# JTEKT CSR Report



## — Value & Technology

Pursuing dreams through skill to bring you valuable technology



# Communicate with Society Communicate with the Future

"Seek to contribute to the happiness of people and the abundance of society through product manufacturing that wins the trust of society."

— This is the corporate philosophy of JTEKT.

In practicing our corporate philosophy,

we think the most essential thing is to keep communicating with society.

We continuously listen humbly to all stakeholders' opinions

and focus on being a trusted and respected company.

The JTEKT CSR Report 2008 is a tool for describing the future with all of you, as well as for disclosing our activities and challenges.



#### CSR

Abbreviation for Corporate Social Responsibility.

## About the Front Cover:

JTEKT has chosen "communicate" as the theme of this CSR Report. The front cover depicts a scene in which one person and another person, or a person and technology are connected, for hope for the future.

## JTEKT

## **JTEKT CSR Report**

2008

## **General Management**

Introduce the basic concept of JTEKT regarding CSR.

## [Interview with the President]

Corporate Governance

**Unique Technologies** 

**Summary of Activities 2007** 

**Together with Customers** 

Together with Suppliers

Together with Employees

**Summary of Activities 2007** 

**Together with Local Communities** 

**Together with Shareholders and Investors** 

for a better future

LFT-Ⅲ

IFS / ITCC

Creating new value for building an enriched society

**CSR of JTEKT** 9 JTEKT VISION 2015 10 Corporate Activities Standard 11 **Employee Conduct Guidelines** 14

Ocorporate Profile / Main Products / Domestic Network / Global Network

## P 2-14

Introduce challenges to contribute to both environmental conservation and society.

**Special Feature** 

#### P 15-19

## **Social Report**

Introduce activities to further strengthen our trusting relationship with each stakeholder.

## P 20-35

## **Environmental Report**

Introduce activities and systems for environmental protection.

## **Environmental Management**

## **Efforts in the Development and Design Stages**

## **Efforts in the Production and Logistics Stages**

Р 36-57	Environment Data by Location	
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HOUKO CO., LTD. / TOYODA VAN MOPPES LTD.

Response to the third-party opinion

JALY / KCUM

KMP / YKS

## **Efforts of** group companies

CSR activities were introduced in four of our ten domestic group companies and at 70 overseas group companies.

## KOYO MACHINE INDUSTRIES CO., LTD. / TOYOOKI KOGYO CO., LTD KOYO SEALING TECHNO CO., LTD. / CNK CO., LTD. 60 KOYO THERMO SYSTEMS CO., LTD. / KOYO ELECTRONICS INDUSTRIES CO., LTD. 61 DAIBEA CO., LTD. / UTSUNOMIYA KIKI CO., LTD. 62

The third-party opinion on JTEKT CSR Report 2008

## P 58-65

#### **Reference Guidelines**

JTEKT CORPORATION

- GRI (Global Reporting Initiative ),
- "Sustainability Reporting Guideline 2006"

**Period and Companies Subject to** 

FY 2007 (from April 2007 to March 2008)

\*Data other than for FY2007 are included for

■ Scope and organizations covered in this report Activities independently carried out by

\*Activities of affiliated companies are included for

the JTEKT CSR Report 2008

Period

some items

some items.

- O Environment Ministry,
- "Environmental Reporting Guidelines 2007"

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# Creating new value for building an enriched society

JTEKT CORPORATION President

## Motohiko Yokoyama



## **Corporate Philosophy**

The corporate philosophy is composed of the "Corporate Purpose" and "Management Stance".

## **Corporate Purpose**

Seek to contribute to the happiness of people and the abundance of society through manufacturing that wins the trust of society.

## **Management Stance**

- 1. Create new value and provide society with joy and inspiration on a broad scale.
- 2. Aim for growth in harmony with society through innovative operations on a global basis.
- 3. Create a bright, energetic corporate atmosphere based on respect for people.
- 4. Strive toward the realization of safer, more abundant living circumstances.

## **Company History**

May 2005

KOYO SEIKO CO., LTD. and TOYODA MACHINE WORKS LTD. concluded a merger agreement.

January 2006

JTEKT CORPORATION was established.

## Making full use of synergy effect to create new value.

—First of all, please let me know the corporate profile of JTEKT.

JTEKT was established in 2006 by a merger of KOYO SEIKO CO., LTD., which started production of bearings in 1921, and TOYODA MACHINE WORKS, LTD., which was established in 1941 for the manufacture of machine tools. Mainly, we operate a steering systems business, a bearing and driveline business, and a machine tools and mechatronics business. When considering the long history of the two companies before the merger, JTEKT has a long history. But at the same time, JTEKT is a young company. It has been only two years since it was formed. All employees are now forming JTEKT from a brand new standpoint to make a new history for our company.

## **Electric power steering**

Electric power steering system



Intelligent front steering (IFS)

Hydraulic power steering

Hydraulic power steering system



Steel mill bearings

**Automotive bearings** 



Machine tool bearings

Windmill power generator

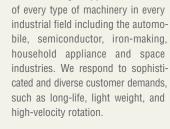
bearings



A vehicle's turning function is performed by the steering system. As a system supplier that provides every type of steering system, JTEKT pursues further improvement of the environment, safety and comfort.



**BEARINGS** 



JTEKT bearings support the rotation

Driveline components perform a cruising function in vehicles by connecting the engine to the wheels. JTEKT driveline components offer comfortable driving with tranquility and low-vibration performance. We are working on further technical innovation, including low fuel consumption and light weight.

## **DRIVELINE**

## **MACHINE TOOLS & MECHATRONICS**

JTEKT is a unique company as a parts manufacturer because we also have machine tool technology. Created through the use of a market-in development system, JTEKT machine tools assist our customers to ensure production output and quality.

## Intelligent torque controlled couplings (ITCC)



**Driveshafts** 

**TORSEN** differential



**CVT Oil pump** 





Cylindrical grinder



Special-purpose machines



Machining center



Programmable controller (PLC)



\*IFS, ITCC and TORSEN are trademarks of JTEKT CORPORATION.

# —The big point for the future of JTEKT is how to create a synergy effect between the two companies.

I think that is exactly true. To do so, I believe the most crucial point is to hammer out a course of action and let each employee head toward the same goal. So, I decided on the "Corporate Philosophy" (Cf., P.2) and "JTEKT VISION 2015" (Cf., P.9). The corporate value, duty and basic stance of JTEKT are shown in our corporate philosophy. This is, so to speak, the fundamental value standard of JTEKT, and we will never stop striving for it. Based on our corporate philosophy, each employee plays a role, so that we can fly high in the future and create new value.

# Being a "Quality First Company" is our social responsibility as a manufacturer.

## —It is stated as "wins the trust of society" in the first part of the corporate philosophy. What is the thinking behind it?

This is a very basic aspect of our activities to win the trust of customers and society. I believe this is essential for sustainable growth of a company.

## -So, what do you think is most important to win trust?

Quality. Appreciation of a company depends not on a company's size but on its capability to provide a high degree of satisfaction to customers through high-quality products and services. So, we emphasized becoming a "Quality First Company" as a goal in the medium-term management plan for fiscal 2008 to 2010. Needless to say, quality means the quality of our products, but there is more. To enhance the quality of every activity at JTEKT provides the footing for our future development. I would like all employees to take the phrase "There is no development without quality improvement" into their hearts and strive to enhance the quality of their work.

# Improvements to society and the environment are linked together.

## -Please let me know the focus and target of JTEKT.

In "JTEKT VISION 2015", we set the following corporate objectives:

- 1. Be a manufacturing company friendly to the global environment.
- 2. Be a company that promotes living and work environment improvements by providing safe, reliable and pleasurable products.
- 3. Be a company that sees market changes as business chances and continues to grow throughout the world.
- 4. Be a truly global company that is a good corporate citizen with an excellent social and cultural understanding in each world region.

### **■** Corporate Profile

Company name	JTEKT CORPORATION	
Headquarters	No. 5-8, Minamisemba 3-chome, Chuo-ku, Osaka 542-8502 Japan	
Head Offices	Nagoya Head Office No. 7-1, Meieki 4-chome, Nakamura-ku, Nagoya, Aichi Pret 450-8515 Japan	
	Osaka Head Office No. 5-8, Minamisemba 3-chome, Chuo-ku, Osaka 542-8502 Japan	
President	Motohiko Yokoyama	
Capital	36,800 million yen (as of March 31, 2008)	
Number of employees	32,542 (consolidated) 10,023(nonconsolidated) (as of March 31, 2008)	
Sales	Year ending March 2008, 1,157.5 billion yen (consolidated) 683.1 billion yen (nonconsolidated)	
Ordinary income	Year ending March 2008, 72.8 billion yen (consolidated) 37.1 billion yen (nonconsolidated	
Consolidated subsidiaries	93 (31 in Japan, 62 overseas)	

## DOMESTIC NETWORK



## **JAPAN**

## **Head Offices**

- Nagoya Head Office
- Osaka Head Office

## **Research & Development Centers**

- 3 Nara Pref.
- Osaka
- Aichi Pref.

## **Technical Centers**

- 6 Chubu Technical Center
- Toubu Technical Center

## **Domestic Plants**

- 8 Kokubu Plant
- Kariya Plant
- 10 Tokushima Plant
- 1 Okazaki Plant
- 12 Tokyo Plant
- Kagawa Plant
- 1 Nara Plant
- 15 Higashikariya Plant
- 16 Toyohashi Plant
- Tadomisaki Plant
- 18 Hanazono Plant
- 19 Kameyama Plant

## **Sales Offices**

- Tokyo Branch Office
- 21 Higashinihon Branch Office
- 22 Kitakanto Branch Office
- 23 Hamamatsu Branch Office
- 24 Toyota Branch Office I
- 25 Toyota Branch Office II
- 26 Nagoya Branch Office
- Kansai Branch Office 28 Nishinihon Branch Office
- Utsunomiya Business OfficeMito Business Office
- 31 Chiba Business Office
- 32 Hokuriku Business Office
- 33 Kobe Business Office
- 34 Okayama Business Office
- 35 Kyushu Business Office
- 36 Fukuoka Business Office

## **Distribution Centers**

- 37 Kansai Distribution Center
- 38 Kawai Distribution Center
- 39 Chubu Distribution Center
- 40 Kanto Distribution Center

#### **Head Offices**



## **Research & Development Centers**





**Technical Centers** 



**Domestic Plants** 











Tadomisaki Plant





## — "Environment" is stressed at the top of the corporate objectives.

As people all over the world become more conscious of the environment, I recognize that response to environmental issues is the top priority.

## -What do you think is necessary to achieve such goals?

I believe that the driving force to open up our future is technological capabilities. To devote our energy to quickly providing our advanced technology and products is crucially important, and I hope to increase the instances in which we can do so. When we realize this, we can contribute to the sustainable development of society, and as a result, we will win the trust and appreciation of society.

# Promote a working environment in which all employees are proud of their work.

# —Development of human resources is necessary to realize such targets, isn't it?

I firmly believe that the very base of such efforts is human resources and a company's heritage is its human resources.

## -What kind of human resources do you want to develop?

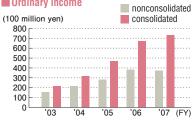
I think that working means obtaining places and opportunities to develop as a person. We receive a great deal of joy from working and we can share the joy with co-workers. To gain joy and to develop, it is necessary to positively challenge new things with high aspirations. When challenging new things, sometimes we succeed, but sometimes we fail. The point is, what we learn from failure. To experience failure will be a great wealth, not only for that unsuccessful person, but for the workplace and company. This is why I have a strong hope to develop employees who positively take up a challenge and stick with it to the end. To do so, the very important thing is that the workplace atmosphere welcomes challenges.

# To be a truly global company that wins the trust of international community.

## —Please let me know about the overseas operations of JTEKT.

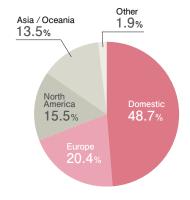
We have been aggressively advancing into overseas operations since 1958. Now, we work on research and development, manufacturing and sales in Japan, North America, Europe and Asia and operate more than 70 companies.





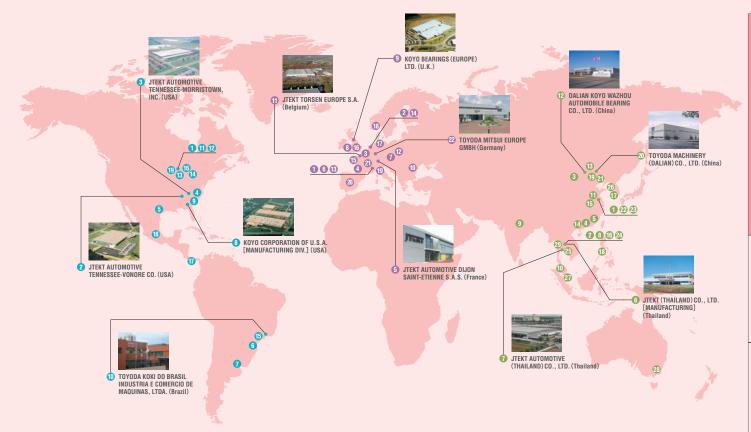






Note: JTEKT CORPORATION was inaugurated on January 1, 2006 by merger of KOYO SEIKO CO., LTD. and TOYODA MACHINE WORKS, LTD. So, results of fiscal 2005 are the compilation of the results of KOYO SEIKO CO., LTD. from April to December 2005 and those of JTEKT CORPORATION from January to March 2006. Results of KOYO SEIKO CO., LTD. are listed as the results before fiscal 2004.

## GLOBAL NETWORK



#### **NORTH AMERICA & SOUTH AMERICA**

#### **Regional Headquarters**

1 JTEKT NORTH AMERICA, INC. (USA)

#### Steering Manufacturing

- 2 JTEKT AUTOMOTIVE TENNESSEE-VONORE CO. (USA)
- 3 JTEKT AUTOMOTIVE TENNESSEE-MORRISTOWN, INC. (USA)
- 4 JTEKT AUTOMOTIVE VIRGINIA, INC. (USA) 5 JTEKT AUTOMOTIVE TEXAS, L.P. (USA)
- 6 JTEKT AUTOMOTIVA BRASIL LTDA. (Brazil)
- JTEKT AUTOMOTIVE ARGENTINA S.A. (Argentina)

## **Bearing Manufacturing**

8 KOYO CORPORATION OF U.S.A. [MANUFACTURING DIV.] (USA)

## **Driveline Components Manufacturing**

JTEKT AUTOMOTIVE SOUTH CAROLINA, INC. (USA)

#### **Machine Tool Manufacturing**

10 TOYODA KOKI DO BRASIL INDUSTRIA E COMERCIO DE MAQUINAS, LTDA. (Brazil)

- 11 JTEKT NORTH AMERICA, INC. TECHNICAL CENTER (USA)
- 12 JTEKT CORPORATION NORTH AMERICAN TECHNICAL CENTER (USA)

- 13 KOYO CORPORATION OF U.S.A. [SALES DIV.] (USA)
- 13 JTEKT TORSEN NORTH AMERICA, INC. (USA)
- 15 KOYO ROLAMENTOS DO BRASIL LTDA. (Brazil)
- 16 KOYO CANADA INC. (Canada)
- T KOYO LATIN AMERICA, S.A. (Panama)
- 18 KOYO MEXICANA, S.A. DE C.V. (Mexico)

## Sales & Service

19 TOYODA MACHINERY USA CORPORATION (USA)

## **EUROPE**

#### **Regional Headquarters**

- 1 JTEKT EUROPE S.A.S. (France)
- 2 JTEKT EUROPE BEARINGS B.V. (Netherlands)
  3 JTEKT TORSEN HOLDING S.A. (Belgium)

## Steering Manufacturing

- JTEKT HPI S.A.S. (France)
- 5 JTEKT AUTOMOTIVE DIJON SAINT-ETIENNE S.A.S. (France)
- 6 JTEKT AUTOMOTIVE LYON S.A.S. (France)
- JTEKT AUTOMOTIVE CZECH PLZEN, S.R.O. (Czech Republic)
- (I) JTEKT AUTOMOTIVE UK, LTD. (U.K.)

## **Bearing Manufacturing**

- KOYO BEARINGS (EUROPE) LTD. (U.K.)
- 10 KOYO ROMANIA S.A. (Romania)

#### **Driveline Components Manufacturing**

- 1 JTEKT TORSEN EUROPE S.A. (Belgium)
- .ITEKT ALITOMOTIVE CZECH PARDUBICE, S.R.O. (Czech Republic)

## Technical Centers

- JTEKT EUROPE S.A.S. TECHNICAL CENTER (France)
- 11 JTEKT CORPORATION
  - EUROPEAN BEARING TECHNICAL CENTRE (Netherlands)

### Sales

- (13 KOYO FRANCE S.A. (France)
- 6 KOYO (U.K.) LIMITED. (U.K.)
- T KOYO DEUTSCHLAND GMBH (Germany)

  B KOYO KULLAGER SCANDINAVIA A.B. (Sweden)
- 19 KOYO ITALIA S.R.L. (Italy)
- 20 KOYO IBERICA, S.L. (Spain)

## Sales & Service

- TOYODA MACHINERY AND ENGINEERING EUROPE SAS (France)
- 22 TOYODA MITSUI EUROPE GMBH (Germany)

## ASIA / OCEANIA

## Regional Headquarters

- 1 JTEKT (CHINA) CO., LTD. (China)
- 2 JTEKT (THAILAND) CO., LTD. (Thailand)

## Steering Manufacturing

- 3 JTEKT AUTOMOTIVE (TIANJIN) CO., LTD. (China)
- 4 JTEKT AUTOMOTIVE (FOSHAN) CO., LTD. (China)
- 5 JTEKT STEERING SYSTEMS (XIAMEN) CO., LTD. (China)
- 6 JTEKT (THAILAND) CO., LTD. [MANUFACTURING] (Thailand)
- 7 JTEKT AUTOMOTIVE (THAILAND) CO., LTD. (Thailand)
- 8 KOYO JOINT (THAILAND) CO., LTD. (Thailand) JTEKT SONA AUTOMOTIVE INDIA LTD. (India)
- 1 JTEKT AUTOMOTIVE (MALAYSIA) SDN. BHD. (Malaysia)

## **Bearing Manufacturing**

- 1 WUXI KOYO BEARING CO., LTD. (China)
- 12 DALIAN KOYO WAZHOU AUTOMOBILE BEARING CO., LTD. (China)
- (B) KOYO BEARING DALIAN CO., LTD. (China)
- (China)
- 15 KOYO AUTOMOTIVE PARTS (WUXI) CO., LTD. (China) 1 JTEKT (THAILAND) CO., LTD. [MANUFACTURING] (Thailand)
- T KOYO JICO KOREA CO., LTD. (Korea)
- 13 KOYO MANUFACTURING (PHILIPPINES) CORPORATION (Philippines)

## **Driveline Components Manufacturing**

(D) JTEKT DALIAN INNOVATION AUTOMOTIVE CO., LTD. (China)

## **Machine Tool Manufacturing**

10 TOYODA MACHINERY (DALIAN) CO., LTD. (China)

#### **Technical Centers**

- **3** JTEKT AUTOMOTIVE SCIENCE AND TECHNOLOGY CENTER (DALIAN) CO., LTD. (China)
- 2 JTEKT (CHINA) CO., LTD. TECHNICAL CENTER (China)

## Sales

- 8 KOYO (SHANGHAI) CO., LTD. (China)
- ② JTEKT (THAILAND) CO., LTD. [SALES] (Thailand) ③ GKN TOYODA (THAILAND) LTD. (Thailand)
- 3 JTEKT KOREA CO., LTD. (Korea)
- 7 KOYO SINGAPORE BEARING (PTE.) LTD. (Singapore)
- KOYO AUSTRALIA PTY, LTD. (Australia)

#### Sales & Service

20 TOYODA MACHINERY S.E. ASIA CO., LTD. (Thailand)

## -What is important when advancing overseas?

As I mentioned, we placed as one of our corporate objectives, "Be a truly global company that is a good corporate citizen with an excellent social and cultural understanding in each world region." In addition, we have in our corporate activities standard, "Follow international rules, observe the laws, cultures and customs of countries and regions where we have operations, and seek to contribute to their growth."

A company accepted in the world builds a relationship of trust with the local residents through service-minded social action programs and blends into local communities overseas. We will promote localization of management as a partner that grows together with the local community.

# To communicate continuously with society leads to a better future.

## — Please let me know the vision of JTEKT again.

"JTEKT VISION 2015" has two purposes. One is to realize the company's dream "to contribute to the happiness of people and the abundance of society". The other is to realize each employee's potential. —"Enable each employee to obtain the joy, satisfaction and recognition that result from contributing to society through corporate activities and to achieve continual personal growth."—I hope to build such a working culture.

The watchwords for realizing our vision are "Creation & Innovation". All of us are willing to serve customers through creating new value, willing to share the joy with customers and to achieve corporate objectives and employees' self-actualization.

## Please give a final word to the stakeholders.

We continue our steady effort to be a trusted company through valuing communication with stakeholders. I would very much like all stakeholders to become more familiar with the activities of JTEKT through this CSR Report. We welcome your candid opinions and impressions. I want to make full use of such opinions for continuous improvement of our activities.

JTEKT CSR Report 2008

# CSR of JTEKT

## The mission for a sustainable future

## Winning and enhancing the trust of society —this is the very base of JTEKT's corporate activities.

JTEKT set a new corporate philosophy as the base of our values at the merger in 2006.

The new corporate philosophy sticks to our ideas about corporate social responsibility of winning the trust of society by providing value.

In addition, we emphasize carrying out ideas about corporate social responsibility

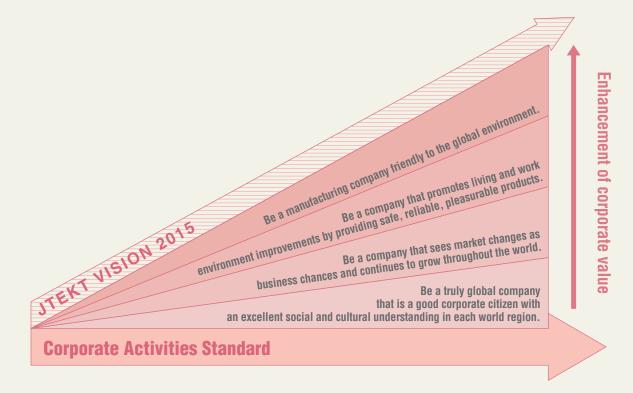
both in our corporate activities and in each employee's everyday situation.

So, we established "JTEKT VISION 2015", "Corporate Activities Standard",

and "JTEKT Employee Conduct Guidelines" to pervade such ideas throughout the company.

To heighten the corporate values and contribute to the sustainability of human life, society and the global environment,

we always try to share such ideas across the whole company.



