DENSO

DENSO ENVIRONMENTAL & SOCIAL REPORT 2004

DENSO CORPORATION

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About the cover: Ejector Cycle

Innovative technology newly adopted in CO_2 water heaters and car air conditioners to radically improve refrigeration cycle efficiency.

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Editorial Policies

●Since 1999 DENSO has published an annual Environmental Report. To reliably report a fuller range of relevant facts, the 2003 edition was greatly expanded to become a Sustainability Report that included information about compliance, social contribution, and employees. The current 2004 edition has given priority to accommodating the views about sustainability of all stakeholders. Because of the need to more effectively present DENSO's concern with corporate social responsibility, in the thoroughly revised structure, content is presented from three perspectives: Social, Financial, and Environmental.

●Effort has been made to present the information in this report from a truly global perspective with consolidated group data. Because automotive parts is not generally well understood, specially pages have been included to explain, in an easy to understand form, the features and characteristics of relevant parts.

●To increase objectivity, the report includes a third party comment from IIHOE (International Institute for Human, Organization, and Earth).

■Period and Scope:
Period covered: Fiscal 2003 (April 2003 to March 2004)
Results data are for fiscal 2003, but some of the content about activities includes information from fiscal 2004.
Companies and business locations covered:
DENSO CORPORATION and 90 group companies (Japan and elsewhere)
Note: See page 59 for a specific breakdown.
Scope of report: Financial information is given for group affiliated companies. [p. 32]
Environmental performance data is given for all the sites of all affiliated companies that have completed implementation of an Environmental Management System. [p. 60, p. 61]
In the social section of the report, text and figures refer to non-consolidated DENSO in Japan unless stated otherwise.
***To show trends over time, in principle, graphs show data for five years (fiscal 1999 to fiscal 2003). If there is a standard base year, the relevant data is also shown. However, because space is limited, in places some data has been omitted.**

■Guidelines Used in Preparation of Report
Sustainability Reporting Guidelines (GRI, Global Reporting Initiative)
Environmental Reporting Guidelines (Ministry of the Environment)
Environmental Reporting Guidelines with Focus on Stakeholders (Ministry of Economy, Trade and Industry)

Tables and other detailed information, business outlines and financial data recommended by the GRI Guidelines not found in this report can be seen on our website.

http://www.globaldenso.com/

P. 0 "Refer to" mark
Flip to the indicated page for related articles or more detailed explanations.

URL "Web page" mark
Related or more detailed information can be found on the indicated web page.

Issued by: Koichi Fukaya, President and CEO
Editor: Toshio Yamagata, General manager, Environment Planning Department
Issued: November 2004
Next edition scheduled to be issued in October 2005.

Pioneering a new era

Nearly five years ago we developed DENSO EcoVision 2005, our environmental roadmap. In that document, we made a promise to ourselves, our customers and our communities: We would use our skills and expertise in research and development to ensure that what we do and what we build is in harmony with the environment and contributes to environmental preservation.

Today, I am pleased to say that we have kept that promise, and we are well on the way to reaching all of the goals we set for ourselves in DENSO EcoVision 2005. For example, as of the end of fiscal year 2003, all of our manufacturing companies had acquired ISO14001 certification. To help prevent global warming, we developed a CFC-free air conditioner, and in Japan, all of our companies have achieved zero emissions.

Now it's time to look even further ahead.

So in April, we formulated DENSO VISION 2015, a new 10-year policy to help us navigate our way to creating a better world for the future. At its core, this vision calls for DENSO to continue to grow by fulfilling its social responsibility. And it introduces a greater social element into our business activities and practices than ever before-demanding that we work harder to minimize the impact of vehicles on the world around us and to protect the environment and all its natural resources.

One of the main pillars of our vision is to achieve what we call an advanced automotive society-one in which people and cars coexist in harmony. For "advanced" doesn't just mean designing and producing increasingly sophisticated cars. It means creating vehicles that do not harm the environment and that promote a society of safety, convenience, ease and comfort.

How will we do this? We will start by focusing on what we consider to be the two most pressing issues: safety and environment.

If we can develop safer vehicles, vehicles that are collision resistant or minimize danger and injury to drivers, passengers and pedestrians in the event of a collision, this will lead to an advanced automotive society. Another approach is infrastructure and road layout. While public infrastructure is best left in the hands of governments, DENSO can play a role in developing technology and forming partnerships that lead to better transporation options.

And of course, we will continue to focus on the environment through improved fuel economy, cleaner exhaust emissions and enhanced recyclability. This past year we developed an air conditioner equipped with an electrical compressor, which is already in use in electric hybrid vehicles such as the Toyota Prius. Our air conditioner helps improve fuel economy and makes driving more comfortable.

