate investment in pollution prevention measures in fiscal 2007. What activities does NMT plan for that?

MNT thinks the “grinding swarf briquetter” developed by NTN Japan will be an investment in pollution prevention. We will improve our recycling rate with this equipment and start selling the briquettes to steelmakers and recycling companies. We believe this advanced equipment will further the zero emissions goal at NMT.

\* Thai investment committee (BOI): Thai governmental organization for promoting investment established in 1977. Broad incentives and protections are provided to investment projects that meet with national economic developments, such as: “Enhancing technology in Thai industry” and “Reducing environmental problems.”

## NDI (U.S.A.)

Continuing energy conservation and recycling activities. Improving the results.



**Bill Miller**  
Environment, Health and Safety Supervisor

### NDI implemented an environmental management system in December 1999. What kinds of environmental improvements have been achieved?

NDI reduced power consumption, waste materials and wastewater. In fact, we have twice received the Indiana state “Governor’s Award for Environmental Excellence” for our improved recycling rate.

### What was your environmental focus in fiscal 2006?

Our efforts were focused on four important issues:

1) Reduction of power consumption

Target: 2% reduction of power consumption per joint compared to the previous fiscal year.

Result: Achieved 4.3% reduction by energy conservation measures such as changeover to high efficiency electric motors and energy saving lights. CO<sub>2</sub> emissions reduced 1,800 tons.

2) Recycling of grinding swarf

Target: Continue 100% recycling of grinding swarf.

Result: 160 tons (100%) of grinding swarf were recycled by effective maintenance of filtering equipment for grinding coolant (We also received \$9,300 from selling the material).

3) Reduction of wastewater

Target: 300,000 gallon (1,140 kL) reduction in wastewater that is treated by external companies.

Result: 400,000 gallon reduction in wastewater by expanding oil / water separation, using a wastewater treatment plant (\$76,000 reduction in wastewater treatment cost).

4) Promoting recycling activities

Target: 100% recycling of office paper, aluminum cans etc.

Result: Collection containers were installed at appropriate locations, and collection was endorsed by employees. Achieved 98.1% recycling rate.

### Where will you focus your future efforts?

We are aiming at continuous reductions of energy consumption and CO<sub>2</sub> emissions, expanding recycling activities and a continuous reduction of air pollution.

Also, we are making efforts to educate every employee to be aware of energy conservation and air pollution prevention.

# Environmental Performance Data

Collection period: Grand total for April 2006 to March 2007

Number of sites: 13 domestic operating sites

## Energy

	Oil (kL)	Gas (Ton)	Electricity (1,000 kWh)	CO <sub>2</sub> emissions (Ton)	Natural energy generation (kWh)
Kuwana Works	2,332	1,078	98,800	47,200	61,100
Iwata Works	938	1,492	186,000	77,900	11,500
Okayama Works	1,958	4,035	122,800	64,000	–
Takarazuka Works	334	1,606	21,600	14,400	–
Nagano Works	40	265	21,800	9,200	–
NTN Kongo Corp.	31	454	32,200	13,800	–
NTN Engineering Plastic Corp.	75	6	5,100	2,200	–
NTN Powder Metal Corp.	1	206	6,400	3,100	–
NTN Mikumo Co., Ltd.	56	3	16,100	6,300	–
NTN Casting Corp.	1,744	145	15,700	11,100	–
Hikari Seiki Industry Co., Ltd.	98	0	3,300	1,500	–
NTN Omaezaki Corp.	15	0	3,700	1,500	–
NTN Mie Corp.	13	2,133	28,700	18,000	58,400

## Waste materials

	Total waste emissions (Ton)	Final disposition (Ton)	Recycling rate (%)
Kuwana Works	7,320	49	99.3
Iwata Works	22,130	85	99.6
Okayama Works	11,600	42	99.6
Takarazuka Works	1,870	6	99.7
Nagano Works	810	0	100
NTN Kongo Corp.	1,890	6	99.7
NTN Engineering Plastic Corp.	230	0	100
NTN Powder Metal Corp.	90	0	100
NTN Mikumo Co., Ltd.	1,170	13	98.9
NTN Casting Corp.	3,350	503	85.0
Hikari Seiki Industry Co., Ltd.	1,770	0	100
NTN Omaezaki Corp.	1,000	2	99.8
NTN Mie Corp.	720	5	99.4