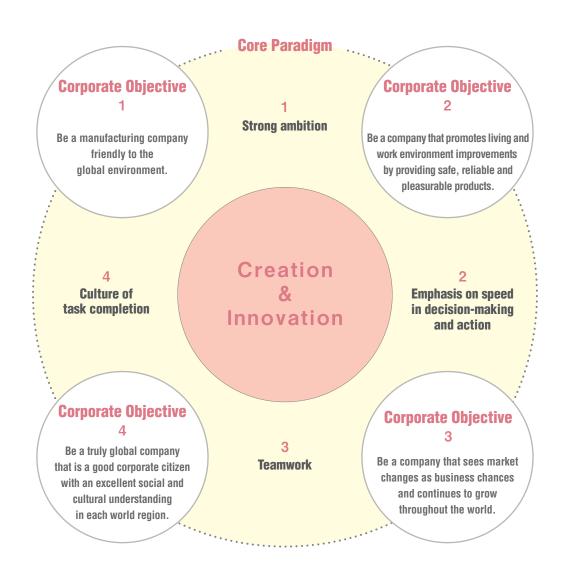
# Making strides toward realization of "JTEKT VISION 2015" with the Corporate Activities Standard at the core.

We promote the "JTEKT VISION 2015", which we plan to achieve in 2015, based on the "Corporate Activities Standard".

We believe that we will win more respect from our stakeholders by clearly specifying
the ideal situation of JTEKT from the four standpoints and forcefully promoting its realization.

## **JTEKT VISION 2015**

With "Creation & Innovation" as watchwords, we established "JTEKT VISION 2015" and are working to achieve it.



## For sharing the ideal future with all employees

JTEKT established "JTEKT VISION 2015" in 2007 to share the goal of our activities with employees and for all employees to play a role. The specific aims of JTEKT VISION 2015 are "achievement of the company's dream" and "realization of each employee's potential". JTEKT VISION 2015 consists of four "corporate objectives" and a "core paradigm" which is the basis of all employees' way of thinking and activities. With the watchwords, "Creation & Innovation", we work on corporate activities to win the trust of all stakeholders.

## Specific aims of JTEKT VISION 2015

## **Achievement of the company's dream**

Enable JTEKT as a manufacturing company to contribute to the betterment of society by providing products and services truly desired by customers.

## **Realization of each employee's potential**

Enable each employee to obtain the joy, satisfaction and recognition that result from contributing to society through corporate activities and to achieve continual personal growth.



A pocket version was distributed to all employees to share the JTEKT VISION 2015.

# **Corporate Activities Standard**

The "Corporate Activities Standard" consists of the seven items that JTEKT should do in practicing corporate activities.

To become a necessary company for society, we reflect each standard in our management and daily work.

**Compliance** 

Follow proper business practices and engage in fair, transparent and free competition based on a respect for the law.

**Customer Satisfaction** 

Derive concepts from the market, provide the best quality, technology and service, and obtain the satisfaction and trust of customers.

Carry out global environmental improvement activities proactively and aggressively, profoundly recognizing it as one of our important missions.

Respect for the Individuality of Employees

Respect the individuality of employees, create workplaces that motivate employees, enable them to fulfill their potential, and strive to provide each with abundant living circumstances.

Information Disclosure

Maintain close communication not only with shareholders but also with society at large and disclose corporate information properly.

Social Contribution

As a good corporate citizen, aggressively pursue activities that contribute to society.

\_\_\_ A Global Corporation

Follow international rules, observe the laws, cultures and customs of countries and regions where we have operations, and seek to contribute to their growth.

Compliance

Fulfill the duties of the whole group and conduct fair, transparent and free competition.

JTEKT believes that a law-abiding spirit is the first responsibility in conducting business. It is when we meet such responsibilities that we conduct business transaction fairly and transparently. In addition, we understand that not only JTEKT Corporation but the whole JTEKT group should encourage compliance. So, we decided to establish compliance program for the whole JTEKT group at the "Corporate Actions and Risk Management Committee". As one of the compliance policies, we promote the "JTEKT Employee Conduct Guidelines" to all employees.

Action Items of Fiscal 2007

© Revise "JTEKT Employee Conduct Guidelines"

Revise "JTEKT Employee Conduct Guidelines" Distribute a pocket version to all employees

Release revised "JTEKT Employee Conduct Guidelines" on the company's intranet

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## **Corporate Activities Standard**

## **Customer Satisfaction**

Always consider customers' views and opinions when manufacturing products.

To provide customer satisfaction, we regard "manufacturing from the customers" standpoint" as the very base of our every decision and action. Specifically, we feed back to each department the customers' opinions and demands learned from ordinary communication with them and information gained from customer satisfaction surveys, so that we can fully use this information for proposal sales, product development and design, and processing and assembling. Continuously providing the best products, technologies and services that meet customers' requirements is the mission of JTEKT, and that leads to executing our social responsibilities.

> **Environmental Preservation** Leave the precious Earth to our children by

voluntary action.

Working on environmental issues is a core corporate social responsibility. To leave the precious Earth to our children, every employee's environmental consciousness is indispensable. So, we put in the words, "proactively and aggressively" to encourage employees to move, and to promote environmental preservation activities. In addition, we regard responses to environmental issues as a high-priority managerial issue, and we established an "Global Environment Conservation Committees". We continue to enhance awareness of environmental preservation, including efforts toward global warming and environmental risk control.

## Respect for the individuality of employees

Realize ideal working conditions and allow the culture of respecting employees to take root.

Human resources are an asset to the company. To achieve corporate objectives and maintain the management stance, it is necessary to "respect human rights and establish nondiscriminatory working environment" and "establish a culture of challenging and achieving higher goals". To realize these goals, we introduced such systems as self-certification, a personal evaluation system, shift rotation, flexible working hours, a child-care leave system and a reemployment system, and we try to create ideal working conditions for each employee. We continue to promote communication with employees and strengthen "the culture of respect for employees" by strengthening collaboration with them.

Conduct "Customer Satisfaction Survey"	22
© "manufacturing" from customers' standpoint	22
Social contribution through products and technologies	15~19 24
<ul> <li>Quality assurance that involves our suppliers</li> </ul>	23

**Action Items of Fiscal 2007** 

OCompany-wide management by the "Global Environment Conservation Committees'

environmentally burdensome

substances from our products

© Efforts to eradicate

Reduction of geo-environmental risks

Environmental audits Conducting environmental

education

O Developing technologies that help preserve the environment

© Reducing CO2 emissions through corporate activities

Employee survey

© Enhancement of human resource development program OSupport to good performance

by female employees Reemployment of the elderly

OChild-care leave system Industrial action prevention

Mental healthcare Measures against overwork

Measures against lifestyle-related disease

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## **Information Disclosure**

Disclose fair and proper corporate information to win the trust of society.

We disclose fair and proper corporate information continuously and promptly to build a trusting relationship with society and enhance the transparency of management. In addition to putting various kinds of information on our website promptly, we release our CSR Report. We also value direct communication with stakeholders at presentation meetings or trade fairs. We think that winning stakeholders' sympathy for every activity of JTEKT is important to win the trust of society. We continue to provide opportunities to communicate with all stakeholders.

	•
© Enhance the transparency of management	14
Release information on our website	35

**Action Items of Fiscal 2007** 

6

## **Social Contribution**

Support regional activities and participate in social activities

To become a company that wins the trust of international society, it is important to promote social harmony and build mutual trust with local communities through service-minded social contribution. JTEKT acts as a member of society, for example through aggressively donations and cooperation in local activities. Employees of JTEKT participate in voluntary activities. We would like to contribute to building a wealthy community by promoting social contribution activities and enhancing each employee's awareness of such activities.

<ul><li>Holding discussion sessions with local community</li></ul>	32
<ul><li>Voluntary activities by employees</li></ul>	33
Sponsoring a soccer competition of elementary school pupils	33

7

## **A Global Corporation**

Coexist within other societies overseas to be a company that wins the trust of the people of the world.

As a company that strives to become a truly global company, JTEKT has set a goal to establish and promote JTEKT brand that wins the trust of the people of the world. To realize it, knowing and respecting the culture and laws of the regions of the world is necessary. In addition, we think it is important to promote business activity that coexists with local communities overseas and contributes to development of the region. Under the principle of coexistence with global society, we will share our corporate culture with local communities and promote localization of management, as partners who influence each other.

- Solution of the second of t
- Cocalization of management

## **Employee Conduct Guidelines**

## Revised according to a change of law

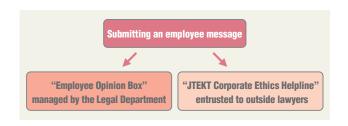
In June 2008, we revised "Employee Conduct Guidelines", which was established in April 2006, according to a change in the law. To carry out our corporate philosophy and achieve the ideal situation, we established "Employee Conduct Guidelines" as a compilation of our basic attitudes in an understandable way. With the revision of these guidelines, we regard them as part of our compliance policies. The contents of these guidelines are released on the intranet and at the same time, a pocket version is distributed to all employees to allow the guidelines take root in employees.

#### **Employee Conduct Guidelines**

Chap. 1	Employee's relationship with the company
Chap. 2	Employee's work in the company
Chap. 3	Employee's relationship with society
Chap. 4	Employee's personal activities

## Consultation services for corporate ethics in and out of the company

We have set up an "Employee Opinion Box" in the Legal Department and "JTEKT Corporate Ethics Helpline" (outside lawyers) as assistance where employees can consult or report when they have a problem or question regarding compliance. We made two consultation services in and outside the company and we arrange the working environment so that the employees can consult more easily. This is for us to grasp important information on compliance quickly. In addition, to let employees know about services for corporate ethics, we introduced assistance regarding compliance ethics on the intranet and write an article about it in the company magazine bimonthly.



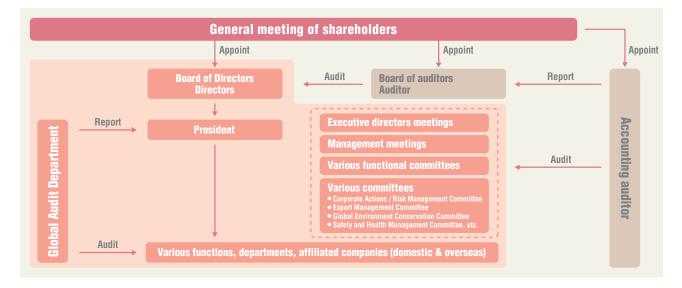
#### **CSR of JTEKT**

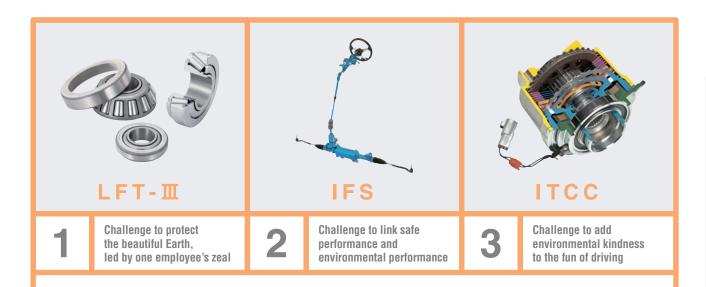
## **Corporate Governance**

## For fulfilling social responsibility

JTEKT makes every effort to maintain transparency of management, not only to shareholders, but to all stakeholders to sustainably improve our corporate value and to carry out our social responsibility as a globally trusted corporate citizen. We adopt an auditing system. Five auditors including three outside auditors conduct an audit on the performance of executives' duties. As an internal audit section, the Global

Internal Audit Dept., which is independent of other corporate activities, audits all aspects of corporate activities including accuracy and legality of administrative management. In addition, with the implementation of the Internal Control Report System (J-SOX), we are revising our internal control system, covering internal control all over of the JTEKT group, business process control and IT control.





| Special Feature |

# Unique technology for a better future

JTEKT is always aware of the social impact of product development.

What should we do to truly fulfill our social responsibility as a company?

The best answer is to help improve the global environment and society with our unique technology.

Fully demonstrating our abilities in our principal operation of manufacturing will be the source of improving our corporate value and of sustainable development.

In this special feature, we will introduce our development challenges in the future through three products developed with the use of unique technologies of JTEKT.



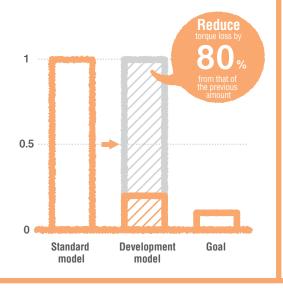
## | Special Feature | Unique technology for a better future

Low friction-torque 3<sup>rd</sup>-generation tapered roller bearing

LFT-II



# Challenge to protect the beautiful Earth, led by one employee's zeal



JTEKT started its operations as a maker of functional components through the merger in 2006. Our product development has always been based on considering our products' social meaning, and that is our heritage from the two predecessor companies of JTEKT. Our product development always starts from the question, "What is the current issue?" and "How can we respond to the issue with our technology?"

One of the solutions to the problem of how to preserve the environment was the development of "LFT- ${\rm I\hspace{-.1em}I\hspace{-.1em}I}$ ".

The first step was a voluntary effort to reduce torque loss to one-tenth.

In the midst of a rapid increase in demand for automobiles worldwide, improving fuel efficiency and reducing CO<sub>2</sub> emissions are essential for the global environment and a motorized society to coexist. So, JTEKT started a project that goes against conventional ideas, the "Torque Loss 1/10 Project",

in 2002, to gain more effect only with a bearing system. It was originally an idea that came as a flash to one researcher who was strongly concerned about the global environment. It came as a flash because in the state-of-art technology, conventional wisdom was that many innovations result in one-tenth of a percentage point or so of improvement in effectiveness. At first, other researchers didn't pay attention to it because it was just

like a dream. But they were struck by his enthusiasm, and the number of researchers who sympathized with this idea increased. Then, employees from various departments voluntarily started research and development. It was the beginning of this project. Product development started officially.

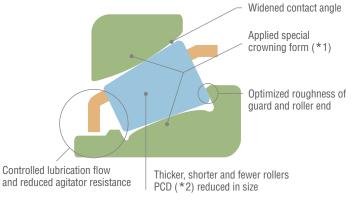
The power of the team pursuing an aggressive target made the development of the Low Friction Torque (LFT-III) tapered roller bearing successful.

With the aspiration to exceed conventional wisdom through a united effort, the project team developed heat treating technology and design technology to succeed in long lifetime and reduction in size of the product after many trials and errors. Then, the team developed a new form for controlling the amount and flow of lubrication that no other company had tried, and reduced





## Innovative Technologies of LFT-III



#### \*1 Crowning:

to process the form of the surface into a convex shape

#### \*2 PCD:

abbreviation of "Pitch Circle Diameter", the diameter of the centers of the rollers in bearings

# We optimized specifications and realized low friction, long lifetime and high rigidity at the same time.

We developed a new bearing design technology based on experiments and theories. In addition, we reduced roller viscous resistance and slide resistance by finding the best suited contact situation and achieved low torque, long lifetime and high rigidity at the same time.

## 2

## Miniaturization through long-lifetime heat treating

We developed heat treating technology that optimizes the rigidity of the surface and material organization for the bearings to last longer, even in lubrication containing foreign substances such as abrasion powder from gears. We realized a 40% size reduction by increasing the load capability of bearings.

## 3

#### Control lubrication flow and reduced agitator resist

We found out the impact of lubrication flow on torque loss, which had not been examined, and developed a new form for controlling quantity and flow of lubrication. We reduced agitator resistance by controlling lubrication flow.





torque loss to one-fifth (20%) in 2004. The target value was to reduce to one-tenth, but to reduce to one-fifth greatly contributes to preserving the global environment. So, production of LFT-III tapered roller bearings started in 2007. Compared to standard tapered roller bearings, LFT-III reduced torque loss by 80% from that using regular ball bearings. In addition, it has a longer lifetime and variant-resistance, and was reduced in size by 40%. As a result, when it is adopted in the differential gears of automobiles, we can expect a gas mileage improvement of 2% and CO2 emissionreduction of 3-5 g/km (nearly equal to 1.15 two-liter plastic bottles). If a car runs 10,000 km a year, 11,500 plastic bottlefuls of CO2 emissionreduction will be expected with LFT-III. This beneficial energy conservation effect and originality and economical

efficiency were greatly evaluated

and received the "Minister of Economy,

Trade and Industry Award" in "Energy-

Conserving Machinery Awards for 2006".

## Utilize technology and contribute to environmental protection in a wide range of fields

When we delivered a presentation to domestic and overseas manufacturers for practical application, they were struck by the fact that just one component improves gas mileage by 2%. Now, LFT-III is equipped to domestic automobiles and is scheduled to be equipped to industrial machines, too. As bearings are used in so many machines and components, we would like to develop the LFT-III technology for various fields to contribute to global environmental protection. Of course, we will also keep trying to mass produce bearings that allow a torque loss of only 1/10.







A failure of a trial product of which torque loss increased tenfold 2. One of the project members, Kazutoshi Toda, Office Manager of the Research & Development Planning Sect. 3. We contributed all of the supplementary prize of the "Minister of Economy, Trade and Industry Award" to UNICEF.



Me Ly

Intelligent front steering

**IFS** 



# Challenge to link safe performance and environmental performance



\*Comparison with hydraulic power steering

An intelligent automobile that assists drivers

Can an automobile with intelligence to assist the driver prevent accidents? Expectation of such safety features as accident-preventing technology is increasing, as is expectation of improved environmental performance such as gas mileage improvement and reduction of CO<sub>2</sub> emission. To respond to the both demands, JTEKT developed Intelligent front steering (IFS) by combining Rack direct-drive type electric power steering (RD-EPS), that enabled the world's highest level of output, and an Electronically controlled variable gear ratio (E-VGR).

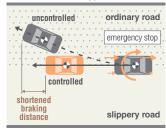
## Pursuing safer driving while considering the environment

RD-EPS is state-of-the-art electric power steering which has 70% more power and 23% less noise, compared to conventional models. Its high output enables it to be used in large cars. In addition, as it is an electric motor-driven type, it improves gas mileage by  $3\sim5\%$  compared to the hydraulic type.

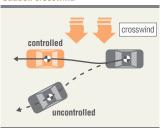
E-VGR is a system that enables changing the steering gear ratio along with the car speed. With this system, when driving at low speed or parking the car, the angle of the tires becomes wide with little steering, and when at high speed, running stability improves by narrowing the tire angle of steering. In addition, when changing lanes and applying the brakes on a slippery road or when a crosswind hits, the system checks the driving status and stability and assists steering. IFS, in which safe performance and environmental performance were combined, is a product that greatly contributes to global environmental preservation, operational performance, accident prevention and safety of automobiles.

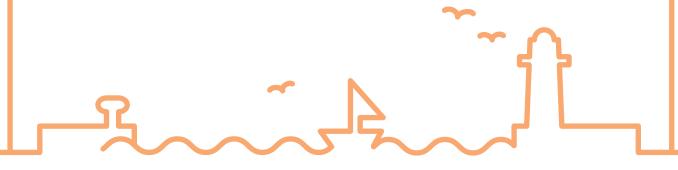


Emergency stop on roads with different levels of slipperiness



#### Sudden crosswind





Intelligent torque controlled coupling

## ITCC



# Challenge to add environmental kindness to the fun of driving



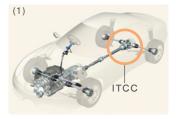
\*Compared with fulltime 4WD driving

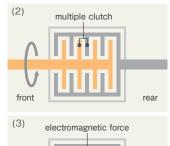
## Realizing gas mileage improvement and the comfort and safety of 4WD

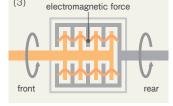
4WD is popular, due to its powerful driving, but these days, from an environmental standpoint, gas mileage is a problem. So, JTEKT developed a small and high-performance Intelligent torque controlled coupling (ITCC) for improving gas mileage of 4WD cars. ITCC is a driving part. It usually works in two-wheel driving and control power, but automatically changes to four-wheel driving on a slippery road such as a snowy-road. ITCC improved gas mileage by approximately 5% compared to fulltime 4WD while maintaining the comfortable and safe driving of 4WD by transmitting the most suitable power. At the same time, it enabled weight saving by 30kg because the burden on the rear wheel axle was reduced and the form was made more slender.

## Can be loaded to large cars. Promote environmental preservation by expanding share.

In large cars, the burden on the clutch in the coupling is very heavy, and it used to be a problem that the coupling was large. So, we developed an electromagnetic clutch covered with diamond-like carbon (DLC-Si) which has properties like diamond and wears slowly. Although it is lightweight and compact, it is eight times as durable as the old model, allowing ITCC to be loaded to large cars. Since its production in 2004, ITCC has been adopted by major manufacturers in Japan, America and South Korea and has a 54% market share worldwide for electrically controlled power transmission systems. This new technology that realizes safety, comfort and gas mileage at the same time indicates new possibilities in global environmental preservation and in the automobile industry. In addition, adoption of this technology in other industrial areas is expected.







- (1) ITCC loading point
- (2) Usually two-wheel drive; power is rarely transmitted to the rear wheels.
- (3) A sensor detects slippery roads due to freezing, engages the clutch with electromagnetic power and transmits power to the rear wheels.





JTEKT CSR Report 2008

# **Social Report**

For deeper communication with society, all employees face and resolve problems.

JTEKT, as a manufacturing company, now faces a wide variety of social problems.

With "Quality First" as watchwords, we promote further quality improvement.

A safe workplace

Elimination of traffic accidents

Coexisting with the global environment and local community

Development of new technology that contributes to sustainable human development

To resolve issues, we believe they must be organized and shared broadly. Here in the Social Report chapter, we compile issues and activities by stakeholders and introduce them.





## **Social Report**

## **Summary of Activities 2007**

# Together with Customers



777

## **Conducting a customer survey**

To manufacture from the perspective of customers, we survey customers and make use of the results.



**●**P22

**●**P25

## **Promoting TQM activities**

We promote TQM (Total Quality Management) based on the mottos of "customer first",

"continuous improvment" and "participation by all".



**●**P23

# Together with Suppliers



P25

## Hold a meeting regarding purchasing policy

We hold a purchasing policy meeting for the suppliers every year. This meeting for fiscal 2007 was held in March 2008, with 400 people from 334 companies participating.



## Publish "Green Purchasing Guidelines"

For green purchasing, we publish "Green Purchasing Guidelines" and ask for our suppliers' cooperation.



**●**P25

**₽**P31

**₽**P34

## Together with Employees

# → P26

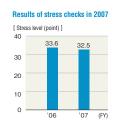
## **Conducted an employee survey**



To grasp employees' opinions and reflect them in corporate objectives, we conduct a morale survey.