One area where we want to make even greater strides in improvement is in reducing CO_2 gas emissions from our manufacturing facilities. Our target is to reduce these emissions to 90 percent of 1990 levels by fiscal 2010, although we are increasing our production volume. We are determined to find new and innovative measures to help us reach this target.

The goals we have set for ourselves in DENSO EcoVision 2005 and DENSO VISION 2015 are challenging goals. We recognize that. But if we want to see what we can accomplish and what is possible, we have to set the bar higher and push ourselves harder. We know, too, that we cannot do this alone. Working with others is essential to the realization of a sustainable society. So, DENSO will continue to work with business partners, other corporations, our employees, our communities, consumers and governments to meet your needs, respond to your concerns and create the innovations you desire.

Koichi Fukaya
President

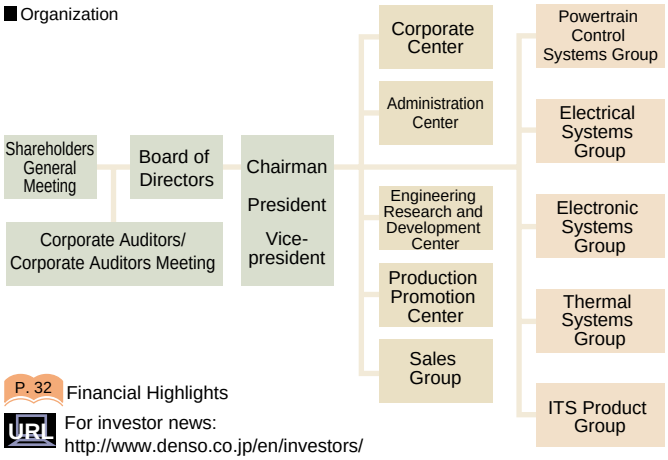
Koichi Fukaya

DENSO Group Profile

Corporate Data (As of March 31, 2004)

Corporate name:	DENSO CORPORATION
Headquarters:	1-1 Showa-cho, Kariya, Aichi 448-8661 Japan
Date of establishment:	December 16, 1949
Representative:	Koichi Fukaya, President and CEO
Capital:	¥187.4 billion
Employees:	Consolidated — 95,461
	Non-consolidated — 33,362
Net sales:	Consolidated — ¥2,562.4 billion
	Non-consolidated — ¥1,708.5 billion
Facilities/plants in Japan:	11 (9 manufacturing plants, 2 factories)
Research center:	DENSO Research Laboratories
Consolidated subsidiaries:	164 (62 in Japan, 33 in the Americas, 31 in Europe, 38 in Australia/Asia)
Affiliates accounted under the equity method:	27 (Japan 14, the Americas 5, Europe 1, Asia and Australia 7)

■Organization

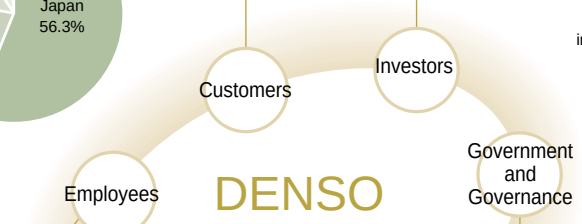


P. 32 Financial Highlights

URL For investor news:
http://www.denso.co.jp/en/investors/

Business Operations and Stakeholder Relations

DENSO believes the most crucial undertakings in this rapid globalization of business operations are those related to building and fostering better partnerships with the various stakeholders. We believe that it is these measures that are the foundation upon which corporations and communities can develop symbiotic relationships.



Customers

About 96 percent of DENSO's product sales relate to automobiles, Our products are used by major automobile manufacturers throughout the world, which means we have a tremendous number of customers. We are also working to improve customer convenience in new enterprise operations by employing DENSO's proprietary technology.

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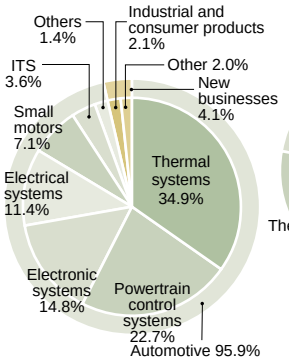
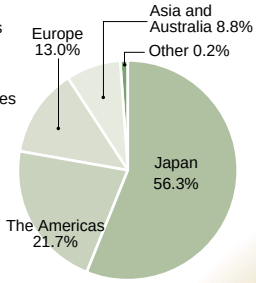
■Sales by Product



■Sales by Region



Investors

The stock issued by the company amounts to 1,426,940,000 shares and capital stock amounts to 884,070,000 shares. There are about 48,000 shareholders (as of March 31, 2004) and the breakdown of who these shareholders are is shown in the pie graph below. DENSO is striving to expand business and achieve greater operational efficiency to maximize enterprise and shareholder value.