## Air and water quality

	Air emissions		Discharged water quality	
	SO <sub>x</sub> (K value)	NO <sub>x</sub> (ppm)	BOD (mg/l)	COD (mg/l)
Kuwana Works	2	55	8	10
Iwata Works	1	408	10	18
Okayama Works	<0.02	95	6	12
Takarazuka Works	<0.01	14	<1	1
Nagano Works	<1	28	2	13
NTN Kongo Corp.	<0.01	142	5	12
NTN Engineering Plastic Corp.	0.15	43	2	–
NTN Powder Metal Corp.	–	–	23	32
NTN Mikumo Co., Ltd.	–	–	7	13
NTN Casting Corp.	<6	–	–	5
Hikari Seiki Industry Co., Ltd.	–	–	180	–
NTN Omaezaki Corp.	–	–	88	29
NTN Mie Corp.	0.16	60	4	5

- \* Air emissions is a Max value when there is more than one machine at a site.
- \* This means that there is no subject machine at a site.



# Third Party Opinions

## Third party opinion on the CSR report of NTN Corporation

**Junko Edahiro**

This report explains simply how NTN's products are contributing to society. NTN is a corporation that develops and manufactures and is not often in the view of the general public. Their environmental and social efforts are reported faithfully. Thus this report has a very favorable impression.

This is an excellent report since the special topics of this report convey the clear message that NTN is contributing, to the creation of a sustainable society. As its main business, NTN is utilizing its strengths to develop and supply long-life and energy-conserving bearings to various industries that are working on environmental measures (such as preventing global warming). The general public may discover that products made by NTN are used in windmills that people happen to see and in cars that people ride in without much thought. The report will be useful to develop the capability required in this age to "extend one's thoughts and ideas to unseen things."

It is excellent that NTN is supporting small-sized companies to obtain environmental certificates because many of their business partners are small and medium sized companies. The reports from environmental managers, who introduce situations at operating sites, are also favorable. As seen in the special topics section, eco-products for many industries are greatly reducing the environmental impact on society. If NTN reported on the percentage of eco-product sales relative to the total sales, how the company thinks of its present status, and what NTN will do going forward in addition to the R&D expense, the CSR report would be more effective.

I will make additional comments below for further improvement.

With global warming being an urgent global issue, promoting various activities and reducing CO<sub>2</sub> emission are appreciated. However, global warming is impelled not just by the emission rate, but by total emissions. Think one step deeper about how an increased impact from your company affects the physical condition of the earth, and set a target for total emissions.

Also, for an indirect effect on your company, make a firm road map to where NTN will be in 10, 30 and 50 years as an environmentally advanced company.

In social aspects, reports of your ideas and the present status of human rights issues in less-developed countries are required. Also, although the rates of women employees and women managers are reported to be low, make clear NTN's concrete policy, numeric targets and action programs to actually support the idea

that "we would like to increase opportunities for women's performance."

As a CSR report, not many descriptions of financial aspects are found. From the viewpoint of contribution to the local economy and the creation and distribution of assets (particularly distribution to the underprivileged), a CSR report should contain financial information different from a standard financial report.

This kind of CSR report must be arranged in a "PDCA" format: Check Status → Plan → Do → Check Status and Reporting. In this report, there is a description of "Reflecting the interests of stakeholders in the next activities." Explanation of the actual system for doing this is required.

Various good activities have been developed and NTN clearly perceives that a relationship with stakeholders is important. It is expected that using this report as a stepping stone, your company will progress toward "constructive, two-way communication" by having bidirectional communication in its real sense above and beyond the stages of "one-way communication," "tour opportunities" and "listening to opinions"



**Junko Edahiro**

Environment journalist, Interpreter, Chairperson of Change Agent Ltd., Representative of Ease Ltd., Cooperative representative of the NGO, Japan for Sustainability (JFS)

Finished Master's Course of Educational Psychology at Graduate Course, Tokyo University. She studies systems of action modification and its extension, extending the wave of "Communication and continuity" through lectures, writing and interpretation. For individuals, she teaches courses on "Thinking of personal growth in a systematic way," "Draw your own vision and apply your own management system" and correspondence courses of "Next stage" to enhance "Communication capabilities." She holds training courses in systematic thinking for educational bodies. She also provides facilitation consulting that provides skills for innovative changes in systematic thinking and to create a "Learning organization" for companies and organizations.

For New Technology Network



## NTN Corporation

● For further information about this CSR report, contact:

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