## Promoting mental health measures

We educate supervisory employees about mental health, and employees about stress management.



# Together with Local Communities



P32

## Hold a "Plant Festival"

To get acquainted with the local community, a "Plant Festival" is held at each plant every year.



**●**P32

**→**P35

## Activities for fire prevention and road safety

To be a company that wins the trust of local communities, we attach great importance to fire prevention and road safety.



# Together with Shareholders and Investors



P35

## Hold a general shareholder's meeting

The general shareholder's meeting is held in June.
After starting with the president's greetings, various reports are made.



## **Information disclosure**



To enhance management transparency, we always try to promptly disclose accurate and fair information.

## **Together with Customers**

With the motto, "We will put quality first and provide products to earn the trust and satisfaction of our customers," all employees and managers at JTEKT strive to produce attractive products that satisfy customers' by thoroughly promoting the policy of putting customers first and focusing on quality.

## [ Quality Control ]

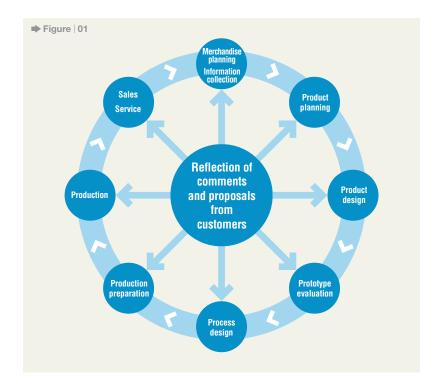
## **■** For further quality improvement

We build quality into products based on the slogans "improvement in quality of work" and "vitalization of employees and workplaces" in every process of our business operation from product planning to sales and service. Particularly in 2007, we stated our business policy to establish a firm foundation of development through further quality enhancement, and we worked to provide reliable quality and caring service to our customers.

## **■ Conducting a Customer Satisfaction Survey**

To manufacture from the standpoint of customers, JTEKT conducts a customer satisfaction survey of its main customers once a year. In the survey, we gather opinions on quality, delivery, technical capability, cost and other points from our customers and we feed back such opinions to the whole company.

In addition, to satisfy customers' demands, we have a quality control system that clearly spells out what to do and what to guarantee in all stages of our business, from product planning and information gathering to sales and service.



#### Figure 01

**Quality Control System in which customers'** opinions and proposals are reflected

#### Merchandise planning / Information collection

We are willing to accept customers' comments.

## O Product planning

O Product design

We plan well-balanced products with high quality.

We put high-quality based on accumulated technologies and experiences into drawings.

#### Prototype evaluation

We check product quality repeatedly under various operating conditions.

#### Process design

We build quality into process flow.

## O Production preparation

We carefully prepare for production for stable production of high-quality products.

#### Production

We manufacture high-quality products based on operation standards.

#### O Sales / Service

We provide high-quality products and service that satisfy and win the confidence of customers.

## Quality Management System

The fundamentals of quality assurance are achieved by building in quality at each process, never transmitting defective units to the following process, and establishing a process to prevent defective units. To do so, we constantly improve the system to build quality at each process by clarifying requirements for quality assurance and things to be implemented at each process, including development, production preparation and production. As a result, we acquired ISO9001 certification, the international standard of Quality Management System (QMS), and third-party certification of ISO/TS16949, the sector-specific standard of the automobile industry. We keep enhancing customer satisfaction through continuous improvement of QMS.

## ■ **Promoting TQM** (Total Quality Management) **Activities**

We are promoting TQM (Total Quality Management) Activities based on the policies of "putting customers first", "continuous improvement", and "participation by all". From the top management to each employee, we work on improvement so that we can carry out our work more efficiently and more effectively.

At the front lines of the workplace, we study diligently through J-QC circle activities (activities in small groups in which we take up an immediate problem in workplace and solve it). These activities also play a role in "JTEKT Quality".

## ■ Quality Assurance that Involves Our Suppliers

Quality assurance is the most important point in JTEKT, Koyo, TOYODA and TORSEN. To provide high-quality products, we consider our suppliers as precious partners for manufacturing, and we ensure quality through our quality control system and continuously work on quality improvement.

## ■ Efforts to Eradicate Environmentally Burdensome Substances from Our Products

We consider eradicating environmentally burdensome substances from our products as a quality characteristic, to provide products that customers can use safely.

## Awards from customers

As a result of activities based on the policy, "Putting customers first and focusing on quality", JTEKT receives many awards from our customers.

## Main awards in fiscal 2007

Customer	Title	Awarded Company
Toyota Motor Corporation	Quality Control Award	JTEKT CORPORATION
Toyota Motor Corporation (Head Plant)	Zero-PPM Award	JTEKT CORPORATION
Asumo Co., Ltd.	Best Quality Award	JTEKT CORPORATION
Sawafuji Electric Co., Ltd.	Quality Award	JTEKT CORPORATION
Toyota Motor Engineering & Manufacturing North America, Inc.	Launch Award	JATM (U.S.: local subsidiary manufacturing steering)
Guangzhou Toyota Motor Co., Ltd.	Quality Award	JAFS (China: local subsidiary manufacturing auto parts)
Tianjin FAW Toyota Motor Co., Ltd.	Best Quality Award	KWA (China: local subsidiary manufacturing bearings)
Tianjin FAW Toyota Motor Co., Ltd.	Quality Award	KWK (China: local subsidiary manufacturing bearings)
Thai Yamaha Motor Co., Ltd.	Best Quality Award	JTC (Thailand: supervising company)
Thai Yamaha Motor Co., Ltd.	Best Delivery Award	JTC (Thailand: supervising company)



ISO/TS16949 Certification of Nara Plant



The 2nd Company-wide J-QC Circle Convention (November 17, 2007)

## [ Relationship with customers ]

## ■ The keyword is "environment"

Now, people can live convenient lives through the development of technology. On the other hand, environmental problems, including greenhouse effect, have become more urgent. For sustainable human development, enhancing both environmental protection and production or consumer activities become more and more important. Development of environment-friendly technology is being pursued in all industrial fields, for example, hybrid cars and electric cars in automobile industry, and wind power generation in the power

JTEKT also strives to develop environment-friendly and valuable frontier technologies under the watchwords of "Value & Technology". We keep providing new value to every industrial field and contributing to the realization of a sustainable society through technological innovation.

## ■ Supporting the foundation of manufacturing

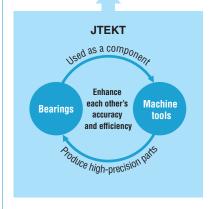
Bearings are called a "staple product of industry" and are widely used in a broad range of machine products and household appliances. In addition, machine tools are called "mother machines". They support manufacturing as machines that give birth to machines. JTEKT is a rare company in that it has both technologies indispensable for manufacturing.

To produce high-precision machine tools, high-precision bearings are necessary. Production of high-precision bearings requires high-precision machine tools. JTEKT contributes to industrial development by blending and deepening these two technologies.

For that reason, troubles with JTEKT products may affect the entire society. JTEKT is aware of its social responsibility and always strives to improve technology and quality.

Contribute to global industries and the environment

**Contribute to various products** 





Bearings that are called a "staple product of industry"



Machine tools are also called "mother machines"

## TOPICS

## **Produced a series advertisements expressing** our relationship with customers

Products of JTEKT are widely used, surrounding the people of the world. For example, our products, including steering, driving parts, bearings and oil seals, are loaded to automobiles. JTEKT products are also used in air conditioners; washing machines; refrigerators; vacuum machines; computers in homes and towns; railcars, including those of the bullet train; ships; airplanes; elevators and escalators of stations and buildings; and in products related to clothing, food and housing. JTEKT products are used in farm machines and textile machines, in paper manufacturing machines and printing machines, and in steelmaking and electrical generation equipment.

JTEKT regards not only our customers but also end users as important customers. We made a series of advertisements, so as to inform people of our social responsibility widely.



These newspaper ads can be viewed in the newspaper ads library on our website.

## **Together with Suppliers**

JTEKT regards suppliers as partners and respects them. We strive to fulfill our social responsibility by building trustful relationships with suppliers, and making effort towards thorough compliance, information disclosure and promotion of green purchasing.

## [ Approach to purchasing ]

## **■ Basic Policy toward Purchasing**

JTEKT operates purchasing activity based on the following philosophy and policy

"Follow proper business practices and engage in fair, transparent and free competition based on respect for the law."

(from JTEKT Corporate Activities Standard)

## [ Purchasing Policy ]

## Fair and transparent businesses transactions

We provide fair, transparent and free entry opportunity to all suppliers, regardless of nationality, company size, and presence or absence of transaction record.

## **Purchasing Basic Policy**

#### Mutual trust

We build mutual trust through close communication with suppliers.

## Coexistence and Co-prosperity

We realize harmonious relationships with suppliers based on mutual trust.

## Long-term and Stable Dealings

We realize stable purchasing that satisfies quality, price, volume and delivery date requirements through continuous dealing.

## Global Purchasing

We realize optimal purchasing globally. We strive to enhance international competitiveness with a firm supply chain.

## ■ Holding a "Purchasing Policy Meeting"

We hold a "purchasing policy meeting" every year for suppliers. We held the meeting in March 2008 for fiscal 2007, and received 400 participants from 334 companies. We explained our purchasing policy based on the two important points in purchasing: "change and complete" and "teamwork and speed". We also held an awards ceremony and honored suppliers that achieved excellent records in quality, cost and technological development.

## Approach to Green Purchasing

All of JTEKT works on green purchasing activities in order to establish a sustainable recycling society. We established "Green Purchasing Guidelines" for its promotion, and request suppliers' cooperation.



Awards Ceremony at Purchasing Policy Meeting



**Green Purchasing Guidelines** 

In Green Purchasing Guidelines, we particularly request suppliers the following points;

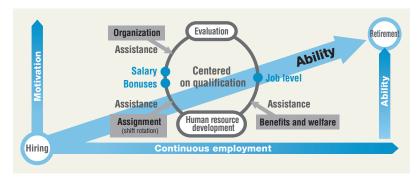
- To establish environmental management system
- To thoroughly follow environment-related laws and regulations
- To ban or limit the use of environmentally burdensome substances
- To improve environmental performance including CO<sub>2</sub> reduction

## **Together with Employees**

JTEKT holds up as one of our management stances the slogan, "Create a bright, energetic corporate atmosphere based on respect for people." Each employee regards him or herself as a main character of the company and conducts self-sustaining activities. To promote the realization of an ideal company through such employee activities leads to creation of a workplace that motivates employees.

## Philosophy on Human Affairs

JTEKT's philosophy is to "seek to contribute to the happiness of people and the abundance of society through product manufacturing that wins the trust of society." To create new value and provide society with joy and excitement broadly, we develop human resources in a manner that allows all employees to fully use their creative abilities. We strive to create workplaces where the individuality of each employee is respected, that provide employees with the chance to fulfill their potential, and that enable them to contribute to the success of the company. Our human resource development system, which consists of the three elements of training, evaluation and compensation, enables employees to continually improve their skills and provides them with a motivating working environment during their years in the company.



## [ Labor-Management relationship ]

Based on a good labor-management relationship, JTEKT conducts various activities for development of the company, stability and enhancement of employees' lives. In addition to periodically holding "labor-management meetings" and "central manufacturing subcommittee meetings", we establish opportunities both for labor and management to discuss face-to-face at plants and departments including at "manufacturing subcommittee meetings" and "labor-management meetings" for deepening mutual trust and mutual understanding.

## [ Morale Survey ]

In order to grasp employees' feelings towards the corporate culture, daily tasks and the merger of two companies and reflect them in corporate policy or departmental policy, we conduct a morale survey. In the survey, we set questions regarding vitality of the organization and employees, including vital powers of organization, employee satisfaction and communication vitality. In the survey, conducted in February 2008, we gained a response rate of 98.9% from 1,500 employees. Results are reported to the top management, fed back to employees through the company magazine, and used for realizing "JTEKT VISION 2015", based on problems highlighted by the survey.

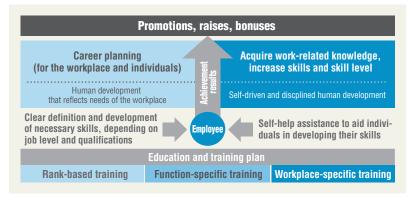
## **Surveyed items**

● Teamwork	● Challenge
<ul><li>Responsibility</li></ul>	Self-sustenance
<ul><li>Employee satisfaction</li></ul>	<ul><li>Communication</li></ul>

## [ Human Resource Development ]

## **■ Idea behind human resource development**

Based on the "idea behind human resource development" on the right side of this page, JTEKT constructed a systematic human resource development system so that each employee can develop his or her skills while gaining accomplishments.



## **■** Employee development

Our training system consists of "rank-based training (companywide training)", "function-specific training" within specialist fields, and "workplace-specific training" carried out by the workplace.

In rank-based training, knowledge, skills and responsibilities that must be attained by employees at each rank are clearly defined and actual training is conducted depending on each employee's level.

Function-specific training is provided so that employees can obtain advanced knowledge and skills from both in-house and external instructors who are skilled in specific functional fields. At each workplace, an education and training plan is defined so that employees can acquire the skills relevant to their job level and qualifications based on a schedule.

In addition, we support employees' efforts to obtain qualifications and in self development programs.

## **■ Technician Development**

In order for JTEKT, as a manufacturer operating both a bearing and a machine tool business, to continuously provide the world with advanced and reliable technology rooted in innovative manufacturing technologies, we are organizing the system to train employees to attain advanced technical skills. Technicians receive basic education through our vocational schools and then through OJT(\*1) at workplaces. The whole workplace trains technicians with advanced skills by utilizing national and in-house technical skill examinations and courses to increase their skills.

#### Idea behind human resource development

- Develop employees who understand the company philosophy, and who are professional, creative, highly skilled and able to achieve management goals.
- Develop employees who are creative, always motivated to improve themselves, and able to realize their true potential through self-driven and disciplined actions.
- Develop employees who respect human rights, live in harmony with the environment, observe social rules, are sensible and have an international perspective.

#### \*1 0JT:

Abbreviation for "On the Job Training"; training is carried out through actual work.

## **VOOOOO**



Okazaki Plant **Takayoshi Asano**Selected as a "Contemporary Master Craftsman" and award

Selected as a "Contemporary Master Craftsman" and awarded by the Ministry of Health, Labor and Welfare in 2007 for his great skill and coaching of younger employees.

## I'd like to convey the joy of work with younger employees.

I established a skill test in the company for training the younger employees and wrote the test. I try to let them become interested in a more specific job. I would like to convey the joy of working on a job requiring feeling and a high sense of touch.

## T O P I C S

## **Participated in "Skill Olympics"**

JTEKT began to participate in "Skill Olympics" in 2006 for the purpose of training core workplace personnel who obtain cutting-edge technology. Young workers under the age of 23 and engaged in the manufacturing industry (excluding some jobs) compete for the championship in this contest. JTEKT keeps recommending our employees to participate in this contest for raising skills.



## [ Respect for human rights, equal opportunity and diversity ]

## **■** Utilization of diverse human resources

JTEKT writes in its Corporate Activities Standard, "Respect the individuality of employees, create workplaces that are motivating to employees and enable them to fulfill their potential, and strive to provide each with abundant living circumstances". To utilize diverse human resources, we adopt various measures including hiring foreign employees, assisting female employees' career development, hiring fixed-term employees as permanent employees, employment of handicapped persons, job assistance for those who engage in child-care and nursing-care, and continued employment for the retired.

## Assisting female employees' in developing their careers

We provide equal opportunities based on motivation and qualification and not on gender. Specifically, we hire female managers, properly change employees' line of work, and promote women to administrative positions.

## ■ Reemployment of the elderly

In the acceleration of demographic aging, JTEKT established the "Senior Partner System" in April 2006 so that retired employees with high motivation and abundant knowledge and experience can continue working. Senior partners train younger employees who will become leaders of JTEKT.

#### Assist in balancing a career and child-raising Figure 01

With the adoption of the childcare leave system and short-time working system, we actively assist those who intend to balance their careers and child-raising and work free from anxiety. In the guestionnaire for those who have taken child-care leave, 81% answered that the workplace had an atmosphere of easily taking child-care leave, and 72% answered that they won the understanding of their workplace. We also established a vacation system available at the time of a family member's illness.

## **■** Enhancing the power of the workplace

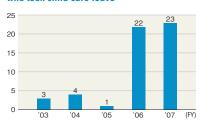
By enhancing each employee's qualification and teamwork with the use of OJT and systematic workplace-specific training, JTEKT seeks to strengthen the power of the workplace. We stimulate horizontal ties beyond the departmental boundaries, in addition to the normal hierarchical workplace relationships, through various events including plant festivals, club activities and recreational activities.

( → Related article, See P.32)

## ■ Hiring fixed-term employees as permanent employees Figure | 02

JTEKT provides various ways of working, and as one of the measures for varied personnel to develop their careers, we established a system to assign fixed-term employees as permanent employees in fiscal 2006. We plan to hire approximately 90 fixed-term employees as permanent employees in 2008.

#### Figure 01 The number of employees who took child care leave



#### Figure | 02 Composition of employees as of March 31 2008

maron or, 2000			
	Male	Female	Total
Permanent employees	9,386	637	10,023
Fixed-term employees (*2)	1,788	312	2,100
Total	11,771	966	12,737
Length of employment	18.0 years	16.5 years	17.9 years
Job turnover rate (*3)		1.1%	

<sup>\*2</sup> The total of fixed-term employees, part timers, reemployed employees and temporary workers

<sup>\*3</sup> Voluntary termination rate

## [ Safety, Hygiene and Health ]

## ■ Decided "Safety and Health Policy"

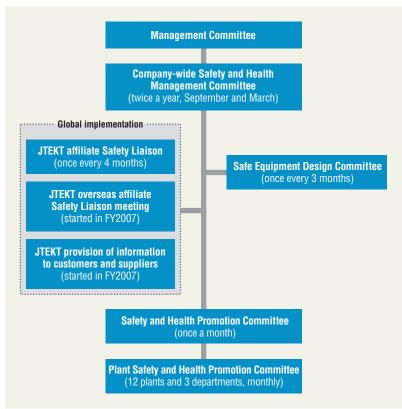
JTEKT decided on its "Safety and Health Policy" in 2007 for creating a safe and pleasant workplace where employee can maintain mentally and physical health. Then, based on this, each plant decided its own "Safety and Health Policy". Based on such policies, the entire staff participates in various kinds of activities to create a safer, healthier and more pleasant workplace.

## ■ Management System to realize policies

The "Safety and Health Management Committee" discusses and decides policies, goals and measures regarding safety, hygiene, health, and traffic and fire prevention, and then, manages progress and achievement. Regarding safety and health activities overseas, we divide responsibility among parent plants, local subsidiaries and the Secretariat and conduct various activities. Regarding safety and health activities at plants, we provide all employees the action program and important information dealt with at the "Safety and Hygiene Promotion Committee" for preventing recurrence of accidents and for enhancing workplace safety.

Thus, JTEKT built a management system covering the whole company to realize its "Safety and Health Policy" deliberately and efficiently.

## **Centralized management**



#### Safety and Health Policy

- We deeply understand that maintaining employees' safety and health is indispensable for operating business at JTEKT, so we proactively promote safety and health management activities for its realization.
- 2. We abide by safety and health related laws, instructions and guidelines issued by administrative authorities by properly reflecting them in our company regulations. We also try to specify and eliminate risk factors and hazardous substances by promoting accident prevention with the use of our safety and health management system with improved risk assessment.
- 3 .We improve employees' self-awareness and promote a truly safe workplace and safety-conscious employees, and the following control points for safety and health management.
  - (1) Elimination of labor accidents
  - (2) Formation of a pleasant workplace
  - (3) Eradication of traffic accidents
  - (4) Strengthening of fire-prevention management
  - (5) Promotion of mental and physical health
  - (6) Enhancement of safety and health education
- 4. We promote change and innovation at every phase while listening to employees' opinions.

## Promote Activities Systematically

To improve safety and health level systematically and continuously, we set medium and long-term plans regarding safety and health management. In the plan, based on "establishing a safe workplace", "developing safety-conscious employees", and "enhancing implementation methods of OSHMS (\*1)", we set a single-year goal and medium-term goal. We pursued the following items in 2007 as main measures.

## 01 | Activities based on the safety and health management system

We pursued improvement of working methods and facilities by promoting risk assessment (\*2). In addition, we promoted acquiring safety-related certification from external organizations. All 12 of our plants had acquired the certification by the end of 2007.

## 02 | Improving the work environment and enhance safety- consciousness of employees

We improved the work environment by reflecting daily safety and health activities in our risk assessment. We also expanded our internal safety audit system.

## 03 | Promoting efforts to improve the intrinsic safety of equipment

We make a "Safety and Health Check Sheet" when introducing equipment. In addition, we make a "Risk Assessment Operating Procedure" when designing equipment.

## 04 | Improving the work environment

We succeeded in reducing noise at eight workplaces (66 pieces of equipment). To create pleasant workplaces for female and elderly employees, we also implemented a work environment assessment based on human engineering at three domestic plants. A work environment assessment is scheduled to be implemented at the remaining nine plants in 2008.

## ■ Improving awareness and knowledge through education ⇒ Figure | 01

Safety and health education is an important part of training and is carried out consistently. Mainly, we conduct "rank-based education" based on job level, "special education", "Basic KYT 4R training (\*3)", "Danger Training" and "Skill Training".

## Enhance safety

Figure | 02

In the first half of 2007, eight lost-time accidents occurred (\*4). JTEKT recognized it as a serious crisis. We held an urgent meeting on safety in August and enhanced safety activities. As a result, in the latter half of 2007, the number of such accidents was reduced to two. We keep trying to reduce the risk of work-related accident through various kinds of safety activities.



Hanazono Plant acquired OSHMS Certification

#### \*1 OSHMS:

Abbreviation for Occupational Safety & Health Management System, the system to responsibly, systematically and continuously promote safety and health management for improving safety and health standards at business facilities.

#### \*2 Risk Assessment:

Measure to investigate the risks in a workplace and implement proper risk-reduction measures.

#### Figure 01

Principal education (the number of attendees in 2007)

Rank-based	Safety Managers Education	114
Education	Group Leader Education	208
	New Employees Education	133
	Education for Academy Students	64
Special	Grinding stone replacement	148
Education	Arc welding	59
	Forklifts	53
	Cranes	192
	Robots	51
Others	Toyota-group education of people in charge of outside workers	549
	Toyota-group education of people in charge	379
	Education for high-elevation work	758
	Electric shock prevention	740
	Risk assessment education	427
Total		3875

#### \*3 Basic KYT 4R Training:

KYT means Kiken (hazard), Yochi (prediction), and Training. 4R means 4 rounds. This is hazard-prediction training through 4 phases.