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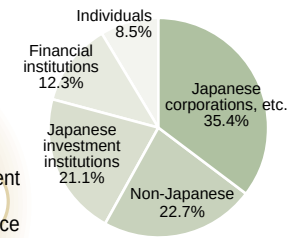
■Stockholder Analysis



Employees

As part of our globalization strategy, we focus on creating environments in which our employees can reach their full potential through measures such as executing human resource policies that are fair, just and emphasize autonomy, enriching education and training.

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Government and Governance

In addition to complying with the laws and regulations of each country and region, we are proactive in researching new technologies to reduce our impact on the environment, constructing and improving traffic life in societies through experimentation in ITS.

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Suppliers

The doors to the DENSO Group are always open to prospective suppliers to ensure we can procure from the world market the parts, materials and equipment that are the very best from every perspective: quality, cost, delivery times, operational management, safety and environment. When establishing a contract we set out a policy that is fair and just and which is based on grounds designed to facilitate mutual growth potential. We publish our procurement policy, contact details and procurement procedures on our website and make ourselves accessible to companies in any region of the world.

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Communities

DENSO's way of ensuring growth in our business activities is to completely assimilate into a community as a good corporate citizen. To us, this means more than ensuring that our employees respect the laws and customs of each country and community in accordance with our fundamental philosophy and action plan; we also believe in continually taking the initiative to find new ways to serve the community.

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NGOs and NPOs

In 1999 we established a non-profit organi-zation to assist disabled people in gaining greater autonomy by providing them with wheelchairs. We believe it essential for our entire corporate structure to allow for volunteer activities, and that cooperation with non-governmental and non-profit organi-zations is integral to the community service that each of DENSO's business locations contributes.

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Main Products

■Automotive Parts

Thermal Systems

Air conditioning unit

Front end module

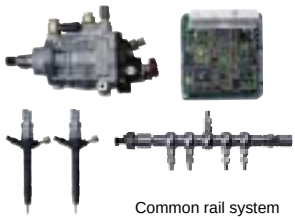
Air conditioning

Car air conditioning, air purifiers, products employing the refrigeration cycle system (which dramatically improves energy efficiency), etc.

Engine cooling

Engine cooling system modules with the radiator as the core component, etc.

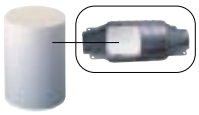
Powertrain Control Systems



Common rail system

Diesel engine-related

Fuel injection systems such as common rail systems, which dramatically improves exhaust gas purification



Monolithic carrier for exhaust gas purification

Gasoline engine-related

Various components ranging from fuel efficiency improve-ment to exhaust gas puri-fication

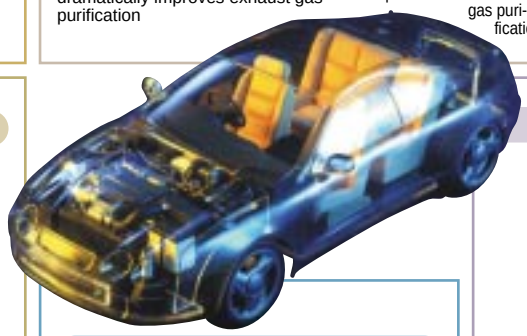
Spark plug

Ignition systems

Starter generator (ISG)

Hybrid car/electric car-related

Starter systems for hybrid cars for optimum control of engine and electric motor



Electrical Systems

Starter

Alternator

Engine related

Starter to start engine, alternator to charge battery and electrical system

Intervehicular distance control computer

Cruising safety-related

Controls systems employing radar technology, various sensors and braking systems

Electronic Systems

Instrument display

Body related

Family of products to improve safety ranging from easy-to-read instrument displays to electronic keys, and back and corner sonar systems.

Hybrid ECU for engine

Vehicle body direct mounting type

Engine related

Various control computers (ECU) performing a variety of functions ranging from basic engine controls such as fuel injection, ignition timing, idling rpm to exhaust gas purification.

Motors

Servo motor

Cooling fan motor for air conditioner

Power window motor

Various motor systems essential for cars such as wiper, washer, power window etc.

ITS

Car navigation system

Onboard ETC equipment

URL For information on our products:
http://www.globaldenso.com/TECHNOLOGY/car-parts/index.html

■Non-automotive Products

QR code scanner

IC card reader/writer

Automatic recognition

QR code and barcode reading systems for streamlining distribution and logistics, non-contact IC cards and reader/writers essential for management systems, etc.