#### \*4 Accidents resulting in an employee's absence due to a work-related injury:

JTEKT defines an accident resulting in an employee's absence due to a work-related injury as "more than one day's absence due to a work-related injury".

#### Figure | 02

## Change of lost-time accident rate



- JTEKT - Transportation equipment makers

General equipment makers
 All manufacturing companies

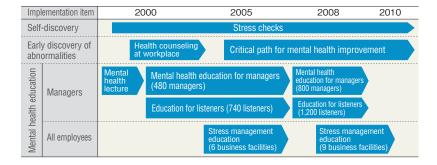
Number of lost-time accident rate **Total labor hours** 

## ■ Achieving mental and physical health

Maintaining each employee's health is indispensable for our business activities. JTEKT implements various programs to maintain employees' mental and physical health.

## **O1 | Achieving mental health**

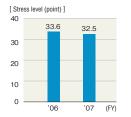
We proactively promote mental health measures focused on preventing depression. In addition to educating managers about mental health and educating all employees about stress management, we conduct stress checks so that our employees can realize their own stress levels and so that we can grasp the actual status of workplace. As a result of these stress checks, we counsel high-stress individuals and deal with any cases requiring mental care at an early stage. In FY2007, we implemented "critical path for mental health improvement". As a result of such activities, stress levels (\*5) are decreasing.



## 02 | **Measures to crushing labor**

For health management, it is a company's obligation to have long-term workers interviewed by a doctor. JTEKT conducts after-the-fact measurement and health guidance through an interview by an industrial physician's for employees who work 45 hours of overtime during 3 consecutive months and want to have a doctor interview, and for employees who work 70 hours of overtime in one month.

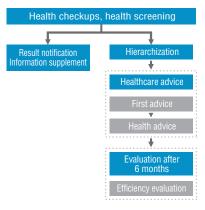
#### Results of stress checks in 2007



#### \*5 Stress level (Depression scale):

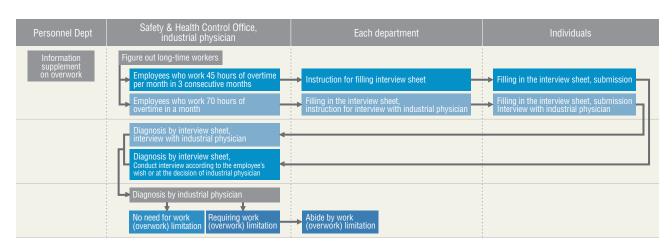
Stress level shows the status of stress and emotional status at the time of stress checks. Above 60 points is suspected of depression.

## Healthcare advice items implemented in 2007



#### Results of healthcare advice in 2007

	First advice	health advice	efficiency evaluation
Timing of implementation	December 2007	January to April, 2008	June 2008
The number of cases	770	628	346
Implementation rate	100%	81%	45%



## 03 | Measures to combat lifestyle-related diseases

Prior to implementation of "health checkups and healthcare advice" in April 2008, we started healthcare advice in October 2007.

## **Together with Local Communities**

JTEKT emphasizes interaction with local communities as a member of the community. We proactively promote communication through various activities including "Community Discussion Meetings" and "Plant Festivals".

## [ Promotion Framework ]

## ■ Company-wide Management through a "Local Environment Subcommittee"

JTEKT forms a "Local Environment Subcommittee" as one of six specialized subcommittees of the "Global Environment Conservation Committee" chaired by the President. The purpose of this subcommittee is for "JTEKT to win the respect of local communities and the confidence of administrative authorities, and for our plants, headquarters, branch offices, sales offices, distribution centers and technical centers to develop without interruption and to continue operation". We believe that we will fulfill our responsibility by listening to the opinions of local communities and by continuing to improve.

## [ Communication ]

## ■ Hold "Community Discussion Meetings"

We periodically invite local residents and hold a "Community Discussion Meeting" at each plant. At these meetings, we report the results of our environmental preservation activities and exchange opinions with local residents. We build good relationships with local communities through such activities. A total of 160 attendees gathered at all plants in 2007.

## ■ Holding an event called "Let's have a peek at a manufacturing scene"

This is a joint event held by seven companies of Toyota Group to celebrate the 50th anniversary of the municipality of Kariya City and it was started in 2000. We hold this event every year for the local residents to deepen their understanding of our business activities. They are invited to the showrooms and plants of these companies. At first, participants were limited to those who live, work or study in Kariya City. But now, the coverage area of this event has been expanded to the Mikawa Region (Kariya, Anjo, Takahama, Hekinan, Chiryu), Obu City and Tokai City. We deepen exchanges with local residents from children to the elderly by giving them firsthand knowledge of the manufacturing sites (plants).

## ■ Plant Festival

JTEKT holds a "Plant Festival" every year at each plant to cultivate friendship among the employees, families of employees and local residents. We prepare various activities including a stage show, games and sales booths at each plant, and such activities entertain the visitors.

We held total of 10 plant festivals and drew a total of 7,723 attendees in 2007.



'Community Discussion Meeting' (Higashikariya Plant)



"Let's have a peek at a manufacturing site"









- 1. Hanazono Plant Festival, 2. Kariya Plant Festival,
- 3. Okazaki Plant Festival, 4. Tadomisaki Plant Festival

## [ Activities Contributing to Local Communities ]

## Participation in local beautification activities and greening activities

We carry out local beautification activities every year to enhance employees' environmental consciousness. To live together with local communities, employees proactively participate in cleanup activities around the plants and flower-planting activities.

For example, Kameyama Plant participated in "the cleanup campaign of the Suzuka Path" held by Kameyama City on June 3, 2007. There is no end to littering and illegal-dumping around the Suzuka Path. In drizzling rain, the operation gathered about 500 participants, including those from Kameyama Plant. They gathered up various kinds of rubbish including plastic bottles, tires and wheels.

We also participated in the "Midosuji Cleanup Campaign" held in Chuo-Ward, Osaka City on August 24, 2007. This campaign is to clean up Midosuji Boulevard which was selected as the marathon course of the World Championships in Athletics in Osaka. About 800 participants from the municipality and companies along the street and 11 from JTEKT Osaka Head Office participated in the campaign. They gathered rubbish, including plastic bottles, and cleaned bronze statures in extreme heat.

We gathered a total of 2,472 participants for cleanup activities and beautification activities in the local community.

## ■ Participation in "Child's Emergency Call" campaign

The "Child's Emergency Call" campaign is to maintain as many shelters as possible for children. Local authorities around Japan promote this campaign to establish an environment where everyone can live with a sense of security. The prefectural government of Osaka calls for companies and homes to be engaged in the "Child's Emergency Call" campaign. Kokubu Plant participated in this campaign in December 2007. It was one of the activities by which they contributed to the local community. They helped prevent trouble with mobile "Child's Emergency Calls", which are promoted by putting "Child's Emergency Call" stickers on four commuter buses and three company cars.



Zero Emission Campaign (Toyohashi Plant)



The cleanup Campaign of the Suzuka Path (Kameyama Plant)



Midosuji Cleanup Campaign (Osaka Head Office)



"Child's Emergency Call" campaign (Kokubu Plant)

## T-O-P-I-C-S

## **Sponsored an Elementary School Soccer Tournament**

To educate children through sports, JTEKT sponsors the "JTEKT Challenge Cup", an elementary school soccer tournament held in Kariya City, since 1997. This tournament is held in winter every year and attracts more than 30 teams from 16 elementary schools.

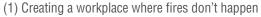
The JTEKT soccer team sends volunteer referees to this tournament. JTEKT plant volunteers providing free miso soup service to players and their parents is also an annual event.



## [ Traffic and Fire Prevention ]

## **■** Promoting fire prevention

To be a company that wins the confidence of local communities, we think that fire prevention is an important activity. So, we promote fire prevention voluntarily and under the instruction of local fire-fighting authority. We also conduct fire prevention activities at each workplace with a sense of taking good care of our workplace by mapping fire hazards. In 2007, the Tokyo Plant received the Fire Commissioner's Award for fire-fighting activity and hazardous material management. The Tadomisaki Plant and the Higashikariya Plant received a commendation from their local fire stations.



- Maintaining the latest edition of fire maps and procedures
- Legal and voluntarily inspection of high-pressure gas facilities
- Implementation of initial-stage firefighting training
- Legal and voluntary inspection of dangerous facilities
- Fire prevention inspection by a fire-prevention manager

## (2) Promotion of fire prevention measures

- Review of facilities, including buildings and equipment
- Removal of LPG tanks (switch to LNG)
- Updating automatic fire receiving equipment
- Promoting fire prevention at fire pits and in-line facilities

## **■ Traffic Safety Activity together with Local Communities**

As an automobile-related company, JTEKT believes that promoting traffic safety is key social responsibility. We implement activities including participation in traffic patrols and holding a traffic safety lecture with a police-related person, the local community, local authorities and police. In 2007, the Hanazono Plant acquired a good reputation for its traffic safety activity and received a commendation from local police station as a superior traffic safety company.



Received Fire Commissioner's Award (Tokyo Plant)



Initial-stage firefighting training (Okazaki Plant)



United Activities of the Toyota Group (Kagawa Plant)

 Yellow-stop activities Traffic patrol July 200 participants September 300 participants December 300 participants

## TOPICS

## **Promoting traffic safety activities for employees**

To avoid all traffic accidents, including accidents in employees' private time, and to protect employees' safety and happiness, we proactively promote traffic safety activity for employees. Specifically, we implement hazard prediction training at intersections and awareness activities for enhancing consciousness of dangerous spots in commuter routes. In addition, we conduct traffic safety education on "the traffic accident and insurance system" and "the situation at the outbreak of the accident and countermeasure".



Traffic safety education (Kokubu Plant)



Traffic safety lecture (Hanazono Plant)

# Together with Shareholders and Investors

JTEKT seeks to build long-term trustful relationships with shareholders and investors.

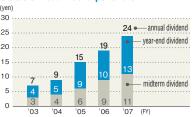
To do so, we emphasize heightening corporate value, stable dividends, and transparency in management.

# [ Performance and profit return ]

Consolidated sales for FY 2007 were 1,157.5 billion yen, an increase of 133.2 billion yen or 12.9%, over the previous period. Regarding profit, despite a rise in raw material prices and increase of depreciation allowance by the revision of corporate tax law, consolidated operating income rose to 72.8 billion yen, an increase of 5.9 billion yen or 8.9%, thanks to increased sales. Consolidated net income decreased 1.4 billion yen or 3.2%, to 43.4 billion yen. As a result, we issued an annual dividend to shareholders of 24 yen per share, an increase of 5 yen per share from the previous year.

We are eager to response to expectation of shareholders and investors through establishing better quality control system, product development that takes the market in advance and strengthening revenue base by cost reduction.

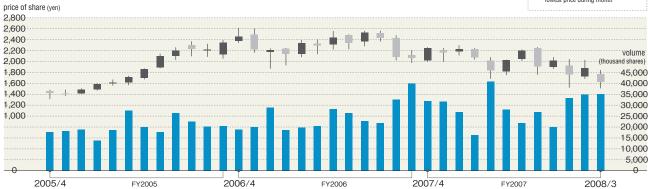
# Status of net dividend per share



JTEKT CORPORATION started its operation on January 1, 2006 by merger of KOYO SEIKO CO., LTD. and TOYODA MACHINE WORKS, LTD. Dividend of FY 2003 and 2004 are those of KOYO SEIKO CO., LTD.



# Changes in price of share



# [ General Shareholders Meeting ]

JTEKT holds general shareholders meeting every June. The meeting stars with the President's opening remarks, then audit issue, operating statement, balance sheet and profit & loss are reported.

# [Information Disclosure]

In order to build long-term trustful relationship with shareholders and investors, transparency in management is essential point. Therefore, we strive to disclose proper, fair and accurate information continuously.

# major IR activities

 Holding results briefings once a 6 months Issuing report • Financial and IR related information transmission through the website Issuing annual report Accepting interviews Plant tour



108th general shareholders meeting

JTEKT CSR Report 2008

# **Environmental Report**



# Pursuing new possibilities to help protect the global environment.



JTEKT recognizes environmental preservation as among the most critical management issues. This idea is stated in our Corporate Activities Standard, and we conduct related activities daily.

To give the widest possible publicity to our unified environmental policy

To take measures against environmental risk to secure the safety of the local community

To reduce the environmental burden by improving productivity

To preserve energy, conserve natural resources and develop recycled products

We not only pay attention to activities inside the company; as an environment-conscious manufacturer,

we try to find ways to help preserve the global environment through our business operations.

In the "Environmental Report" chapter we will introduce our activities to secure the future of the Earth.





# **Environmental Report**

# **Summary of Activities 2007**

# **Environmental Management**

# Started environmental activities in China

We started activities regarding the environment and safety. Fifteen China-based affiliate companies attended the general meeting in China.





# An India-based affiliated company, SONA, was awarded in the environmental area

SONA received a high evaluation of its environmental preservation activities and received the highest award in the "6th TERI Corporate Award for Environmental Excellence" in India.





# Rendered PCB-used equipment harmless

We disposed of PCB equipment kept in the Kariya Plant and Higashikariya Plant through detoxification.





# Ffforts

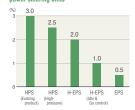
# Efforts in the Development and Design Stages

# Realized high power in electrical power steering

Realized high power in rack-assist type electrical power steering. This allowed it to be equipped to large SUVs or pick-up trucks for the first time in the world.



Comparing energy consumption of power steering units

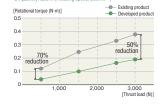


# Dramatically reduced torque loss of needle roller bearings

We contributed to improved gas mileage by realizing low-torque thrust needle roller bearings, reducing torque loss by 50%



Reduction efficiency of torque loss
Oil quantity: 200ml (Rotating speed: 200min<sup>-1</sup>)



# Dramatically reduced energy consumption per workpiece

Productivity was improved dramatically by the development of a high-rigidity wheel spindle. Energy consumption per workpiece was reduced by a total of 45%.





# → P45

# Efforts in the Production and Logistics Stages

P50

# The Kokubu 2nd Plant was awarded for energy saving

The Kokubu 2nd Plant was awarded in 2007 for its excellence in energy management by the Kinki Bureau of Economy, Trade and Industry.

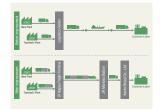
**₽** ₽50



# Improvement of physical distribution

Dramatically reduced CO<sub>2</sub> emissions by reviewing packaging and transportation between Nara / Toyohashi and Iwate. We will apply the same method to logistics in other regions.

P51



# Tokushima Plant awarded for ingenuity

The Tokushima Plant acquired a high reputation for its waste reduction activities and was awarded concerning "improvement in recycling shot dust into valuable resources" by the Ministry of Education, Culture, Sports, Science and Technology.

₱ P53



\*H-EPS is trademark of JTEKT CORPORATION.

# **Environmental Management**

To pass down the precious global environment to the future,
JTEKT promotes environmental preservation activities.
We try to reduce the environmental burden of all of our business activities
through our "Environmental Policy" and contribute to realizing a sustainable society.

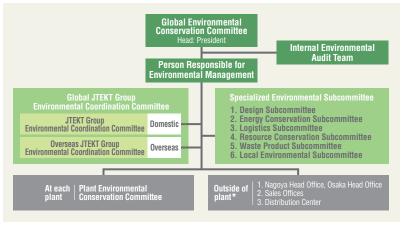
# [ Promotion Framework ]

# ■ Formulate the "Environmental Policy"

JTEKT determines its company-wide environmental policy. We keep everyone informed about the environmental policy and also inform the policy public to all employees including external contractors. In addition, some plants determine their own environmental policy based on their originality and on regional characteristics.

# **■** Established centralized management framework

JTEKT established six specialized subcommittees under the Global Environmental Coordination Committee chaired by the President. These discuss and determine the company policies and purposes. Regarding efforts of the entire JTEKT Group including domestic and overseas subsidiaries, we established the Global JTEKT Group Environment Liaison Meetings and carry out environmental conservation activities. In 2007, we started such activities in China where environmental issues arising from rapid economic growth are a concern. We held a general meeting for our 15 local subsidiaries to strengthen environmental and safety measures.



\*Outside the scope of third-party certification

#### **Environmental Policy**

- Deeply understand the importance of global environmental conservation and voluntarily and aggressively carry out global environmental conservation activities both in Japan and abroad concerning our all business activities, products and services.
- Continuously enhance the environmental management system to harmonize our business activities with the environment, and pursue cooperation with suppliers of raw materials.
- 3. Comply with environment-related laws, regulations and agreements pertaining to our business activities, and strive aggressively to prevent environmental pollution. In addition, contribute to global energy and resource conservation by accurately grasping technical needs related to global environmental conservation and developing and supplying products that meet such needs.
- 4. Raise the environmental awareness of all employees and pursue the following as important environmental management objectives in relation to all our business activities, products, and services:
- (1) Reduction of CO<sub>2</sub> emission through efficient energy utilization
- (2) Reduction of waste
- (3) Thorough control of chemical substances and reduction of substances of environmental concern
- (4) Reduction of raw and consumable materials
- (5) Reduction of logistics-related CO<sub>2</sub> emissions
- (6) Maintaining and improving community environments
- Maintain an organized environmental conservation structure, clarify environmental conservation activity objectives and targets, conduct periodic reviews, and pursue environmental conservation activities with participation of all employees.
- 6. Maintain an awareness of the community surrounding each business site, maintain good communication with concerned government agencies and loar residents, and publicly disclose information on our environmental management activities as necessary.

April 1, 2008

# T-O-P-II-C-S

An India-based affiliated company, SONA, was awarded in the environmental area SONA KOYO STEERING SYSTEMS LTD. (SONA), the overseas affiliated company that manufactures steering systems in India, received the 6th TERI Corporate Award for Environmental Excellence hosted by the Energy and Resources Institute (TERI). This is to honor a company for its noteworthy achievements in environmental preservation. In this case, the activities of SONA, including elimination of toxins, conservation of water used in the plant and promotion of a greening campaign were highly evaluated. SONA was the first company to win this award in the automobile industry.



Dr. Surinder Kapur, Chairman & Managing Director (left) and Shiri P. Chidambaram, the Finance Minister of India (right)

# [ Objectives and Results ]

# **■** Environmental Action Plan of JTEKT

To realize a sustainable society, JTEKT formulated the "Environmental Action Plan of JTEKT" that stipulates action policy and specific goals until 2010. Based on the plan, we are carrying out environmental conservation activities including at affiliated companies. In areas where goals have already been achieved, we have set more challenging targets and are working to achieve them.

#### PRTR Law:

PRTR is abbreviation for Pollutant Release and Transfer Register. This is a legal system in which administrative authorities show the volume of specific chemical substances released to the environment, as reported by the business entities.

# [ 1 ] Environmental conservation activities for further reducing environmental impact

\* Raising the targets

Item	Details	FY2007 Target	Results	Assessment	Page
Promotion of measures to prevent global warming	<ul> <li>Total CO<sub>2</sub> output: 5% reduction from 2003 level by the end of FY2010</li> <li>Unit CO<sub>2</sub> output: 30% reduction from 2005 level by the end of FY2010*</li> </ul>	268,000 (t-CO <sub>2</sub> ) 41.4 (t/100 million yen)	282,306 (t-CO <sub>2</sub> ) 41.3 (t/100 million yen)	×	50
Strengthening management and reduction of environmental burden	Substances subjected to PRTR Law:     60% reduction from FY1998 level by the end of FY2010	96 (t)	88(t)	0	53
	<ul> <li>Zero landfill waste: Reduce to zero by the end of FY2010</li> <li>Incinerated waste:</li> <li>96% reduction from the FY1990 level by the end of FY2010*</li> </ul>	28 (t) 1,254 (t)	26 (t) 1,177(t)	0	
Reducing waste and	Unite waste output:     30% reduction from the FY2003 level by the end of FY2010*	10.7 (t/100 million yen)	9.3 (t/100 million yen)	0	
promoting resource	Primary materials, by mass:  5% reduction from the FY2005 level by the end of FY2010	1.536 (t/1 million yen)	1.538 (t/million yen)	×	52~53
CONSCIVATION	Primary materials, by value:     5% reduction from the FY2005 level by the end of FY2010	9.69 (million yen/million yen)	9.41 (million yen/million yen)	0	
	Secondary materials, by value:     5% reduction from the FY2005 level by the end of FY2010	4.37 (million yen/million yen)	4.25 (million yen/million yen)	0	
Promoting the	CO <sub>2</sub> output at the transportation stage:     At or below the FY1990 level by the end of FY2010	17,406 (t-CO <sub>2</sub> )	17,621 (t-CO <sub>2</sub> )	×	
rationalization of logistics	Basic unit of CO <sub>2</sub> output:     40% reduction from the FY1990 level by the end of FY2010	2.68 (t/100 million yen)	2.58 (t/100 million yen)	0	51

# [2] Eco-friendly development and design

Item	Details	Results		Page
Efforts in the development and design stage	Reduction or environnmental burden	Development of (RP-CPS), which has high power and the world's highest standard of quality     Low friction thrust needle roller bearings     Weight reduction of hub units for small vehicles     Reduction of size and weight in damper pulleys     Low power consumption GL32J cylindrical grinders, etc.	0	45~49
Strengthening cooperation with suppliers	Further promotion of green purchasing     Creation of eco-friendly "Green Purchasing Guidelines"     for distribution to suppliers	Revision of "Green Purchasing Guidelines" (April 2008)	0	25

# [ 3 ] Expansion of environmental management in response to consolidated management

Item	Details	Results	Assessment	Page
Developing structure and improving actions	Share basic policy and action guidelines	Continued activities with domestic and overseas group companies	0	38,42

# [ 4 ] Proactive participation in social and conservation activities as a corporate citizen

Item	Details	Results	Assessment	Page
Promoting social contribution activities	Participating in environmental conservation activities	Implementing clean-up activities around the plant	0	33
Developing communication with local communities	Coordinating with and providing support for local governments	Continuing to hold local meetings regarding the environment	0	32
Promoting PR and information disclosure	Improving the supply of environmental information via the Internet     Improving and continuing to issue our environmental reports     Promoting regional community volunteer activities	Issued Social &Environmental Report 2007	0	

\*RC-EPS is a trademark of JTEKT CORPORATION.

# [ Environmental Burden of our Business Activities ]

Reducing the environmental burden of our business activity is the key point in environmental preservation activities. To reduce the environmental burden in each business activity, JTEKT quantitatively grasps the overall amount of resource and energy input and the overall amount of output of environmental burden.

# ■ Resource / energy input and environmental burden output

The chart bellow shows the amount of resource / energy input and environmental burden output. JTEKT makes every effort to use energy effectively and to minimize our contribution to global warming. Specifically, we try to reduce energy usage in forging, casting, heat treatment and machine processing, while promoting the conversion of energy source to electricity or to municipal gas, which are more energy-efficient.