Manufacturing robots

Factory automation

Various manufacturing robots and program-mable controllers, etc., We have secured the top market share in the world for our small-scale assembly robots.

Spot cooler

Cooling devices and air conditioning

Cooling systems for equip-ment such as mobile phone base stations, spot coolers and heaters for factories

CO_2 Heat pump type Hot water supply systems

Consumer related

CO_2 Heat pump type Hot water supply systems, motor system for height adjustable kitchens, etc.


DENSO

As a company focused on society's needs, DENSO is committed to delivering craftsmanship of the highest quality. The keys to delivering this are technology, skill and human-resource development.

Uncompromising Quality

DENSO's first president Torao Hayashi always stressed to employees: "Our work has a direct bearing on people's lives. If a car has an accident, the lives of people are endangered. It is our responsibility to engineer parts that we can guarantee as having an absolute level of quality." This spirit led DENSO to receive the prestigious Deming Application Prize for Total Quality Management (TQM) in 1961, and for almost a half century since, the name DENSO has continued to be synonymous with quality.

"To be trust worthy and responsible" is one of DENSO's guiding precepts. (Announced in 1956)

Monument to commemorate winning the Deming Prize
(The names of the 5,136 employees are inscribed on the back.)

Uncompromising Technology and Skill

Generations of DENSO's executives have noted that technology and skill are the wheels of a car, and they need to be supported by people power.
We believe this describes our role as a manufacturer and is the driving force that has allowed us to continue to grow to where we are today.
Cars today are composed of high-tech parts, and rely on cutting-edge, high-quality technologies that span a vast range of technical fields. The final production stage cannot be reached through theory alone -- craftsmanship skills to actually make the product are also essential.
For instance, to convert a drawing into a tangible object, you must first prepare hand-made special-purpose molds along with tools and blades based on design drawings. Then, at each step in the process, you must make quick decisions regarding techniques and equipment. Then you make a prototype, carry out product performance evaluations and check everything related to the technologies and manufacturing techniques used.
When mass production begins, it will be machines that make the product, but the key to reaching that stage is "people power." By fusing a high level of these technologies and skills, we can launch next-generation products of high quality that earn the trust of consumers. Since its founding, DENSO has fostered technology and technicians with the craftsmanship to support development of the world's best products. It is this insistence on quality that has enabled DENSO to successfully nurture today's craftsmen.

Uncompromising Human Resource Development

Fostering high-caliber technicians requires high-caliber mentors, the right environment and plenty of time. Establishing this inside a corporate environment requires a system in which the act of improving technology and skill is a rewarding experience. This is provided by the national accreditation system for craftsmen who possess a high level of skill and technique, similar to the German apprenticeship system that has been in place for generations.
Since establishing a training school for technicians (now called DENSO College of Industrial Technology) in 1954, soon after DENSO was founded, DENSO has devoted much energy to encouraging participation in world-class skill competitions, proprietary development and manufacturing based on manufacturing and production core technology, and ensuring that there is a system by which to evaluate technology and skill.

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* World Skills Competition: International competition for technicians of various fields.

Photos
Above: Young technician hoping to compete in the world-class competition, the World Skills Competition*
Below: Analyzing details of a car air conditioner temperature control using a thermal mannequin.

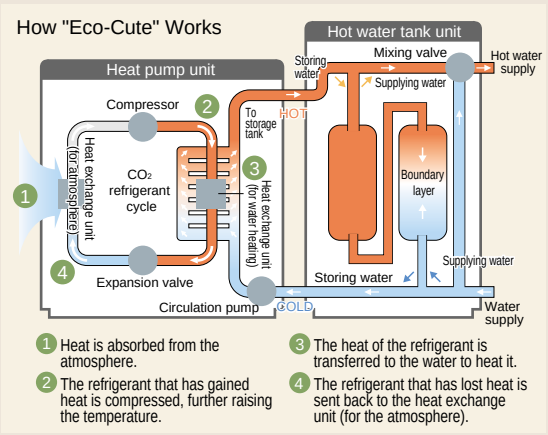
"Eco-Cute" Blooms from Car Air Conditioner Technology

"Eco-Cute," which has shattered the conventional notion of residential hot water systems, is a natural refrigerant, heat pump hot water system — a hit product delivering high energy efficiency.
Hidden behind the birth of "Eco-Cute" are DENSO's skills and technology, which were cultivated through the development of car air conditioners.

The leader of "Eco-Cute" development
Masahiko Ito
General Manager of Air-Conditioning
R&D Dept. 1

Three Companies from Different Industries, Brought Together by Natural Refrigerants

In June 1998 at the IIR International Conference on Natural Refrigerants held in Oslo, Norway, a development team from DENSO reported their research into a new type of car air conditioner that used carbon dioxide (CO_2). CO_2 has less impact on global warming than fluorocarbon-based refrigerants. Present at the conference were researchers from the Central Research Institute of Electric Power Industry (CRIEPI) who were especially interested in our lecture. — so much so that it left them excited and filled with expectation. Noted one CRIEPI member at the time, "This is the same principle we're using in a new type of hot water supply system we're now researching. We think DENSO's technology can help us develop a commercial product."
CRIEPI was researching heat pump systems using natural refrigerants that gain heat energy by compressing CO_2. Their goal was to find more energy efficient methods for hot water supply, which makes up one third of the total residential electricity consumption in Japan. After the researchers had returned to Japan, they contacted Tokyo Electric Power Company, which had also been probing for ways to develop new types of hot water systems. Soon after, CRIEPI and Tokyo Electric Power Company began collaborative development with DENSO.



Tapping into Skill and Manufacturing Technology Gained from Car Air Conditioner Production

Masahiko Ito, then- head of DENSO's Special Development Laboratory, was asked to lead DENSO's collaborative efforts. He felt that the CO_2 refrigerant-based heat pump method was well-suited for hot water supply, and believed that commercializing a sealed hot water system would be relatively easy compared to car air conditioner design, where we had to scale down the complex air conditioning system and mount it inside the engine by splitting up the components. The three corporations began collaborating, but the the project was not without complications. As a refrigerant, CO_2 must be controlled at 100 times normal atmospheric pressure (a supercritical state), equivalent to five times what is needed for fluorocarbon-based refrigerants. Creating such a system required a perfect sealed system technology that prevented even the tiniest amount of refrigerant leakage. The system also needed to be scaled down, and because it was designed to run at night, it had to operate quietly. The project team used microprocessing technology and new technology developed in fluorocarbon-free car air conditioner research to create many prototype models. These were repeatedly sent to CRIEPI to undergo evaluation and improvement.

"Eco-Cute"

After a year of development, we were ready to begin field-testing the system. Systems were installed at 30 residences in selected sites from Hokkaido to Okinawa, and we made improvements while verifying the operating conditions. In May 2001, "Eco-Cute," the world's first natural refrigerant hot water system, was released to the market. DENSO manufactures the main body of "Eco-Cute," which is sold under the brand names of housing equipment manufacturers.
This system uses heat from the atmosphere to heat water to 90°C, and is estimated to be three times more energy efficient than electric hot water systems, as well as five times cheaper than running a gas hot water system (DENSO's provisional calculations) — facts that have earned wide acclaim. In its first year of release, "Eco-Cute" won the Minister of Economy, Trade and Industry Prize at the Energy Conservation Grand Prize (under the sponsorship of the Energy Conservation Center, Japan), and DENSO was soon signing manufacturing licenses with various power companies and hot water system manufacturers. Japan's national government has recognized "Eco-Cute" as equipment that contributes to suppressing global warming, and in 2002 the government began offering subsidies to encourage people to buy the system.

Discarded Technology Leads to a Technical Breakthrough

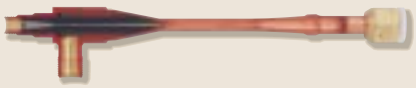
In 2002, we had no time to savor the success of "Eco-Cute" — we immediately expanded development to include model variations for bathroom dryers and floor heating systems. In December 2002, the fluorocarbon-free car air conditioner team overcame various hurdles to commercialize the world's first fluorocarbon-free car air conditioner. This was installed in Toyota's FCHV fuel cell hybrid car and delivered to the Prime Minister's official residence. Then in April 2003 exciting news spread throughout DENSO — an ejector cycle that could dramatically improve the energy efficiency of the refrigerant system had been developed. This new technology improved energy efficiency by up to 50 percent. The key was to replace the component that expanded the refrigerant with a smaller, more intricate blowoff system called an ejector. The ejector itself was not new — it was a mechanism that had been researched by electrical manufacturers and discarded because it did not improve efficiency. In 1991, Hirotsugu Takeuchi, then at the Air Conditioning Technology Department, knew of its existence through research conducted to improve the efficiency of bus air conditioners. He instinctively saw the ejector's potential. "Alongside the shortcomings that had led to its abandonment was a real treasure trove," remarked Takeuchi. DENSO linked up with Toyohashi University of Technology to conduct research into the two-phase flow component, which led to development of a basic design.