Electricity and municipal gas make up about 95% of energy input (on a calorie basis). For effective utilization of resources, we recycle 98% of emissions discharged from each process and sent outside the company.

# CO<sub>2</sub> conversion factor used for CO<sub>2</sub> emission calculation

Electricity	0.3817 kg-CO <sub>2</sub> /kWh
Fuel oil A	2.7000 kg-CO <sub>2</sub> /L
Kerosene	2.5308 kg-CO <sub>2</sub> /L
Propane gas	3.0094 kg-CO <sub>2</sub> /kg
Municipal gas	2.2559 kg-CO <sub>2</sub> /m <sup>3</sup>

<sup>\*</sup>The source of CO<sub>2</sub> conversion factor: Japan Automobile Manufacturers Association, Inc.

To assess our self-improvement, we fixed an electricity conversion factor. CO<sub>2</sub> reduction effect by cogeneration is converted by the average of conversion factors for thermal power generation and reflected in the emission calculation.

GJ: Gigajoule (unit of heat) G=109

COD: Chemical Oxygen Demand (an index that indicates water pollution)

# INPUT

# Resource / energy inputs

# **Raw materials**

(metals, non-ferrous metals)

Total: 290,000 t

# **Energy**

Total: 6,961,175 GJ

Electricity	591,091 MWh
Municipal Gas	17,543,000 Nm³
LPG	3,135 t
Kerosene	875 kl
Fuel oil A	3,901 kl

# Water

Total: 2,860,000 m<sup>3</sup>

Service water	498,000 m <sup>3</sup>	
Industrial water	508,000 m <sup>3</sup>	
Groundwater	1,854,000 m <sup>3</sup>	

# **Chemical substances**

(transaction volume of substances set out by the PRTR Law)

Total: 132 t

# Logistics

Packaging and packing material: 5,174 t

# Manufacturing

Casting / Forging

**Heat treatment** 

Machining

**Painting** 

**Assembling** 



# **Products**

Bearings

Machine tools

# OUTPUT

# Emissions of environmentally detrimental substances

# Emission into the atmosphere

CO2 282,306 t-CO2
Output of substances
listed in the PRTR Law 70 t

# Emissions into rivers, lakes and oceans

Amount of wastewater	1,034,000 m³
COD	6.9 t
Nitrogen	8.3 t
Phosphorus	0.1 t
PRTR Law Subject Substance	e 0.1 t

# Emissions sent outside the company

Waste	1,203 t
Recycling	13,918 t
For-fee recycling	48,391 t
PRTR Law Subject Substance	17.4 t

# Logistics

CO<sub>2</sub> generated from product transportation

17,621 t-CO<sub>2</sub>

# [ To Reduce Environmental Risk ]

JTEKT has incorporated preventive measures into its environmental management system and strives to reduce environmental risks with the aim of eradicating regulatory infractions, abnormalities and complaints regarding harm to the environment.

We grasp the situation and take measures regarding the cases that didn't become abnormalities or complaints, in addition, we share such information for prevention. Furthermore, we listen to the opinions of local communities through the Local Environment Subcommittee and respond to such opinions, and we carry out emergency training every year as a precaution.

# **■** Environmentally Conscious Noise Control

As a measure for reducing global environmental risk, we built sound barriers for reducing noise when the old building was taken away from the site of the Nara Plant. In addition, we placed sound absorption sheets on the building to avoid the impact of the echo to the area outside the plant.

# ■ Response to environmental accidents and complaints

In August 2008, an accident, in which detection value of COD (chemical oxygen demand) and SS (suspended solid) exceeded the standard value fixed by law, happened at Toyohashi Plant. The reason was the overflow of untreated waste water caused by clogging of a sand separator.

In January 2008, the accident, in which oil drained into a public waterway through a foul water sewer and storm sewer happened at the Kokubu Plant. The reason was delay in discovering an inflow of oil into the storm sewer because there was no monitoring function set at the rainwater outlet.

So, in addition to improving and expanding facilities as a preventive measure, we thoroughly reviewed the management system and applied corrective measures to the other plants.

We are continuously promoting prevention activities through continued efforts.

# **■ Compliance Status for Environmental Laws and Regulations**

We have set voluntary standards for plant wastewater and atmospheric emissions that are even more stringent than those set by law. In FY2007, we had no penalties or fines except for the above two environmental accidents. There were no legal actions brought against us.

# Efforts related to soil and groundwater (continuous reporting)

Figure 01

To prevent groundwater contamination by trichloroethylene contained in the cleaning agent that was used before, Kariya and Okazaki Plant use a pump-and-treat method (\*1) to purify water and prevent the outflow of pollutants. In addition, the Okazaki Plant introduced bioremediation (\*2) through injection of nutrients in 2004 as a measure to promote water purification. The effect of bioremediation is demonstrated, as the detection value of trichloroethylene falls below the value fixed by law at the places where the bioremediation method is applied.

In addition, we report groundwater measurement results to the authorities as well as to local residents through Community Discussion Meetings.

( → Related article, See P.32 )



Sound barriers (Nara Plant)

# ➡ Figure | 01 FY2007 Trichloroethylene measurements

Plant	Maximum measured value in groundwater
Kariya	0.710 mg/L
Okazaki	0.137 mg/L

<sup>\*</sup>Environmental standard value 0.03 mg/l

### \*1 Pump-and-treat method:

Groundwater is turned to spray and air is blown from below to vaporize and separate organic solvents inside, and activated carbon absorbs the pollutants.

# \*2. Bioremediation:

This is a method for cleaning polluted environments using microorganisms. Substances such as nutrients are injected into the affected area to elevate the cleaning power of resident microorganisms.

# **■ PCB-used Equipment**

Figure | 01

We properly store PCB-using equipment, including condensers for which PCB (polychlorinated biphenyl) is used in insulation oil, and periodically report the volume and storage situation to the municipal authorities. In May 2008, we disposed of a total of 31 condensers stored at the Kariya and Higashikariya Plants after detoxification. We delegated this operation to Japan Environmental Safety Corporation. We promote disposal by delegation in a planned manner.

# [ Environmental Audit ]

To evaluate whether or not the environmental management system is continuously maintained and enhanced, JTEKT carries out both an internal and an external environmental audit every year.

# **■** Internal Audit

JTEKT conducts the internal environmental audit of each department and of the Specialized Environmental Subcommittees based on an audit plan every year. We follow up on all of the suggestions of the auditors and strive to continuously improve our environmental preservation level and reduce underlying environmental risks.

# **■** External Audit

An external auditing institution carries out a surveillance audit (once a year) and renewal inspection (once every three years) to check JTEKT's continuous compliance with its environmental management system. In the surveillance audit carried out in 2007, we received suggestions regarding compliance with environmental law and regulations, and regarding the system to properly reduce environmental risks, so we followed the suggestions. We received an overall assessment that we operate our environmental management system properly. Especially, activities for improving the environment that is directly-connected with the business operations and its results, proactive improvement activities for reducing environmental burden and activities for communicating with local residents, including regarding beautification activities, are highly evaluated.

# **■** Efforts by group companies

Figure 02

Five group companies, inclusing both domestic and overseas affiliates, obtained ISO14001 certification FY2007.

#### Figure 01

#### PCB-using equipment in storage

Plant	Condenser	Stabilizer
Kokubu	15	3,761
Kariya	1	850
Tokushima	66	126
Okazaki	83	99
Tokyo	23	269
Nara	11	112
Higashikariya	0	1
Total	199 units	5,218 units

There is no PCB-using equipment other than at the plants listed above.



A scene from the external environmental audit

# Figure | 02

JAFS (China)

# Group companies that obtained ISO14001 certification in FY2007 (domestic and overseas)

Domestic Group companies	Date certification obtained
KOYO HEAT TREAMENT CO., LTD.	December 2007
KOYO SALES, LTD.	March 2008
YUTAKA HIGH-TECH CO., LTD.	April 2008
Overseas Group companies	Date certification obtained
KAW (China)	December 2007

February 2008

# T-O-P-D-C-S

# KOYO HEAT TREATMENT CO., LTD. obtained ISO 14001 certification

As an environment-related activity, JTEKT promotes having our domestic affiliated companies obtain ISO certification. In FY2007, KOYO HEAT TREATMENT CO., LTD. obtained ISO14001 certification. This attempt enhanced employees' awareness of energy saving and waste reduction and brought results. In addition, they could conduct a compliance assessment properly through an internal audit. In FY2008, they are further promoting environmental conservation activities as well as increasing the number and level of the internal auditors.



The main manufacturing site, Yao Plant (Osaka

# [ Environmental Accounting ]

JTEKT carries out continuous improvement effectively and efficiently through quantitatively grasping the cost and effect of environmental preservation. For all stakeholders to have better understanding of our environmental preservation activities, we utilize the figures as the data for information disclosure.

# **■ Cost for Environmental Preservation**

(Unit: million yen)

Category	Description	Investment	Cost
Business area cost     Pollution control	<ul> <li>Maintenance and management costs for wastewater treatment equipment</li> <li>Maintenance and management costs for dust collection equipment</li> </ul>	175	298
② Global environmental protection	Cost for energy conservation measures	371	57
3 Resource recycling	<ul> <li>Investment and maintenance costs for waste reduction</li> <li>Cost of waste disposal, recycling, etc.</li> </ul>	32	707
2 Upstream and downstream cost	<ul><li>Green purchasing costs</li><li>Expense for industry groups, etc.</li></ul>	_	661
Management activity cost	Cost of education     and awareness-development activities     Cost of maintaining     and managing ISO14001 certification     Cost of environmental monitoring     and measurement	_	215
Research and development cost	<ul> <li>Development cost of eco-friendly products</li> </ul>	870	1,875
5 Social activity cost	<ul> <li>Cost for environmental information disclosure</li> <li>Cost of greening, etc.</li> </ul>	_	82
6 Environmental damage cost	<ul><li>Pollution load levy (Tokyo and Tokushima)</li><li>Cost of groundwater and soil purification</li></ul>	_	25
Subtotal		1,448	3,920
Total		5,3	68

# ■ Economic Effect of Environmental Preservation Measures

(Unit: million ven)

	Details of effect	Economic effect
Profit	Business profit from the recycling of waste products generated by our primary business activities and used products, etc.	1,547
	Reduction of energy cost	332
Cost reduction	Reduction by energy preservation measures from resources conservation and recycling	24
Total	1,903	

# **■**Environmental accounting results for FY2007

Figure 01

The total environmental preservation cost for FY2007 was 5,370 million yen, which is comprised of 1,450 million yen of investment and 3,920 million yen of expense, and increased 250 million yen (5%) when compared to the previous year. Investment in energy saving as a countermeasure against global warming accounts for 64% of the business area cost.

The economic benefit from environmental preservation measures was 1,900 million yen, increased 240 million yen (14.6%) from previous year. Profit on sales of recyclable materials increased because of escalating metal price.

#### Note for chart "Economic Effect of Environmental Preservation Measures"

Figures only include calculable items including energy-saving effect. Therefore, the effects such as contribution to added value of products, environmental risk aversion and improving the company image are not included in the economic effect.

Cost depreciation is not included. Costs with combined expenditure purposes are shown.

#### Calculate range:

JTEKT CORPORATION only (Head offices and branches, Logistics Centers, R&D Dept. and all plants) Accounting period:

FY2007 (April 2007 to March 2008)

# ► Figure | 01 Costs and Effects of Environmental Preservation



# [ Environmental Education and Training ]

# **■** Environmental Education

JTEKT conducts various kinds of environmental education to enhance all employees' environment-consciousness. In addition to training internal environmental auditors, we educate about the environment in all education curriculums for entry-level employees, those newly-appointed to key position and engineers.

# 01 | Environmental self-awareness sessions

We hold environmental self-awareness sessions for employees at each plant every June, our environmental month. In 2007, to enhance environmental-awareness, we held the session on the theme of finding an environmental activity you can do by yourself.

# 02 | Educating internal environmental auditors

We conduct training for internal environmental auditors once a year for employees and employees of affiliated companies. In 2007, a total of 30 participants attended the course and newly registered as internal environmental auditors.

Number of people with major environment-related qualifications (FY2007)

Pollution prevention	Atmosphere	25
manager	Water	30
	Noise	25
	Vibration	17
Energy management ma	anager	24
Energy management officer		9
Internal environmental	auditor	274

Specially controlled industrial waste manager	32
Dangerous object handler (class A)	3
Dangerous object handler (class B)	250
Dangerous object handler (class C)	39
Licensed electrician (first-class)	1
Licensed electrician (second-class)	12
Licensed electrician (third-class)	22

# **■** Emergency training

It is necessary to conduct emergency training sufficiently and routinely to minimize environmental risks. JTEKT periodically carries out emergency training across the organization and inspects environmental preservation equipment. During inspection or training, we specify the critical incidents among fire, explosion, earthquake, typhoon and leakage of harmful substances that have a high potential for creating an emergency. Training and inspections are conducted based on the role of each department organized for emergency response.



Internal environmental auditor training



Environmental self-awareness session (Kariya Plant)



For sharing environmental awareness with all employees

Environmental issues frequently come up in news or daily conversation these days. I talk about the company's environmental preservation activities during environmental education.

I hope that environmental education becomes the stage for employees to think about the activity they can do, and leads to as many results as possible.



Emergency training (Tokyo Plant)

# General Management

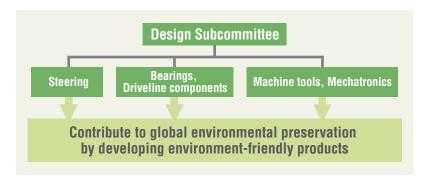
# **Efforts in the Development and Design Stages**

JTEKT focused on efforts at the development and design stage as the most important point of all environmental activities. This is because epoch-making technological innovation has a possibility to achieve high goals that cannot be achieved with the other methods.

# [ Promotional Framework ]

Under the Global Environment Conservation Committee, it is promoted and managed by the Design Subcommittee.

It is important to always improve the function of the product as well as improving environmental functions. In addition to providing comfort and safety, and fulfilling such requirements as quality, cost and deadline, we intend to develop technology that finally contributes to society.



# [ Goals and Evaluation ]

For numerical evaluation of environmental burden reducing effect, JTEKT determines the basic equation of environmental efficiency as an original index. Specific goals are determined numerically and assessed every year.

# Basic equation of environmental efficiency

W: mass term, T: loss term, E: energy term

# Calculation method of reduced environmental burden

Environmental efficiency is calculated from degree of to which products can be made lighter, more compact, more energy efficient, etc. Environmental burden is the figure calculated as a reciprocal number.

Reduced environmental burden is calculated from the following formula, for example, when the figure of environmental efficiency is 1.25 that means that environmental burden was reduced by 20%.

$$(1 - \frac{1}{1.25}) \times 100 = 20\%$$

# [ Activities and Results by Business Areas ]

We will introduce our main activities and results of our three business areas, "Steering Systems", "Bearings and Driveline", "Machine Tools and Mechatronics" in 2007.

# **■ Steering Systems**

# 01 | As the responsibility of the company that knows everything about bearings

Steering is an instrument that bears an automobile's turning function, and function and reliability are valued. JTEKT is one of the few companies in the world that covers all of the various kinds of steering systems, and promotes product development that has both high-quality and eco-friendliness.

# 02 | Reduction of Product Mileage by Localization (\*1)

We promote local production and local procurement overseas for CO<sub>2</sub> reduction during transportation of steering products.

# **03 Types and Application of Steering Products**

# **Electric power steering**

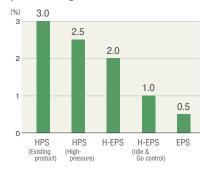
Electric power steering is better than hydraulic power steering and hydraulic-electric power steering in gas mileage and compactness, but increasing power was the issue to be resolved. Therefore, we tried to realize high power along with environment design.

There are three types of electric power steering systems, according to the automobiles to which it will be applied, and we develop the most suitable technology on the basis of features of the systems. Among them, we succeeded in realizing significantly higher power in the rack-assist type.

#### \*1 Product mileage by localization:

This is a concept of CO<sub>2</sub> reduction by saving resources and energy in logistics. The figure is gained from multiplying logistics volume by travel distance.

# Comparing energy consumption of power steering units



An energy ratio used for power steering among energy cosumption of a whole automobile.

# T-O-P-II-C-S

# The World's First Electric Power Steering Applied to a Large SUV (\*2)

Compared to hydraulic power steering (HPS) which is powered by the engine, electric power steering (EPS) which is powered by a motor can increase fuel economy because it exhibits smaller energy loss of engine. However, realizing high power is the issue to be resolved in order to load EPS on large SUVs whose overall vehicle weight exceeds 3 t.

JTEKT tried to make EPS more powerful in various ways including developing a new system, and as one of the achievements, we succeeded in developing rack coaxial type

EPS (RC-EPS) that possesses the world's highest quality. In 2007, RC-EPS enabled loading EPS in large SUVs and pick up trucks for the first time in the world. To contribute to global environmental preservation, we promote diffusion of EPS through further technical innovation.



Newly developed rack coaxial type EPS

# One form of vehicle. Abbreviation for Sport Utility Vehicle. Relation of EPS power output and overall vehicle weight Rack output N (50mm/rev conversion) 13,500 HPS area 13,000 Expanded EPS area 12,500 Expanded EPS area 12,500 11,500 11,500 11,500 11,500 12,000 11

# **Hydraulic-electric power steering**

We focused on improving the efficiency of pumps, reducing size and reducing torque loss.

# **Hydraulic power steering**

We focused on reducing size, lightening and torque loss.

# Types of steering and the automobiles to which applied

	Application					
		Passer	iger car		Large	Location installed
	Kei	Small	Medium	Large	vehicles	
Electric power steering (EPS)						
<ul><li>Column-assist Type (C-EPS)</li></ul>	•	•	•			Cabin
<ul><li>Pinion-assist Type (P-EPS)</li></ul>		•	•			Engine compartment
<ul><li>Rack-assist Type (R-EPS)</li></ul>			•	•		Engine compartment
Hydraulic-electric power steering (H-EPS)		•	•	•		Engine compartment
Hydraulic power steering (HPS)	•	•	•	•	•	Engine compartment

	System	Point of Development	Effect	i	Value of environmental effect
	Column-assist Type	<ul><li>Housing optimization (lightening)</li><li>Reduction of product mileage by</li></ul>	Mass	28% reduction	
		localization in Japan, North America, Europe, China and Thailand	Torque loss reduction	21% reduction	1.60
			Consumption energy	83% reduction	
Electric power steering	Pinion-assist Type	<ul> <li>Adopting hall IC torque sensor (reduction in size and weight)</li> </ul>	Mass	22% reduction	
power		, , , , , , , , , , , , , , , , , , ,	Torque loss reduction	25% reduction	1.58
Electric			Consumption energy	83% reduction	
	Rack-assist Type	<ul> <li>Improvement of motor efficiency (reduced size and high power)</li> </ul>	Mass	23% reduction	
	,	High efficiency realized by adoption of double-reduction gear of	Torque loss reduction	36% reduction	1.71
	gar.	ball screw and bevel gear	Consumption energy	83% reduction	
ectric ring	A.	Efficiency improvement of pumps (low loss)	Mass	20% reduction	
Hydraulic-electric power steering			Torque loss reduction	11% reduction	1.40
Hydra			Consumption energy	67% reduction	
ing		<ul><li>Housing optimization (lightening)</li></ul>	Mass	11% reduction	
Hydraulic power steering			Torque loss reduction	10% reduction	1.14
H	, ,		Consumption energy	17% reduction	

\*RC-EPS, C-EPS, P-EPS, R-EPS and H-EPS are trademarks of JTEKT CORPORATION.

# Bearings and Driveline

Bearings that widely assist the industry and machinery, and driveline components that assume the running function of automobiles. Both components must meet the requirement of high performance as well as eco-friendliness.

Under such circumstances, we chose efficiency and weight reduction for bearings, and size reduction, weight reduction and energy-saving for driveline components as the main subjects of development.

# 01 | Lightweight hub unit for compact vehicles / Saving weight by 30%

Applied new design approach derived from CAE analysis including unit periphery. Succeeded in reducing weight by 30% while maintaining rigidity and strength.

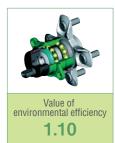


Figure 01

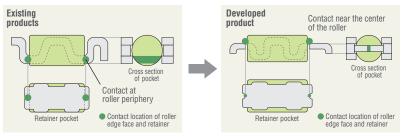
Figure 02

# 02 | Low friction thrust needle roller bearing / **Reducing torque loss by 50%**

We made an optimal design of the retainer of thrust needle roller bearings, the bearings for transmission. We succeeded in reducing torque loss by 50% by reducing the skid resistance of the roller and thus contributed to improving gas mileage.



#### Structure and features



# 03 | Damper pulley for small gasoline engine / Reduction in size and weight, adoption of water-based paint

We changed the accessory drive system to the serpentine method (the method that drives an accessory with one belt) with the improvement of strength and durability of damper rubber, and so we realized reduced size and lightening.

In addition, we reduced VOC (\*1) emission by applying water-based paint.



# Figure 01 Optimizing the form of hub unit

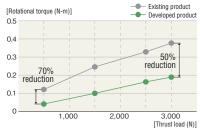


We designed the best suited form to save weight while maintaining strength.

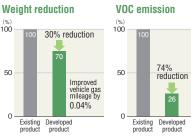
#### Figure | 02

## Reduction efficiency of torque loss

Oil quantity: 200ml (Rotating speed: 200min-1)



# Figure | 03



\*1 VOC: volatile organic compound

# **■** Machine Tools and Mechatronics

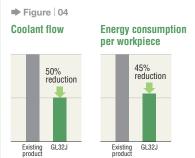
When developing and designing machine tools, we think this is the way we provide products with less environmental burden. We assessed the impact on the environment from the standpoint of the overall life cycle of the product including manufacturing, usage and disposal by conducting product assessment.

# 01 | GL32J Cylindrical Grinders / Reduced consumption energy per workpiece by 45%

We reduced slide resistance, amount of coolant and cooling energy of wheel bearing oil regarding the equipment, except grinding parts, and after all, we succeeded in reducing overall energy consumption of machinery.

In addition, regarding grinding parts, we realized processing by a broad wheel of  $60\,\mathrm{mm}$  with the development of a highly rigid wheel spindle. That provided greater productivity. We reduced energy consumption per workpiece by 45%. We can reduce  $CO_2$  by 10.5 t's in case of manufacturing 200,000 workpieces per year.