Toyota's fuel cell hybrid vehicle
with a CFC-free car air conditioner

Overcoming Technical Hurdles in Manufacturing

Although it was possible to simulate the control of the flow of refrigerant, getting it to work was no easy task. One of the reasons that other researchers had abandoned the ejector was this large technical hurdle in the manufacturing process. Simply put, the ejector was designed to allow the refrigerant to enter at a speed equivalent to the walking pace of a person, but once inside the ejector the refrigerant had to move as fast as a jet airplane, and then be ejected at the speed of a cruising car. Achieving this required micro-precision processing capable of making tubes narrower than a strand of hair.

Our technicians played a key role in making this possible. They have had experience in mass-producing nozzles with diameters of 0.13 mm when they developed an automobile injector that injected atomized fuel. After 10 years, Takeuchi's concept was finally achieved. In June 2003, the ejector cycle was commercialized for refrigerator vehicles. Hailed as the biggest breakthrough since the inverter, it was adopted for the "Eco-Cute" 6 kW model, which offers a 20 percent boost in energy efficiency.



This ejector, in which refrigerant can travel at dramatically different speeds, was made possible through proprietary numerical analysis and manufacturing technology.

On Dec. 9, 2003, a demonstration of Japan's climate protection technologies, including DENSO's "Eco-Cute," was given at a session for the Conference of the Parties (COP9*) held in Milan, Italy.

*COP9: The Ninth Session of the Conference of the Parties to the Framework Convention on Climate Change

Hirotsugu Takeuchi (Senior manager, Thermal Systems R&D Dept.) played a pivotal role in the development of the ejector cycle.

Major Awards Received for Refrigerant Cycles Using CO_2 Refrigerant

"Eco-Cute"

2001 11th "Nikkei Global Environment Technology Award"
(Nihon Keizai Shimbun, Inc.)

2001 (44th) "Top 10 New Products Award"
(Nikkan Kogyo Shimbun, Ltd.)

2002 12th (Fiscal 2001) "Energy Conservation Grand Prize" Minister of Economy, Trade and Industry Prize(The Energy Conservation Center, Japan)

2002 "EPA Environmental Award" Climate Protection Award
(U.S. Environmental Protection Agency)

Fiscal 2001 "Japan Society of Mechanical Engineers Award" Technology Award(The Japan Society of Mechanical Engineers)

Fiscal 2001 "Japan Society of Refrigerating and Air Conditioning Engineers Award"
(Japan Society of Refrigerating and Air Conditioning Engineers)

Fiscal 2001 "Heat Transfer Society of Japan Award Technology Award" Technology Award(Heat Transfer Society of Japan)

2003 6th "Grand Prize for Ozone Layer Protection and Global Warming Prevention" Excellence Award
(Nikkan Kogyo Shimbun, Ltd.)

"Minister of the Environment's Global Warming Prevention Award" Technological Development and Commercialization Department
(Ministry of the Environment)

2004 14th (Fiscal 2003) "Energy Conservation Grand Prize" Energy Conservation Center Chairman's Prize
(Energy Conservation Center)
Note: Injector cycle model

"Fluorocarbon-free Car Air Conditioner"

2004 17th "Chunichi Industrial Technology Award"
Special Encouragement Award (The Chunichi Shimbun)

"Ejector Cycle"

2004 2003 (46th) "Top Ten New Product Award"
(Nikkan Kogyo Shimbun, Ltd.)
Note: For cooling system

"Commendation for Excellence in Energy Conservation"
Commissioner of the Agency of Natural Resources and Energy Award
(The Japan Machinery Federation)
Note: For cooling system

Fiscal 2003 "Japan Society of Refrigerating and Air Conditioning Engineers Award" Technology Award
(Japan Society of Refrigerating and Air Conditioning Engineers)
Note: For cooling system

Fiscal 2001 "Japan Society of Mechanical Engineers Award" Technology Award
(The Japan Society of Mechanical Engineers)
Note: For hot water system

"21st Century Invention and Innovation Encouragement Award"
(Japan Institute of Invention and Innovation)
Note: For cooling system and hot water system

Receiving a commendation from Japan's Minister of the Environment Yuriko Koike

Highlights of Community and Environmental Activities in Fiscal 2003

The DENSO Group achieved a great deal in relation to the community and environment in fiscal 2003. Here are some highlights.

Management

Strengthened Management System and a New Vision

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In June 2004 we reduced the number of company directors and instead established managing officer positions. Each of these managing officers is assigned a department and works to streamline and speed up operations within that department. DENSO's mid-term plan, directed to the next-generation automobile society, was established and announced as DENSO Vision 2015.

Announcement of DENSO Vision 2015 (April 21, 2004)

Improved Compliance System

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To enhance and broaden our ethical perspective, DENSO has made October "Corporate Ethics Month," beginning in fiscal 2003. We have also established a Corporate Ethics Hotline — an internal system to facilitate direct communication with external lawyers. As an additional measure, we hold a conference on corporate ethics in the United States twice each year. We are committed to compliance within DENSO.