# 02 | CNC (GC50) Development of defective dimension preventing function / Reduced energy loss by 90% through reduction of defective units

Figure 05

Defective units produced in the manufacturing process cause waste and lead to environmental burden. In 2007, we developed the defective dimension preventing function to reduce defective units in the grinding process. It detects foreign material that gets mixed in with a workpiece when grinding with an in-process sizing device. Until then, when sizing with the foreign material in the device, the device malfunctioned and produced defects. However, the newly developed function reduces foreign material and has reduced defects by 90%. When loss energy is reduced in the 20 processing stages, we can reduce  $CO_2$  by more than 5 t's.

# Reduction of energy loss by reduction of defects Foreign material Grinding wheel Workpiece Measuring unit Sizing device (amplification section) Sequence controller Operation board CNC (GC50) Size control

Drive control

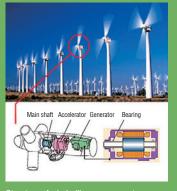
# T-O-P-II-C-S

# **Technology of JTEKT Contributes to the Diffusion of Clean Energy**

Wind power generation is clean energy that is rapidly spreading, mainly in Europe, because of the steep rise of crude oil prices and for prevention of global warming. As maintenance of wind power generators, which are installed at high places, is not easy, long life and reliability is required. Large-size non-conductive ceramic bearings, which JTEKT developed and for which we established a mass production system, succeeded in preventing electric corrosion\* and heat control and realized longer life.

As a result, we contributed to the improvement of wind power generators and reduction of maintenance costs.

\*electric corrosion: A phenomenon in which electric flow passes through the inside bearings and the surface of rolling contact melts locally.



Structure of windmill power generators

# **Efforts in the Production and Logistics Stages**

JTEKT is promoting effective use of materials as well as reducing CO<sub>2</sub> emission, the cause of global warming. In addition, we promote production and logistics activities that harmonize with the environment through waste reduction and management of chemical substances.

# [ CO<sub>2</sub> Reduction ]

# **■ CO<sub>2</sub> Reduction in Production**

Figure | 01

Global warming is the key environmental issue for JTEKT. So, we promote energy saving and  $CO_2$  reduction through such activities as enhancing the efficiency of existing facilities and upgrading aging facilities into high-efficiency ones. In FY2007, we couldn't achieve our target to reduce 268,000 tons of  $CO_2$  by approximately 5% because the production volume increased. However, we reached the goal for reduction of  $CO_2$  unit output. We pursue reduction of  $CO_2$  unit output while we focus on achieving our reduction target for  $CO_2$  emissions, including uncovering hidden items and conducting in-house activities in horizontal cooperation.

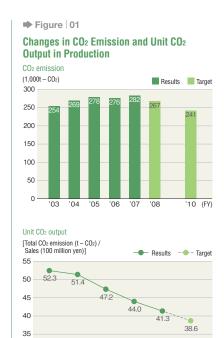
# **O1 | Primary Initiatives**

- (1) Improvement of heat-treatment process
- (2) Improvement of production / peripheral equipments
- (3) Activities for expanding energy conservation through integration of low-load lines
- (4) Efficient operation of in-house power operation
- (5) CO<sub>2</sub> Reduction by energy conversion
- (6) Activation of energy-saving activities at workplaces
- (7) Environmental consideration at newly built plants

# 02 | Primary Actions Implemented

# Kokubu Plant realized energy-saving by upgrading coolant temperature-control devices

A coolant temperature-control device is operated in the Kokubu Plant to restrict elevation of heat. The device was renewed to an inverter type, which has excellent energy-saving capability. The new device realized efficient use of energy; specifically, it realized reduction of electric power charge of 1.4 million yen per year and  $CO_2$  reduction of  $47 \ t - CO_2$ . We are going to expand application of such types of coolant device based on the coolant temperature control method guidelines as an energy conservation activity.



# T-O-P-II-C-S

# Kokubu 2nd Plant was awarded by the Kinki Bureau of Economy, Trade and Industry

On February 21, 2008, at the energy-saving month award ceremony, Kokubu 2nd Plant received the director's award from the Kinki Bureau of Economy, Trade and Industry for its excellence in energy management. This is in appreciation of Kokubu 2nd Plant's long-standing efforts for energy efficiency. Kokubu 2nd Plant keeps on proactively promoting energy efficiency and seeks to receive the Minister's Award, Ministry of Economy, Trade and Industry.



# ■ CO<sub>2</sub> Reduction in Logistics

Figure | 02

We aim to realize CO2 reduction to the 1990 level by 2010.

# **O1 | Primary Initiatives**

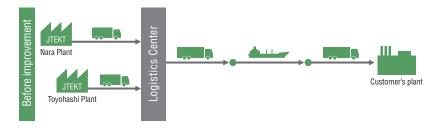
- (1) Improvement of Distance Distribution
- (2) Usage of trailers for core routes

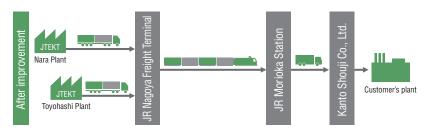
# 02 | Primary Activities Implemented

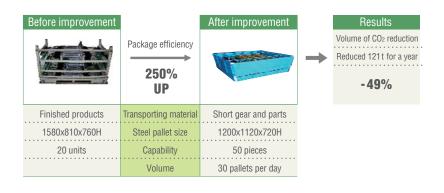
# Nara Plant / Toyohashi Plant, Review of Packaging and Method of Distance Distribution

We used to pack the finished products on pallets before, when the products were transported from the Nara Plant and Toyohashi Plant to the customer in Iwate Pref. But we changed the transportation method. We transport parts packed on pallets, then the parts are gathered near the customer and assembled to the final products. That improved the package efficiency in distance distribution by 250%. Furthermore, we changed the means of transportation from marine transport to rail transport. That reduced CO<sub>2</sub> emission by 121 t (a 49% decrease from the previous year).

We are reducing  $CO_2$  emissions further by applying this method to distribution in other areas.

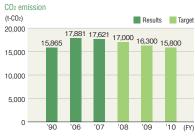






# Figure | 02

# Change in $\text{CO}_2$ Emission and Unit $\text{CO}_2$ Output in Logistics





# [ Reduction of Material Usage ]

JTEKT organizes the Resource Conservation Committee as one of the specialized environmental committees to respond to the resource depletion issue. Specifically, we endeavor to reduce usage of primary materials and subsidiary materials including grinding wheels, cutters and grinding fluid.

# ■ Reducing usage of primary material

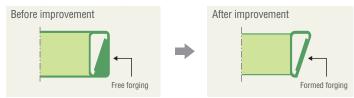
Figure 01

We reduced material loss by not only changing material or quality of material, but changing production method and reducing machining allowances. We succeeded in reducing material cost by improving the yield ratio. In addition, we utilize punched-out material, for example, we make another product from punched-out materials when making products by molding.

# Improving yield ratio of formed and fabricated materials

When forging an inner ring of middle and large sized bearing, we reduced material loss at processing by preparing materials that fit to the form after processing as far as possible. We achieved an effect of 590,000 yen per month.

# Inner ring of middle and large sized bearing



# **■** Reducing Subsidiary Material Usage

Figure | 02

We succeeded in using the subsidiary materials for a longer term by reviewing the materials of grinding wheels, cutters and dies, or by changing their specification including size and hardness. As a result, we realized a reduction of subsidiary material cost. In addition, we promote recycling of waste oil, grinding wheels, cutters and jigs.

# **Reduction of mold cost by**

# changing recycling frequency of the heat forging die

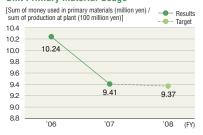
We reuse the metal mold for heat forging (punch) that is washed-up after trimming wearing parts. We quantified the trimming amount and improved it from 5 mm to 2 mm. Thus, we succeeded in increasing recycling frequency.

# **Punch cross-section**



#### Figure 01

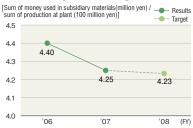
#### **Unit Primary Material Usage**



\* The date above is from FY2006 onward when the Resource Conservation Subcommittee started.

#### Figure | 02

#### **Unit Subsidiary Material Usage**



\*The date above is from FY2006 onward, when the Resource Conservation Subcommittee started.

# [ Waste Reduction ]

Figure | 03

JTEKT proactively conducts waste reduction activities to address to the shortage of landfill sites and to utilize resources. In addition to reducing the amount of waste hauled to landfill sites or incinerated, we promote reduction of overall waste including for-fee recycling and free-of-charge / for-value recycling. We achieved the FY2010 target, so we set stricter targets and took them up as a challenge.



# ■ Main Activities Implemented

# Toyohashi Plant / For-fee recycling of grinding fluid oil

When changing grinding fluid used for metal processing, we used to pay the cost for recycling it into fuel material. We succeeded in changing it into valuable resource, recycled crude oil material, by separating oil and water with the use of an oil-water separating tank. That changed waste oil of which 170,000 t's were emitted in a Oil-water separating tank



year into valuable resource. Also, we succeeded in reducing disposal cost by 340,000 yen per year.

# [ Management and **Reduction of Chemical Substances** ]

JTEKT established "The Chemical Substances Management Standard" for management of such substances. In addition, we endeavor to reduce the emission of PRTR law subject substances by 60% compared to the 1998 level by 2010. In 2007, we reduced of PRTR law subject substances by 150,000 t's by changing grinding fluid and washing fluid into those that don't contain boron.

#### Figure 03 **Changes in Incinerated Waste Emission** [Amount of emission (t)] Results Target 3,000 Target value: 2,3842 2,500 Reduction of 96% from the 1990 level 2,000 463 (Raising the target) 1,500 1 177 1.000 760 500 10 (FY)

#### **Changes in Landfill Waste Emission**



#### **Unit Waste Amount Transition**

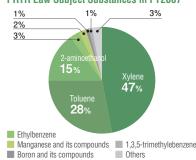


Figure 04

## Changes in Emission and Transportation of **PRTR Law Subject Substances**



# **Details of Emission and Transportation of** PRTR Law Subject Substances in FY2007



# T-O-P-D-C-S

# Kaizen Activity at Tokushima Plant Awarded for its originality and ingenuity

Improvement in changing iron oxide fine powder into a valuable resource, a kaizen example reported in our Social & Environmental Report 2007, was awarded a prize by the Ministry of Education, Culture, Sports, Science and Technology. The awarded activity is an which we used to pay a recycling fee. We continue such kaizen activities for promoting waste reduction by making the best use of inventiveness.



# **Environmental Report**

# **Environment Data by Location**

JTEKT measures environmental impact on the neighboring area at all of our 12 domestic plants

through the Local Environment Subcommittee. (\*Related article, See P.41)

We continuously manage local environment risk, including disclosing measured amounts of subject substances

# Kokubu **Plant**

#### Number of employees 1.250

# **Products**

Various types of ball and roller bearings Ultra-large bearings Hub units High-precision bearings



#### ■ Water Quality Measurement Data

Unit: mg/@ (except pH values)						
Item	Regulation	Results				
item	Value	Maximum	Average			
pH	6.0~8.0	7.8	7.0			
COD	30	21	13			
BOD	30	29	16			
SS	60	11	4.5			
Oil	4	3.5	1.7			
Zinc	4	0.47	0.20			
Soluble iron	10	_	_			
Soluble manganese	10	_	_			
Fluorine	8	ND	ND			
Nitrogen	15	11	5.9			
Phosphorus	1.5	0.64	0.21			
Boron	_	0.39	0.34			
Displacement per day (m³)	_	1,192	889			

#### ■ Atmospheric Measurement Data

	Unit Particulates: g/m3N, NOx: ppm, Sox: K value					
Item	Equipment	Regulation Value	Greatest Measured Value			
Particulates	Boilers	0.30	0.004			
NOx	(for forging)	100	85			
S0x	SOx (for forging)		0.007			

#### ■ Noise / Vibration Data

Unit: dB				
Item		Regulation Value	Greatest Measured Value	
	Morning	65	63	
Noise	Afternoon	70	64	
NOISE	Evening	65	64	
	Night	60	58	
Vibration	Afternoon	70	46	
vibration	Night	65	47	

#### ■ PRTR Law Subject Substance

- rnin	Law Subject Substance								Ur	iit: kg/year
Substance Cubatana Mana		Amount		Emission		Trans	sfer		Treated	
No.	Substance Name	Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
16	2-aminoethanol	10,011	0	30	0	0	9,981	0	0	0
63	Xylene	2,821	2,821	0	0	0	0	0	0	0
311	Manganese and its compounds	1.170	0	23	0	0	421	0	0	726

# **Kariya Plant**

# Number of employees 1 417

#### **Products**

Machine tools Damper pulleys Machined parts



# ■ Water Quality Measurement Data

Unit: mg/2 (except pH values					
Item	Regulation	Results			
Item	Value	Maximum	Average		
pH	5.8~8.6	7.3	7.0		
COD	(14)	6.2	4.9		
BOD	(20)	11.7	9.2		
SS	(20)	1.0	1.0		
Oil	5	0.60	0.33		
Zinc	2	0.60	0.20		
Soluble iron	5	0.53	0.40		
Soluble manganese	2	0.25	0.23		
Fluorine	5	0.14	0.11		
Nitrogen	(17.2)	13	12		
Phosphorus	(1.4)	0.05	0.04		
Boron	10	0.05	0.03		
Displacement per day (m3)	_	1.653	1.159		

# ■ Atmospheric Measurement Data

	Unit Particulates: g/m3N, NOx: ppm, Sox: m3N/h					
It	tem	Equipment	Regulation Value	Greatest Measured Value		
F	Particulates	Boilers	0.1			
Ν	lOx	(for canteens)	100	63		
S	60x	(101 dantoono)	0.5	_		
F	Particulates	Boilers	0.1	0.003		
Ν	lOx	(for cool & hot	100	46		
S	SOx	water generators)	0.5	-		

## ■ Noise / Vibration Data

			Unit: de
Item		Regulation Value	Greatest Measured Value
	Morning	64	57
Noise	Afternoon	69	62
MOISE	Evening	64	63
	Night	59	58
Vibration	Afternoon	68	42
VIDIALIOII	Night	63	39

# **■ PRTR Law Subject Substance**

■ PRTR Law Subject Substance Unit: kg/year										
Substance	Substance Name	Amount	Emission		Transfer			Treated		
No.		Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
40	Ethylbenzene	3,147	2,562	0	0	0	0	0	0	585
63	Xylene	8,674	8,309	0	0	0	0	0	0	364
227	Toluene	12,591	10,111	0	0	0	0	0	0	2,480

# **Tokushima Plant**

## **Number of employees** 1,096

# **Products**

Ball bearings Water pump bearings Cylindrical roller bearings Special-environment bearings



#### ■ Water Quality Measurement Data

Unit: mg/& (except pH values)

Item	Regulation	Res	Results			
Item	Value	Maximum	Average			
pH	6.0~8.2	7.4	7.0			
COD	10	9.8	7.8			
BOD	_	_	_			
SS	19	13	4.7			
Oil	3	2.5	1.8			
Zinc	2	0.05	0.05			
Soluble iron	10	0.50	0.50			
Soluble manganese	10	0.25	0.25			
Fluorine	10	0.11	0.11			
Nitrogen	25	6.6	4.8			
Phosphorus	2.5	0.11	0.05			
Boron	_	_	_			
Displacement per day (m³)	_	1,058	906			

#### ■ Atmospheric Measurement Data

Unit Particulates: g/m3N, NOx: ppm, Sox: K value Greatest Measured Value Regulation Item Equipment Particulates NOx 0.001 Boilers (for heating) 165 250 S0x Particulates Boilers (for absorption cooling and heating machine) 0.01 79 NOx SOx 250 0.06 Particulates 0.1 950 Diesel engine NOx 850

# ■ Noise / Vibration Data

Unit: dB Regulation Value Item Morning 60 57 Afternoor 65 59 Noise Evening Niaht 55 60 52 52 52 Vibration Night

Unit: kg/year

Substance No.	Substance Name	Amount		Emission		Transfer			Treated	0
		Handled	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste		in Plant	Consumed
63	Xylene	4,364	4,364	0	0	0	0	0	0	0

Unit: dB

- Water quality / pH: Hydrogen ion concentration
- COD: chemical oxygen demand BOD: biochemical oxygen demand
- SS: suspended solids
- Oil: n-hexane extracted substance content.
- ( ) denotes average volume per day ND or not detected: less than lower limit
- Regulation values / Self-regulatory standards (including values stricter than those set by law)
- which exceeds 1,000 kg/year (excluding dioxins)
  The substance number indicates the government designated number of a class 1 chemical substance uncer PRTR law. The volume treated in a plant means the volume of a PRTR sustance which is treated in a plant by conversion to a different substance via incineration. neutralization, decomposition, chemical reaction, etc.
  The amount consumed means the amount of a PRTR substance which is converted to a different substance by a chemical reaction and either used in a product or incidentally removed from the plant.

# **Okazaki Plant**

# Number of employees

# **Products**

Electric power steering Power steering gear AT / CVT proportional control valves CVT oil pumps Propeller shafts Cast parts



#### ■ Water Quality Measurement Data

	Onit: mg/& (oxcopt pri valuot					
Item	Regulation	Res	ults			
Itom	Value	Maximum	Average			
pH	6.5~8.5	7.7	7.3			
COD	20	4.6	3.1			
BOD	20	2.8	1.7			
SS	20	1.3	1.0			
Oil	2	0.30	0.14			
Zinc	3	0.10	0.00			
Soluble iron	5	0.57	0.25			
Soluble manganese	3	0.30	0.10			
Fluorine	1	0.10	0.01			
Nitrogen	15	8.9	8.0			
Phosphorus	2	0.07	0.04			
Boron	10	0.06	0.03			
Displacement per day (m³)	_	295	206			

# ■ Atmospheric Measurement Data

	Unit Particulates: g/m3N, NUx: ppm, Sox: m3N/hr									
Item	Equipment	Regulation Value	Greatest Measured Value							
Particulates	Boilers	0.05	ND							
NOx	(for thickeners)	100	54							
S0x	(101 timenonoro)	0.5	_							
Particulates	Boilers	0.1	ND							
NOx	(for air conditioning)	130	32							
S0x	(101 dir conditioning)	ND	_							
Particulates		0.15	0.01							
NOx	Melting furnace	100	83							
S0x		0.76	_							
Particulates	Can angina	0.05	0.005							
NOx	Gas engine (cogeneration)	180	90							
S0x	(0090.1014.1011)	6.08	ND							
■ DDTD I as	w Subject Substans	0								

# ■ Noise / Vibration Data

			Unit: dl
Item		Regulation Value	Greatest Measured Value
	Morning	65	59
Noise	Afternoon	70	59
INDISE	Evening	65	59
	Night	60	59
Vibration	Afternoon	70	30
VIDIALIOII	Night	65	31

PRIK	PRIK Law Subject Substance Unit: kg/ye									
Substance		Amount	Emission			Transfer			Treated	
No.	Substance Name	Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage As Waste		Recycled	in Plant	Consumed
44	Ethylene glycol monoethyl ether	1,990	0	0	0	0	0	0	0	1,990
63	Xylene	2,101	2,013	0	0	0	0	0	0	88
227	Toluene	4,734	3,802	0	0	0	0	0	0	933
311	manganese and its compounds	55,302	0	0	0	0	1,106	0	0	54,196

# Tokyo **Plant**

#### **Number of employees** 465

#### **Products**

Needle roller bearings Constant velocity joints Driveshafts Propeller shafts



### ■ Water Quality Measurement Data

Unit: mg/& (except pH values)

	J			
Regulation	Res	ults		
Value	Maximum	Average		
5.8~8.6	7.8	7.3		
_	-	-		
150	8.0	3.8		
200	18	7.0		
20	5.0	3.0		
2	-	-		
10	-	-		
10	-	_		
8	-	-		
60	14	7.6		
8	1.2	0.39		
_	_	_		
_	270	234		
	Value 5.8~8.6  − 150 200 20 2 10 10 8 60	Value         Maximum           5.8~8.6         7.8           -         -           150         8.0           200         18           20         5.0           2         -           10         -           8         -           60         14           8         1.2           -         -		

### ■ Atmospheric Measurement Data

Office 1 articulates, g/m N, NOX. ppm, OOX. P										
Item	Equipment	Regulation Value	Greatest Measured Value							
Particulates	Can abanestian	0.05	0.003							
NOx	Gas absorption boilers	50	30							
S0x	Dollors	0.1	0.01							

# ■ Noise / Vibration Data

	Item		Regulation Value	Greatest Measured Value
	Noise	Morning	_	_
		Afternoon	70	69
	INDISC	Evening	60	58
		Night	55	54
	Vibration	Afternoon	60	47
	VIDIALION	Night	50	47

# ■ PRTR Law Subject Substance

	Titti Law dubject dubstance Unit. kg/y									iii. kg/yeai
Substance		Amount	Emission			Transfer			Treated	
No.	Substance Name	Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
1	Zinc compounds	1043	0	0	0	0	104	0	0	939
16	2-aminoethanol	1,343	0	0	0	4	1,339	0	0	0
63	Xylene	2,486	2,486	0	0	0	0	0	0	0
227	Toluene	5,284	5,284	0	0	0	0	0	0	0

# Kagawa **Plant**

#### **Number of employees** 648

Tapered roller bearings

# ■ Water Quality Measurement Data

Unit: mg/& (except pH values)

Item	Regulation	Results			
ILGIII	Value	Maximum	Average		
pH	5.8~8.6	7.8	6.7		
COD	40	38	33		
BOD	40	38	35		
SS	50	12	7.3		
Oil	3	2.9	2.4		
Zinc	2	ND	ND		
Soluble iron	10	ND	ND		
Soluble manganese	10	ND	ND		
Fluorine	8	ND	ND		
Nitrogen	60	23	15		
Phosphorus	8	1.2	0.53		
Boron	_	_	_		
Displacement per day (m³)	_	694	540		

# ■ Atmospheric Measurement Data

Unit Particulates: g/m3N, NOx: ppm, Sox: K val						
Item	Equipment	Regulation Value	Greatest Measured Value			
Particulates		0.3	0.0044			
NOx	Boilers No. 1	260	65			
S0x		5.0	0.89			
Particulates		0.3	0.0802			
NOx	Boilers No. 2	250	100			
S0x		5.0	0.32			
Particulates	On aita nawar	0.1	0.0467			
NOx	On-site power generators	950	860			
S0x	gonorators	5.0	0.69			

# ■ Noise / Vibration Data

			Unit: dE
Item		Regulation Value	Greatest Measured Value
	Morning	65	64
Noise	Afternoon	70	65
INDISC	Evening	65	63
	Night	60	59
Vibration	Afternoon	49	32
VIDIALIUII	Night	46	30

									0.	iit. Ng/youi
Substance No.	Substance Name	Amount Handled	Emission		Transfer			Treated		
			Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
63	Xylene	2,922	2,922	0	0	0	00	0	0	0
304	Boron and its compounds	1,040	0	42	0	0	999	0	0	0

# Environmental Report | Environment Data by Location

# Nara **Plant**

# Number of employees

# **Products**

Electric power steering Hydraulic power steering Manual steering



#### ■ Water Quality Measurement Data

Results

Item	Regulation	11030113			
Item	Value	Maximum	Average		
рН	5.9~8.5	7.4	6.8		
COD	13.5	12	11		
BOD	13.5	11	2.5		
SS	20	0.50	0.50		
Oil	2.7	0.50	0.50		
Zinc	2	-	_		
Soluble iron	0.9	0.19	0.10		
Soluble manganese	0.9	0.17	0.10		
Fluorine	8	-	_		
Nitrogen	45	44	27		
Phosphorus	15	8.6	5.2		
Boron	_	-	_		
Displacement per day (m³)	_	138	125		

#### ■ Atmospheric Measurement Data

Unit Particulates: g/m3N, NOx: ppm, Sox: K value Greatest Measured Value Regulation Value Equipment Item 0.1 150 0.01 Particulates Plant 1, No. 1 (boilers) NOx 0.24 0.003 50 0.23 S0x Particulates 0.6 0.1 150 0.6 0.1 150 Plant 1, No. 2 (boilers) SOx Plant 2 (cool & hot water generators) NOx 60

#### ■ Noise / Vibration Data

			Unit: dB
Item		Regulation Value	Greatest Measured Value
	Morning	64	62
Noise	Afternoon	67	62
INDISC	Evening	64	62
	Night	55	54
Vibration	Afternoon	60	52
	Night	55	47

#### ■ PRTR Law Subject Substance

Titti Law Gabjest Gabstanec								Ullit. Kg/year		
Cuhetanea	Substance Name  Substance Name	Amount	Emission		Transfer			Treated		
		Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
63	Xylene	14,339	14,339	0	0	0	0	0	0	0
227	Toluene	3,967	3,967	0	0	0	0	0	0	0

# Higashikariya **Plant**

#### **Number of employees** 338

#### **Products**

Mechatronics products Sensors Propeller shafts Machined parts



# ■ Water Quality Measurement Data

Unit: mg/@ (except pH values)

Item	Regulation	Results			
item	Value	Maximum	Average		
pH	5.8~8.6	7.9	7.4		
COD	29	5.8	4.5		
BOD	20	6.8	4.5		
SS	20	2.8	1.5		
Oil	5	0.40	0.18		
Zinc	2	0.35	0.13		
Soluble iron	5	0.94	0.43		
Soluble manganese	2	0.30	0.20		
Fluorine	5	0.33	0.16		
Nitrogen	(48)	33	28		
Phosphorus	(2.7)	0.07	0.05		
Boron	10	0.10	0.03		
Displacement per day (m³)	_	126	110		

# ■ Atmospheric Measurement Data

one randalates, g/m 14, 140x. ppm, dox.							
	Item	Equipment	Regulation Value	Greatest Measured Value			
	Particulates	Boilers	0.15	ND			
	NOx	(cool & hot water	130	77			
	S0x	generators)	0.57	ND			

# ■ Noise / Vibration Data

				Unit: dE
	Item		Regulation Value	Greatest Measured Value
		Morning	65	58
	Noise	Afternoon	70	62
	IVUISE	Evening	65	63
		Night	60	57
	Vibration	Afternoon	70	41
		Night	60	38

## **■ PRTR Law Subject Substance**

# **Toyohashi Plant**

# **Number of employees**

## 707 **Products**

Hydraulic power steering Hydraulic power steering hoses Manual steering Collapsible steering columns



# ■ Water Quality Measurement Data

Unit: mg/@ (except pH values)

Item	Regulation	Results		
116111	Value	Maximum	Average	
pH	6.1~8.0	6.7	6.5	
COD	18	15	11	
BOD	10	3.1	1.6	
SS	20	17	7.8	
Oil	1	1.0	1.0	
Zinc	_	_	_	
Soluble iron	-	-	-	
Soluble manganese	_	-	_	
Fluorine	_	_	_	
Nitrogen	50	48	36	
Phosphorus	5	4.4	2.4	
Boron	_	_	_	
Displacement per day (m³)	_	90	82	

#### ■ Atmospheric Measurement Data

Unit Particulates: n/m3N NOx: nnm Sox: K value

One Tarticulates, g/m 14, 140x, ppm, cox. it var					
Item	Equipment	Regulation Value	Greatest Measured Value		
Particulates		0.03	0.0034		
NOx	Plant 1 Boilers	100	73		
S0x		0.5	0.0001		
Particulates	Plant 2	0.03	0.007		
NOx	(cool & hot water	100	26		
S0x	generators)	0.5	0.004		
Particulates	Plant 3	0.10	0.093		
NOx	(cool & hot water	180	100		
S0x	generators)	0.5	0.02		

# ■ Noise / Vibration Data

Unit: dE
on Greatest Measured Value
58
62
59
58
37
29

										Oli	iit. kg/youi
Substance Cubatana Nama			Amount		Emission		Tran	sfer		Treated	
No		Substance Name	Handlad	Into Atmosphere	Into Waterways	Into Soil	Sewage	As Waste	Recycled	in Plant	Consumed
6	3	Xylene	1,484	1,421	0	0	0	0	0	0	62
3	346	Molybdenum and its compounds	3,926	0	0	0	0	0	0	0	3,926

<sup>\*</sup>No substances handled at rate of 1,000 kg/year or above.

# **Tadomisaki Plant**

Number of employees 906

**Products** 

Driveshafts 4WD couplings



Displacement per day (m3)

Item

рΗ

COD

# ■ Atmospheric Measurement Data

	Unit Particulates	s: g/m³N, NOx: p <sub>l</sub>	om, Sox: m <sup>3</sup> N/h
tem Equipm	nent	Regulation Value	Greatest Measured Value
Particulates Boilers		0.1	ND
VOx (cool &	hot water	130	53
SOx genera	ators)	0.5	ND

# ■ Noise / Vibration Data

	Unit: d				
	Item		Regulation Value	Greatest Measured Value	
		Morning	65	56	
	Noise	Afternoon	70	56	
		Evening	65	56	
		Night	59	55	
	Vibration	Afternoon	70	41	
		Night	65	41	



<sup>\*</sup>No substances handled at rate of 1,000 kg/year or above.

# Hanazono **Plant**

**Number of employees** 1,158

#### **Products**

Electric power steering Hydraulic power steering pumps Electric control units



### ■ Water Quality Measurement Data

■ Water Quality Measurement Data

Regulation

60~84

(10)

Unit: mg/l (except pH values)

Maximum

8 1

52

409

252

Results

Average

7.5

3.4

Unit: mg/& (except pH values)

Ikana	Regulation	Res	ults
Item	Value	Maximum	Average
рН	6.5~8.5	7.5	7.2
COD	8	5.3	4.3
BOD	8	5.0	2.0
SS	8	2.0	1.1
Oil	1.6	1.0	1.0
Zinc	0.8	0.50	0.12
Soluble iron	4	2.2	0.52
Soluble manganese	2.4	0.31	0.19
Fluorine	0.8	0.10	0.10
Nitrogen	30	27	15
Phosphorus	4	0.07	0.04
Boron	10	1.0	1.0
Displacement per day (m³)	_	304	217

### ■ Atmospheric Measurement Data

Unit Particulates: g/m³N, NOx: ppm, Sox: m³N/hr

Item	Equipment	Regulation Value	Greatest Measured Value
Particulates	Small through	0.24	0.003
NOx	flow boilers	200	29
S0x	now bollors	0.62	0.002
Particulates	Boilers	0.24	0.002
NOx	(cool & hot water	200	57
SOx	generators)	0.62	0.002

## ■ Noise / Vibration Data

				Unit: dB
	Item		Regulation Value	Greatest Measured Value
		Morning	54	50
	Noise	Afternoon	59	51
		Evening	54	50
		Night	49	49
	Mihantina	Afternoon	63	44
	Vibration	Night	58	45

## ■ PRTR Law Subject Substance

# Kameyama **Plant**

**Number of employees** 248

**Products** 

Ball bearings Clutch bearings



# ■ Water Quality Measurement Data

Unit: mg/& (except pH values)

Item	Regulation	Results		
ILGIII	Value	Maximum	Average	
pH	6.0~8.0	7.0	6.4	
COD	9	4.0	2.6	
BOD	8	5.0	1.5	
SS	10	2.0	0.42	
Oil	2.7	ND	ND	
Zinc	2	0.06	0.02	
Soluble iron	10	0.02	0.01	
Soluble manganese	10	0.03	0.03	
Fluorine	8	0.10	0.05	
Nitrogen	_	33	21	
Phosphorus	_	0.12	0.03	
Boron	1	0.10	0.03	
Displacement per day (m³)	_	177	122	

# ■ Atmospheric Measurement Data

	Offic 1 articulates, g/111 N, NOX. ppin, OOX. III N/					
Item	Equipment	Regulation Value	Greatest Measured Value			
Particulates	Direct 4	0.1	0.01			
NOx	Plant 1 (boilers)	150	83			
S0x	(DOIIGIS)	1.65	0.08			

# ■ Noise / Vibration Data

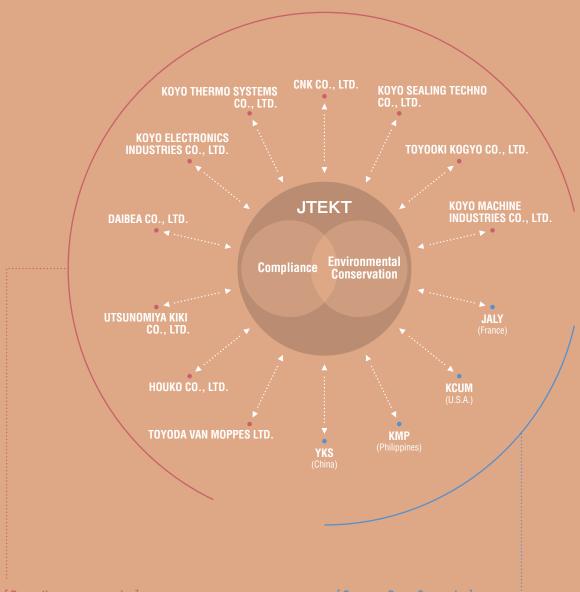
			Unit: di
Item		Regulation Value	Greatest Measured Value
	Morning	65	58
Noise	Afternoon	70	60
MOISE	Evening	65	53
	Night	55	51
Vibration	Afternoon	55	36
VIDIALIOII	Night	50	33

<sup>\*</sup>No substances handled at rate of 1,000 kg/year or above.

<sup>\*</sup>No substances handled at rate of 1,000 kg/year or above.

# Efforts of group companies

# Interconnecting all the group companies under a firm and strong faith.



#### Domestic group companies

# Domestic group companies work as a whole for both compliance and environmental issues.

Eighteen companies based in Japan share the same management stance as JTEKT on both compliance and environment conservation.

For compliance, the Corporate Action and Risk Management Committee thoroughly ensures conformity to laws and various social rules. Meanwhile for environmental conservation, the JTEKT Group Environmental Liaison Conference meets four times a year, making efforts to share activities, goals and results regarding energy- and resource-saving and logistics measures. Efforts by our 10 major group companies are introduced in a summary starting on the next page.

#### [ Overseas Group Companies

# Strengthening communication by organizing overseas group companies into four zones.

Global activities for compliance and environmental conservation are carried out by organizing 70 group companies based overseas into four zones

As for compliance, common goals are set in regard to conforming to international standards and regulations of each country, and efforts are made to share information and to horizontally implement measures worldwide. Group meetings of Environmental Liaison Committees were held in Asia in 2007 and in China in 2008 to step up communication.

Activities of companies representing each of the four zones are introduced on pages 64 and 65

# **KOYO MACHINE INDUSTRIES CO., LTD.**



President Masaomi So

Koyo Machine Industries is working on reduction of CO2, which is a primary factor of global warming, as our most important agenda. Five sectional committees have been organized to energetically promote further reduction of energy through energy/resource saving activities. We also work hard to offer products that save energy with the sense of eco-efficiency. Also, we have been making constant efforts to achieve zero-emissions. We achieved a 99.5% recycling rate in fiscal 2007, and keep trying to bring the figure as near as possible to 100%. We will continue to offer good value to contribute to realization of a safe and bountiful society.

# [Major Efforts] Various efforts for CO<sub>2</sub> reduction

In order to reduce CO<sub>2</sub>, we changed compressors to the type by driven by inverter as an energy-saving measure, replaced some of the factory lighting with inverter-controlled fluorescent lamps, and reexamined each part for possible reduction of materials, achieving good results. Regarding centerless grinders, our core product, we try minimizing warm-up time, speeding up dressing, developing ball screws that are faster moving and more compact, and making high-strength yokes lighter. We continue efforts to develop products with lower environmental burden.





Centerless grinders

# **■**Company Outline

Corporate name	KOYO MACHINE INDUSTRIES CO., LTD.
Head office	2-34 Minamiuematsu-cho, Yao-shi, Osaka Phone: +81-72-922-7881 URL http://www.koyo-machine.co.jp
Established	August, 1961
Capital	1.1 billion yen
Net Sales	FY 2006: 37,953 million yen FY 2007: 39,681 million yen
Primary business	Manufacture and sale of automobile parts, machine tools, factory automation systems and precision devices
Number of Employees	1,050
Business bases	Sales bases: Tokyo, Chubu, and Osaka in Japan, USA, South Korea Production bases: Yao Plant (Osaka) Yuzaki Plant (Nara) Gojo Plant (Nara) Overseas affiliates: 4 companies in USA, China, and Thailand
Acquisition of ISO14001 certification	May 2001

### **■** Main Products

Machine tools	Centerless grinding machines
	Surface grinding machines
	Wafer grinding machines
	Other special-purpose grinding machines
Precision tools	Precision ball screws, Spindle units,
	Index chucks
FA systems	Assembly systems, Sound check systems
Joints	Automobile intermediate shafts
	Driveshafts

# TOYOOKI KOGYO CO., LTD.



President Yasuaki Havashi

With the environmental policy "We refine our environmentfriendly technology, manage our business in consideration of local and global environmental conservation, and contribute to realization of a bountiful and comfortable society", we conform to legal requirements and other agreed requirements, and try to develop products with less burden on the environment, and products or systems that save energy and resources, to ease the environmental burden. Moreover, under the slogan of "Creation of new values from the viewpoint of customers", we present values from the perspective of customers, who are stakeholders, to contribute to realization of society that is prosperous and easy to live in.

# [Major Efforts] **Developing products with** less environmental burden

In order to conserve the global environment, as our important mission, we work on reducing CO2 emissions and reducing substances harmful to the environment from our product materials. In the efforts, we developed hybrid hydraulic equipment and super-energy-saving electromagnetic change-over valves, which help our customers to cut their CO2 emissions. As for SOC (substances of concern), we tackled SOC6, and 60% of the products in our catalogues passed the RoHS standards in fiscal 2007.



Hybrid hydraulic equipn



#### Company Outline

Guilipali	y outilito
Corporate name	TOYOOKI KOGYO CO., LTD.
Head office	45 Kaizan, Hacchi-cho, Okazaki-shi, Aichi Phone: +81-564-48-2211 URL http://www.toyooki.jp
Established	February 1958
Capital	254 million yen
Net Sales	FY 2006: 12,834.96 million yen FY 2007: 12,341.49 million yen
Primary business	Manufacture and sale of hydraulic and pneumatic equipment, automobile parts, and measurement equipment
Number of Employees	521
Business bases	Sales bases: Tokyo, Chubu, Osaka, Hiroshima, Fukuoka Production bases: Headquarters Plant (Aichi) Anjo Plant (Aichi)
Acquisition of ISO14001 certification	February 2003
Acquisition of ISO9001 certification	December 1988

# **■**Main Products



Hydraulic and pneumatic equipment Residential and life-aid devices Industrial and special-purpose vehicle devices

parts



Gear sets for A/T and CVT PS and drive parts

Measurement equipment

Line inspection equipment Test and research equipment

# **KOYO SEALING TECHNO CO., LTD.**



President Hideki Sato

[Major Efforts]

Koyo Sealing Techno is supporting the foundations of industry and life by manufacturing of oil seals and rubber/resin functional products. We seek to operate in harmony with the beautiful Yoshino River, the clear stream of Shikoku. As a major manufacturer, we spontaneously and energetically promote activities to conserve the global environment in every operation of our production planning, designing, procurement, production, sales and service.

Accurately grasping trends in the world, we work on conservation of the global environment with ideas from our whole staff for the products of Koyo Sealing Techno to contribute to environmental preservation.

# **Promoting activities to conserve** the global environment with six subcommittees at the core





Changing lighting stability equipment to inverter-controlled



# **■**Company Outline

Corporate name	KOYO SEALING TECHNO CO., LTD.
Head office	39 Kasaki Nishino, Aizumi-cho, Itano-gun, Tokushima Phone: +81-88-692-2711 URL http://www.koyo-st.co.jp
Established	October 1964
Capital	125 million yen
Net Sales	FY 2006: 14,254 million yen FY 2007: 15,255.08 million yen
Primary business	Manufacture of oil seals (general, large size, bonded piston seals, etc.) and rubber products
Number of Employees	510
Business bases	Production bases: Tokushima Plant China Plant [KOYO (WUXI) SEALING TECHNO CO., LTD.]
Acquisition of ISO14001 certification	October 2002

## ■ Main Products



Various oil seals Large size oil seals

Bonded piston seals for

Bonded piston seals Various boots for joints Various functional parts

# CNK CO., LTD.



President **Rvutaro Abe** 

CNK started operation as Chubu Netsuren Research Center in 1958 for the purpose of researching and developing sulfurization treatment, and later became engaged in development of factory automation equipment concerning machine tools and production of rack shafts, continuing to the present. Holding the management concept of "Contribute to realization of a bountiful and comfortable society by refining technologies friendly to humans and the environment to conserve global and local environments", we acquired ISO14001 certification in February 2002 and are contributing to our customers' efforts as well by offering products with less environmentally harmful substances.

# [Major Efforts]

# **Eco-friendly products only CNK can develop**

We regard positive involvement with the global environment as a significant business resource, which allows us to win trust from society and to improve our business, and put priority on it in our management. Especially, construction of a recycling-oriented society and reduction of greenhouse gas emissions are our most important missions, and we promote development of new products. We offer high-accuracy NC thread rolling machines, which produce no chips for less CO2 emission, round eddy-current coolant systems, which make coolants cleaner and more durable, and other eco-friendly products to customers, thus contributing to alleviating the environmental burden.

On the basis of corporate ethics and compliance, we continue to develop eco-friendly products by finding out customers' needs in advance to act to maintain and improve the global environment, and to better serve the environment and society.



TZN9-80-type thread rolling machine



# **■** Company Outline

	•
Corporate name	CNK CO., LTD.
Head office	28 Bawari, Noda-cho, Kariya-shi, Aichi Phone: +81-566-21-1833 URL http://www.cnk.co.jp
Established	August 1958
Capital	48 million yen
Net Sales	FY 2006: 16,574 million yen FY 2007: 16,632 million yen
Primary business	Manufacture of machinery, environmental products, metal surface treatment equipment and automobile parts
Number of Employees	297
Business bases	Headquarters plant, Toyota Plant, Tokyo Branch Office, CNK Manufacturing (Thailand) Co., Ltd.
Acquisition of ISO14001 certification	February 2002

# **■**Main Products

Machine tools LNIV-type loaders Environmenta products

Feeding equipment Round eddy-current coolant systems

Thread rolling machines

MGF-080B Separators Metal

Magnet separators Cyclone equipment Paper filter coolant systems Chip conveyor coolant system DLC coating

surface treatment Automobile parts

Rack shafts

Carburizing and quenching High-frequency hardening Vacuum hardening

Rack shafts Shaft coupling

# **KOYO THERMO SYSTEMS CO., LTD.**



President Michiro Kajiwara

As our products make use of thermal energy, we believe that our efforts to lower the ecological effects of our products and of our business operations would serve as part of corporate responsibility to society.

Specifically to deal with global warming, in response to customers' needs, we tackle the issue by developing new products with industry-leading eco-efficiency and improving our major products to further raise their eco-efficiency and to put them on the market promptly.

#### Corporate KOYO THERMO SYSTEMS CO., LTD. Head office 229 Kabata-cho, Tenri-shi, Nara Phone: +81-743-64-0981 URL http://www.koyo-thermos.co.jp Established July 1967 Capital 450 million yen FY 2006: 24,665 million yen Net Sales FY 2007: 25,447 million yen Heat treat furnaces for metal, heat treat equipment Primary for manufacture of semi-conductors, electronics parts, and ceramics, heat treatment business equipment for LC / plasma displays Number of Employees Sales bases: Nara (Headquarters), Tokyo, Gunma, Aichi, Shizuoka, Fukuoka, Kagawa Business bases Production bases: Headquarters Plant (Nara), Kashihara Plant (Nara) Overseas affiliates: China, Taiwan. South Korea, Thailand Acquisition of ISO14001 June 2001

# ■ Main Products

certification

Purpose of use

# Carburizing and quenching furnaces Vertical furnace

**■**Company Outline



ni-conducto





Sheet-fed clean

# [Major Efforts]

# Offering products with improved eco-efficiency, and promoting energy-saving

We developed a waste heat recovery unit, which recovers more than 50% of thermal energy exhausted from sheet-fed clean ovens, and are currently working to improve eco-efficiency of our ovens by attaching the units to them.

As an energy-saving measure for our business operation, factory equipment (air-conditioners, exhaust systems, etc.) is turned off when not in use to save electricity, drying conditions of drying furnaces were changed and some cutting processes were discontinued to save gas.

As fiscal 2008 is the final year of our three-year medium-term plan, all the company staff will keep promoting ecological activities to achieve the targets and goals and to plan future environmental programs.

# **KOYO ELECTRONICS INDUSTRIES CO., LTD.**



President Tsutomu Yuine

Based on the principle of "harmony with the environment", we have been actively making efforts to conserve the global environment and contribute to society. Looking at trends in and outside Japan, society is obliging corporations to act responsibly. As the earth is being pressed hard to the point that it is nearly incapable of withstanding human activities, we must urgently control the environmental burden caused by human activities and reduce them to within the limitations of the earth. We will continue working on each issue steadily and sincerely with the determination to halve the environmental burden on environment originating from corporate activities and products.

# [Major Efforts] Active efforts to save energy and resources

We have always tried to save energy and resources and to reach zero-emission status, and are achieving good results in switching to energy-saving facilities, in our wear-no-tie campaign, in paper-saving by turning to information electronics, and in recycling wastes by separating and cooperating with disposal businesses. Our switch to the EcoCute system, which utilizes night-time electricity, accomplished a substantial reduction of CO2 emissions and was highly evaluated by the Heat Pump & Thermal Storage Technology Center of Japan. As for our energy/resource-saving designing, programmable controllers developed this year achieved a 58% cut of electricity consumption and a 60% weight reduction.