Our in-company website on corporate ethics

Conference on Corporate Ethics (DIAM: USA)

Commitment to Social Responsibility

Enhanced Safety Products in More Cars

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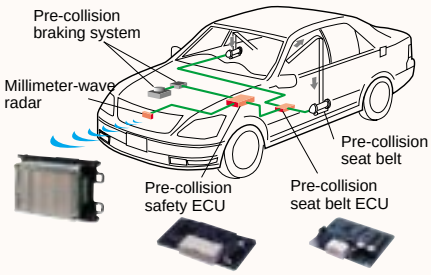
Toyota's new Crown in Japan includes a pre-collision safety system designed to detect obstacles, retract the seatbelts, and apply the brakes before the collision occurs, thereby enhancing passenger safety. DENSO is contributing to this system with the core technologies of the millimeter-wave radar used for obstacle detection and the main ECU (computer).



Improving Dialogue with DENSO Stakeholders

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At DENSO, we believe it is important for people outside our company to see DENSO operations first hand so that we continue to receive honest opinions and insight from outside DENSO. We held Open House in Japan in 2003 as an opportunity for informal discussion on DENSO and the environmental society. Through tours of the DENSO gallery and DENSO plants, a reading of DENSO's Environmental and Social Report and a forum for opinion exchange, we gained valuable insight.

Tour of Biotope

Forum for exchanging views

New Environmental Rating and Evaluations from Outside Institutions

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Now much more weight is being given to a corporation's socially responsible investment (SRI) and environmental rating. DENSO has been selected in the U.S. Dow Jones' DJSI for four years in succession. The company has also been selected as a member of Ethibel, a Europe-based independent organization for SRI evaluation. In addition, DENSO has been chosen as one of the Green Top Runner 67 companies by the Sustainable Management Rating Institute.

Commitment to the Environment

Enhanced Energy Efficiency from a New Ejector Cycle

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In April 2003, the ejector cycle, an intricate and miniaturized injection system, replaced the refrigerant expansion system. This revolutionary breakthrough in design has improved energy consumption efficiency by as much as 50 percent over the previous cooling system design. Automotive cooling equipment that incorporates this new design has reduced CO_2 emissions by about 60 percent.

The ejector cycle delivers astounding performance

"Eco-Cute" Hailed As Exemplary Climate Protection Technology

P. 7-8

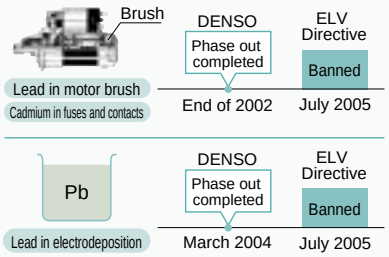
Tapping into our vast reservoir of car air conditioning technology, DENSO has jointly developed the world's first natural refrigerant (CO_2) heat pump hot water system, which is now in mass production. This achievement was recognized at the Conference of Parties to the Framework Convention on Climate Change (COP9) held in December 2003 in Milan, Italy, as exemplary technology for preventing global warming. DENSO also received a commendation from the Minister for the Environment.

Receiving a commendation from Japan's Minister of the Environment Yuriko Koike

Prohibited Substances Phased Out in Advance of the EU End-of-Life Vehicle (ELV) Directive

P. 45

Heavy metals and other chemical substances conventionally have been used in automotive parts to ensure high performance and quality. DENSO made a commitment years ago to reduce the amount of substances that have an environmental impact. By the end of fiscal 2003, well before the new regulations took effect, DENSO had completely phased out the use of lead in the motor brush and electrodeposition, cadmium in fuses, and hexavalent chrome used for rust prevention.



Solid Progress Towards Zero Emissions by Group Companies Worldwide

P. 52

Focused on our goal of having our domestic group manufacturers achieve zero emissions by fiscal 2005 as set forth in DENSO EcoVision 2005, each company has been promoting the exchange of technologies and the spread of exemplary practices. In fiscal 2003, 11 companies achieved zero emissions. All 18 companies achieved their goal two years earlier than the set targets. In our overseas operations, companies in Hungary, India and Taiwan have also achieved zero emissions.

A Work Area for Trying Out Ideas (DNHA: India)

Joint Development of material-recyclable containers

P. 55

Previously, when plastic containers could no longer be used because of deterioration or cracking, they were usually incinerated and recycled as heat energy. DENSO collaborated with companies such as Sekisui Chemical Co., Ltd. to create a material recycling process. From this, DENSO developed a recyclable container that uses recycled plastic. Since 2003 these boxes have been used at DENSO's major plants and group companies.