New model programmable controller for smaller size,



New model programmable display

# **■**Company Outline

Corporate name	KOYO ELECTRONICS INDUSTRIES CO., LTD.
Head office	1-171 Tenjin-cho, Kodaira-shi, Tokyo Phone: +81-42-341-3111 URL http://www.koyoele.co.jp
Established	Starting operation in November 1955 Established as a corporation in March 1959
Capital	1,593.2 million yen
Net Sales	FY 2006: 13,453.13 million yen (nonconsolidated) FY 2007: 14,177.78 million yen (nonconsolidated)
Primary business	Manufacture and sale of electronic control devices and on-vehicle products
Number of Employees	403
Business bases	Sales bases: Tokyo, Sendai, Nagoya, Osaka, Kagawa, Hiroshima Production bases: Oizumi Plant (Yamanashi) Overseas affiliates: USA, China (three companies),

■ Main Products		
Electronic control devices	Programmable controllers Programmable displays	
6	Rotary encoders Proximity sensors Electronic control units	
On-vehicle products	Torque sensors Various on-vehicle controllers	

# DAIBEA CO., LTD.



President **Shuji Miyawaki** 

Global environmental problems are getting more and more serious each year, and ecological efforts are an enormous social responsibility for a corporation and for an individual. In our environmental policy, the basic philosophy is "thoroughly recognize that global environmental protection is an important corporate mission, and promote activities to conserve the global environment spontaneously and actively in business operations, production and service". In order to construct a sustainable recycling-oriented society, and to give the remaining bountiful nature to our children, we will continue our ecological efforts.

# [Major Efforts] Efforts to construct a recyc

# Efforts to construct a recycling-oriented society and products that are good for the environment

Bearings are incorporated in a variety of products, reducing energy loss by lowering friction. Thus, we strongly believe that we are making products that contribute

to the environment. Daibea works on improving environmental performance, with activities of five environmental committees, specializing in energy-saving, resource-saving, environmental improvement, logistics, and reducing paper use. We are making special efforts to construct a recycling-oriented society, such as by reducing CO<sub>2</sub> emissions in line with the Kyoto Protocol and maintaining a 99.5% recycling rate by reducing wastes. Also, as part of our contribution to local communities, we donated jointly with over 30 other companies to plant cherry trees along the banks of the Yamato River.



"Adopt-a-road"



ceremony of a cherry tree

## **■**Company Outline

Corporate name	DAIBEA CO., LTD.
Head office	9-510 Otorikita-machi, Nishi-ku, Sakai-shi, Osaka Phone: +81-72-262-1125 URL http://www.daibea.co.jp
Established	June 1947
Capital	2,317 million yen
Net Sales	FY 2006: 24,006 million yen FY 2007: 25,487 million yen
Primary business	Manufacture and sale of various bearings and bearing-related products
Number of Employees	515
Business bases	Headquarters and Sakai Plant (Osaka) Nabari Plant (Mie)
Acquisition of ISO14001 certification	August 2001

#### **■** Main Products



Having only half the thickness of conventional ones, the bearings are used mainly for fixing rollers of copying machines to save energy.

Thin-walled bearings



Bearings for special environments

Used in vacuum, high-temperature, clean, or other special environments, or in situations that require high speed, light weight, insulation, lack of magnetism, and other special functions.

# UTSUNOMIYA KIKI CO., LTD.



President

Osamu Kumaki

We support the world's energy-saving and resource-saving efforts by manufacturing and offering needle roller bearings. Amid calls for further reduction of CO<sub>2</sub> emissions, we are engaged in environmental conservation activities to make products manufactured with less material, less time, and with higher energy efficiency. As for corporate social responsibility, which is called for these days in various phases, we improve transparency in management and comply with regulations while making trying to improve the environment and occupational safety and health.

# [Major Efforts]

# Promoting energy-saving and CO<sub>2</sub> emission reduction, and establishment of the Compliance Committee

Acquiring ISO14001 certification six years ago, Utsunomiya Kiki is working on energy-saving and CO<sub>2</sub> emission reduction with efforts of the whole company.

Our ecological efforts from fiscal 2007 include improving operation efficiency of air-conditioners, halting compressor operation and improving compressor piping for less air loss, introducing KAPS for better productivity, and developing new technologies and process methods.

We also launched an in-house whistle-blowing system in July 2007, which allows an employee who knows of a legal violation, an unjust action, and other compliance violation to directly report to a relevant contact, while setting up the Compliance Committee, for better corporate self-regulation.

# **■**Company Outline

Corporate name	UTSUNOMIYA KIKI CO., LTD.	
Head office	585 Suzumenomiya-machi, Utsunomiya-shi, Tochigi Phone: +81-28-653-1311 URL http://www.utsunomiya-kiki.co.jp	
Established	October 1953	
Capital	50 million yen	
Net Sales	FY 2006: 6,010 million yen FY 2007: 6,780 million yen	
Primary business	Manufacture of needle roller bearings and others	
Number of Employees	372	
Acquisition of ISO14001 certification	August 2002	

### ■Main Products





Thrust-type needle roller bearings

Radial-type needle roller bearings

# HOUKO CO., LTD.



President **Kazumi Nakamura** 

Based on our managerial philosophy of "supporting bountiful life through manufacture of products that are friendly to human and the earth and through equipment reuse", we promote earth-conscious manufacturing, saving resources in overhaul and improvement of TOYODA grinders and saving energy in high-efficiency small-sized grinders. With all the staff taking part in ecological activities through the Environment Improvement Committee, we cut back on CO<sub>2</sub> emissions and factory wastes while making our plants gentler to human. We will continue to contribute to the local community and society in regard with compliance and other issues.

## [Major Efforts]

# Manufacturing production systems gentle to humans and the environment, and activities to reduce CO<sub>2</sub> emissions

We contribute to manufacturing of production systems that are gentle to humans and the earth by renovating long-established TOYODA grinders for even better functions. The fiscal 2007 sales of the Overhaul Department, which recycles more than 85% of materials, rose 8% from fiscal 2006. G32-series grinders have undergone minor changes for better manipulation, less maintenance work, and less use of resources. As for in-house efforts, production innovation activities and replacement of old equipment with energy-saving models are actively carried out, while actions for waste recycling and reducing emissions to zero are being continued. We will continue our ecological efforts as a perpetual issue, as well as complying by actively collecting information on the local community and legislation.

#### **■**Company Outline

Corporate name	HOUKO CO., LTD.
Head office	1-3 Ejiri, Hishiike, Kota-cho, Nukata-gun, Aichi Phone: +81-564-62-1211 URL http://www.houko.co.jp
Established	February 1971
Capital	100 million yen
Net Sales	FY 2006: 6,830 million yen FY 2007: 7,310 million yen
Primary business	Manufacture of multipurpose grinders and CNC grinders Repair and modification of grinders Manufacture of automobile parts and mechatronic products
Number of Employees	240
Acquisition of ISO14001 certification	December 2001

#### **■** Main Products



# TOYODA VAN MOPPES LTD.



President **Kazuhiko Sugita** 

Since the company's establishment, we have been offering CBN grinder wheels and other super-abrasive coating tools, which work with high efficiency, save resources, and are good for recycling.

As construction of a recycling-oriented and sustainable society is being deemed as an urgent task, our company as a whole is promoting activities to save energy/resources and to improve the environment.

Meanwhile, in the ever-changing social environment, we comply with requests from local areas and society, while complying with regulations, properly disclosing information and contributing to society a higher level. We are developing super-abrasive tools that serve customers to lower their environmental burden.

# [Major Efforts]

# Development of products with less environmental burden and promotion of CO<sub>2</sub> reduction activities

With the managerial philosophy of "constructing the optimal environment management system, contributing to building an affluent and comfortable society in harmony with humans, society and the global environment, and aiming to be a trusted corporate citizen", we promote environment conservation activities in all of the processes and products of our business operation.



Optimizing specifications and process conditions of grinding wheels

(t) 120 –	Reduct	tion of wastes
100 -		
80 -		
60 -		
40 -		
20 -		
0 -	'99 '01 '02	'03 '04 '05 '06 '07

# **■**Company Outline

	,
Corporate name	TOYODA VAN MOPPES LTD.
Head office	1-54, Shiroyama, Maiki-cho, Okazaki-shi, Aichi Phone: +81-564-48-5311 URL http://www.tvmk.co.jp
Established	April 1975
Capital	481 million yen
Net Sales	FY 2006: 4,750 million yen FY 2007: 5 billion yen
Primary business	Manufacture and sale of abrasive coating tools containing diamond or CBN grindstones
Number of Employees	270
Business bases	Production base: Headquarters Plant (Aichi) Sales bases: Aichi, Tokyo, Osaka, Shizuoka, Hiroshima, Fukuoka
Acquisition of ISO14001 certification	March 2001

# ■ Main Products

#### Vitrified bond CBN wheel



- For grinding camshafts
- · For grinding crankshafts
- For high-speed grinding
- For grinding cylinders, etc.

# Diamond rotary dressers



- Traverse type
- Plunge type
  For bearings
  For ball screws
  For piston rings Others

# JTEKT AUTOMOTIVE LYON S.A.S. (France)



President Yoshikazu Konishi

We are located in the Rhône-Alpes region of southeast France. As one of the best auto parts maker in Europe, JALY provides high quality and high performance electric power steering and rack and pinion gears for hydraulic steering systems to major automobile makers. Regarding the environment, not only for corporate profitability but as our corporate responsibility, we continuously take part in environmental preservation activities for a better future. I think we should follow the example of the frugality of the French people.

# [Major Efforts]

# Carry out continuous efforts based on our environmental policy

According to the basic policy on the environment that we should promote improvement based on compliance, OHSAS18001 and ISO14001, and that we should contribute to society through the company's development while observing the new environmental law in the EU (REACH), JALY sets various objectives related to the environment and makes continuous efforts. Specifically, we try to find the best way to treat dangerous materials, reduce energy consumption, raise morale, and develop and provide energy-saving high-performance products.

#### **■**Company Outline

Corporate name	JTEKT AUTOMOTIVE LYON S.A.S. $\langle$ JALY $\rangle$
Head office	Z.I. du Broteau-BP 1 69540 Irigny France
Established	Participate in JTEKT Group (ex-Koyo group) March 1991
Capital	35,860,485 euro
Net Sales	FY 2007: 353 million euro (steering systems, etc. 2,331,000 units)
Number of Employees	Employees 1,039 Fixed-term employees 325
Acquisition of ISO14001 certification	Year of acquisition: 2004
Acquisition of ISO/TS16949 certification	Year of acquisition: 2002

#### ■ Main Products



Column type electric power steering (C-EPS) and manual gears (MS)



Hydraulic power steering (NPS)

#### **KOYO CORPORATION OF U.S.A. [MANUFACTURING DIV.]** (North America)



President Hisami Takaqi

KCUM is a manufacturer of bearings for automobiles in the U.S., and our products are used by Japanese automobile manufacturers in the U.S., the Big 3, and automakers in Europe and Asia. KCUM is located in a green area, so to harmonize with the green surrounding us, we proactively conduct environmental activities. In addition, based on the standpoint that the company can only exist with employees, we try to improve the workplace environment, and we promote a lineside review to reduce every kind of waste. We continuously carry out every measure regarding the environment.

# [Major Efforts]

# To be a company in harmony with global environment

At our Orangeburg Plant, we deal with all waste fluid and adopt centralized treatment equipment for grinding dust to improve separating efficiency of grinding dust and treatment fluid. At our Washington Plant, we carry out measures including usage of cleaning fluid with less adverse impact on the environment and introducing processing facilities that minimize leakage of treatment fluid to the next stage of the process. As an energy-saving measure, in addition to improvement activities at each workplace, we converted mercury lamps to energy-efficient fluorescent light to reduce electricity consumption. Moreover, we recycle copy paper at our offices. All employees work together for environmental conservation. We are promoting comprehensive measures for environmental preservation inducing introduction of electric lifters and tow vehicles for in-site logistics.

# **■** Company Outline

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Corporate name	KOYO CORPORATION OF U.S.A. [MANUFACTURING DIV.] 〈 KCUM〉
Head office	2850 Magnolia Street Orangeburg, SC 29115, U.S.A.
Established	September 1973
Capital	FY 2007: 237 million dollars (whole KCUM)
Net Sales	FY 2007: 172 million dollars
Primary business	Manufacture of bearings for automobiles
Number of Employees	837
Business bases	Orangeburg Plant (Orangeburg County, South Carolina) Richland Plant (Richland County, South Carolina) Washington Plant (Washington County, Tennessee)
Acquisition of ISO14001 certification	Year of acquisition: 2003
Acquisition of ISO16949 certification	Year of acquisition: 2003

# ■ Main Products

Taper roller bearing, Hub unit bearing, Single ball bearing Double angular contact bearing, Water pump bearing Double ball bearing

Tensioner bearing



Taper roller bearing



Hub unit bearing

### **KOYO MANUFACTRING (PHILIPPINES) CORPORATION** (Philippines)



President Kazuaki Takimoto

KMP is located in Malvar, 70km from Manila. With the motto, "Establishing a safe and rich local community through bearing production", we carry out various environmental preservation activities including improvement activities in business operations, greening activity, and contribution to the local community. Regarding energy-saving activities, including CO2 reduction, as the electric power charge here is more expensive than neighboring nations, we are tackling the issue of how to reduce electricity consumption and enhance productivity while expanding our business here. I keep it in mind that KMP can only exist with the local community and endeavor to activate business.

# [Major Efforts] To establish a safe and rich local community

We are improving wastewater treatment of canteens as one of our environmental preservation measures. We used three tanks for wastewater treatment before. now we use five tanks and have succeeded in reducing the amount of oil disposal. As greening activities, we participate in local greening activities and plant trees at our site. In addition, we send our industrial physician to local schools to give medical checkups and carry out several other activities including 5s for children, lectures regarding safety and hygiene and Christmas presents for deprived people.



dical checkups at school by



# **■**Company Outline

Corporate name	KOYO MANUFACTURING (PHILIPPINES) CORPORATION 〈KMP〉
Head office	Lima Technology Center Malvar, Batangas, Philippines
Established	September 1997
Capital	6,509 million yen
Net Sales	Actual performance of FY 2007: 839 million yen Annual sales planning of FY 2008: 1,959 million yen
Primary business	Manufacture of single ball bearings, needle roller bearings, miniature ball bearings
Number of Employees	383
Acquisition of ISO14001 certification	Year of acquisition: 2002
Acquisition of ISO9001 certification	Year of acquisition: 2001
Acquisition of ISO/TS16949 certification	Year of acquisition: 2006
Acquisition of OHSAS18001 certification	Year of acquisition: 2007

#### **■** Main Products







Needle roller bearings

# YUBEI KOYO STEERING SYSTEM CO., LTD (China)



President Mutsuii Yano

# In China, large-scale environmental pollution has occurred since the 1970s. So, an environmental law system was already developed at an early stage. However, under the circumstances that regulations were not implemented because of a lack of human resources and budget, only economic growth continued rapidly. That worsened environmental pollution and destruction of nature. However, these days, China focuses on energy efficiency and environmental protection by the conversion from quickness to quality in the economy, and, for example, the air quality of Beijing where the Olympic Games were held was improved dramatically. Here in Henan Province, in inland China and where YKS is located, there has been much interest in the environment. We will make continuous efforts to harmonize with the local community and realize a rich society through compliance, reduction of consumption and continuous improvement.

# [Major Efforts]

# Carry out detailed activities mainly on resource-saving and energy-saving

Since the acquisition of ISO14001 certification in 2005, the certification has been renewed. At YKS, there is little possibility of environmental pollution by noise and smoke exhaust when considering our main products. So, we focus on resource-saving and energy-saving.

- 1. Never let it be dirty, never be off your guard
- (1) Map the oil leakage point from the equipment, take underlying countermeasures and don't let oil leak (2) Improve deterioration of operating oil (3) Map the contact failure points in the switchboard and keyless
- 2. Collect oil from chips
- Collect oil using a centrifuge and reuse
- 3. Reduce electricity consumption
  - (1) Conversion from mercury lamps to high illumination fluorescent lights
  - (2) Change the electric circuits of equipment to energy-saving circuits
- 4. Enhance production efficiency
- (1) Avoid lavish spending of energy by improving movability and first run rate. (2) Long-life tools







# **■**Company Outline

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Corporate name	YUBEI KOYO STEERING SYSTEM CO., LTD. $\langle  {\rm YKS}  \rangle$
Head office	No. 322 Heping Road, Xinxiang City, Henan Province, 453003, Peoples Republic of China
Established	June 1996
Capital	70,063,000 yuan
Net Sales	Actual performance of FY 2007: 306,652,000 yuan Annual sales planning of FY 2008: 331,279,000 yuan
Primary business	Manufacture of steering for automobiles
Number of Employees	321
Acquisition of ISO14001 certification	Year of acquisition: 2005
Acquisition of ISO/TS16949 certification	Year of acquisition: 2006

# **■** Main Products



# The third-party opinion on JTEKT CSR Report 2008

Representative of NPO, Workers Club for Eco-harmonic Renewable Society

# Tamio Yamaguchi

I express my opinion toward JTEKT CSR Report 2008 based on my experience of attending the study session at the kick off of this report and based on my participation in the meeting for exchanging opinions when the first proof was finished.

In this report, the theme of "communicate" was chosen. My impression after reading this report is that this report is organically constructed with this theme as the axis of this report. This theme expresses the corporate philosophy simply and it is the most suitable because it expresses not only society and the future but also the feeling of each of the employees, whose company was established by the merger of two different companies. This report is easy to read with ingenuity in designing pages and notes. So the volume of 66 pages does not impose a burden on readers.

I highly evaluate the contents describing JTEKT Corporate Activities Standard in this report. With explanations of the seven items of the corporate activities standard, action items of FY2007 and page Nos. on which the action items are written are shown here. So, it reaches well to the readers that JTEKT focuses on its corporate activities standard for achieving its vision and utilizes this standard in daily operations.

On the other hand, there are not a few items on which I would like to deepen discussion and reflect on the report. Firstly, I would like to understand the CSR of JTEKT more clearly. It is too general to say that JTEKT is "providing value" and "winning confidence". At the beginning of the social report of this report, it describes organizing for social issues and endeavoring to resolve such issues with unified efforts by all employees. I think this description has the hint to deepen the CSR of JTEKT. Then, I would like the social report to be more thorough, especially regarding realities of labor practices. Japan stands out with peculiar labor practices among the developed countries and adverse effects by such labor practices specifically appear. There are forward-thinking articles like the results of a stress survey that I have never seen in other reports. So, please try in-depth descriptions for other items, too. I expressed many detailed opinions at the meeting to exchange opinions and I heard that many such opinions become the agendas to be examined in the future. I expect JTEKT to continue discussion on how the JTEKT CSR Report should function and on realization of a CSR Report suitable for a truly global company.



Profile
After working at a newspaper publishing company for 25 years, worked in the public relations section of a venture company, edited a magazine at a publishing company, and went freelance. Part-time instructor at Kanto Gakuin University, College of Economics. Interested in the global environment and corporate activity.

#### Workers Club for Eco-harmonic Renewable Society

A citizen's organization that considers the role of a recycling-based society harmonizing with ecosystems of nature. It aims to research, support and practice activities for establishing a recycling-based society carried out by citizens, business entities and administrative authorities.

http://www.nord-ise.com/junkan

# Response to the third-party opinion

**JTEKT CORPORATION General Administration Department** 

We released this report as "Social & Environmental Report" until last year, but from this year, we changed the title to "CSR Report" and tried to add more information to the report to let the public to know the bare facts of JTEKT. We regard the third-party opinion from Mr. Tamio Yamaguchi not as an assessment for one single year but as opinions to be reflected in our activities from next year. We think we received a acceptable level of evaluation from Mr. Yamaguchi, but at the same time, Mr. Yamaguchi pointed out a big challenge. We receive comments

from Mr. Yamaguchi at the study session for CSR and at the meeting for exchanging opinions in which representatives of departments involved participated. This third-party opinion is based on such a process, so we accept it with sincerity.

Based on the opinion, we are going to deepen discussion and clear up understanding of CSR as a true global company, and then, reflect it in each employee's activity. In doing so, we believe that this report will be further improved and win the trust of the public.

# To communicate more intensively

What do you think of this report with the theme of "communication"? We will continue to make every effort to improve this report as a tool for communication between JTEKT and you. We would be grateful if you provide us with your opinion.

Issued by: General Administration Department

Contact information: TEL: +81-52-527-1900

FAX: +81-52-527-1911

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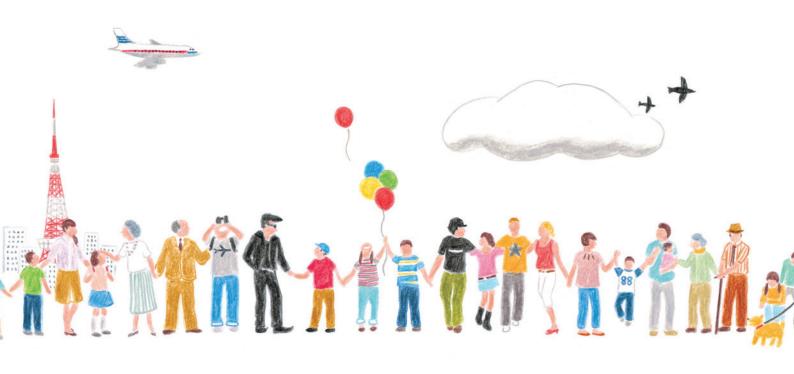
This report can be viewed on our website.

http://www.jtekt.co.jp



# JTEKT CORPORATION

http://www.jtekt.co.jp



**Paper:** Printing paper of which 70% is domestic timber containing 10% of timber from forest-thinning is used for CO<sub>2</sub> reduction in Japan. This is environment-conscious paper that leads to utilization of domestic timber resources and fosters the forestry industry.

**Printing:** Resources and energy are saved with the use of CTP (Computer to Plate) photoengraving. Waterless printing that requires no soak water containing harmful material is adopted. This report is printed at a printing factory which has acquired ISO9001 certification.

Ink: Soy ink containing soy oil in solvent is used to suppress volatilization volume of hazardous material.

**Bookbinding:** Hot-melt adhesive for bookbinding certificated by the Japan Adhesive Industry Association is used to reduce the environmental burden when recycling the used paper.









<sup>\*1:</sup> A slogan on the logo means "Forest thinning nurtures plants".
\*2: A slogan on the logo means "CO2 reduction by using domestic timber".