Recycled containers

High Praise for Environmentally Focused DMHU (Hungary)

P. 57

In 2003, not only did our overseas group company DMHU achieve zero emissions, their environmental activities also included providing environmental education assistance to schools and issuing a sustainability report. These activities did not go unnoticed: they earned DMHU the 2003 Hungary Environmental Award, the Central Europe Environmental Reporting Award and the 2004 EU Environmental Award (Management Award for Sustainable Development).

EU Environmental Award Ceremony (June 2004)

Making Our Corporate Mission a Reality

Aiming for higher goals in a new vision statement and management system

DENSO Vision 2015 is our new long-term policy directive, and the key to making it a reality is to strengthen corporate governance.

The DENSO Philosophy

Mission

Contributing to a better world by creating value together with a vision for the future.

Management Principles

1) Customer satisfaction through highquality products and services.
2) Global growth through anticipation of change.
3) Environmental preservation and harmony with society.
4) Corporate vitality and respect for individuality.

Individual Spirit

1) To be creative in thought and steady in action.
2) To be cooperative and pioneering.
3) To be trustworthy by improving ourselves.

DENSO Vision 2015 — Creating New Value

Since 1964, DENSO has created a long-term management plan for each management turning point. We are now working toward the goals of our current plan — DENSO Vision 2005 — and it seems that all our objectives will be achieved.
Our new long-term plan, DENSO Vision 2015, was announced in April 2004. The basic tenent of this vision is to help cars coexist in harmony with the earth and its people, and to enable people to experience an enriched quality of life. In other words, DENSO wishes to contribute to the achievement of an advanced automotive society. In addition, DENSO is striving to become a truly global corporation that can earn the trust of customers throughout the world. We will do this by tapping into expertise that is shared with the world, and implementing management practices based on regional principles. An overview of the basic strategy for achieving this vision is shown at the right. DENSO looks forward to upholding this vision by creating long-term concepts, annual policies and plans and individual goals. The journey to achieving our new vision has already begun.

Overview of Our Mission, Vision and Plan

At the formal announcement of DENSO Vision 2015
April 21, 2004

URL The entire text of DENSO Vision 2015 is available at: http://www.denso.co.jp/ja/aboutdenso/vision/

DENSO VISION 2015

Beyond All Expectations

Achieving Our Goals

To bring "yasashisa" (consideration) and "ureshisa" (fulfillment) to the people of the world.

Three Policies

Technological Development

I Leading by offering new value
Concentrate development activities on anticipating the needs of end users by focusing on the environment, safety, comfort and convenience to enable an endless supply of innovative products that promote a more advanced automotive society. In tandem with these efforts, boldly explore possibilities in new businesses to broaden the business scope and encourage dynamic new thinking.

Growth of Business Operations

II Growing business operations that are rooted in the ways of the region to instill deeper confidence
Encourage craftsmanship that addresses the needs of specific markets to ensure that people, wherever they live, can experience the pleasure of DENSO's products. As business operations grow, ensure that DENSO's methods are shared, encourage the unique features that local regions have to offer, and gain the competitive edge by constantly evolving.

Management and Human Resources

III Creating an evolving corporation based on global wisdom
Encourage management to benefit from the high level of synergy that is available through a framework of collaborative autonomy. Value the abundance of skills held by employees and reinforce a team-based creative power that is generated through an amalgamation of individual ideas.

Focal Points

1 Product development oriented toward an automotive society

2 New business development oriented toward fostering new ideas and businesses

1 Craftsmanship that instills confidence throughout the world

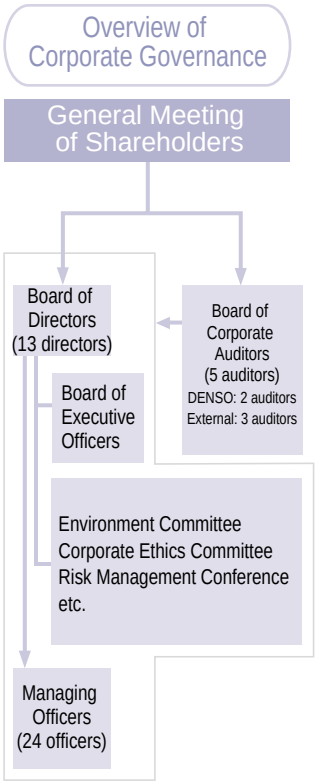
2 Business operations that incorporate local features and are in harmony with the region

1 Corporate framework that offers both autonomy and synergy

2 Developing people to carry on the challenge of innovation and creation

DENSO's Corporate Governance

DENSO is adding substance to its governance system with the goal being to improve long-term business performance in the rapidly changing global market in a stable way. In addition to the legal functions such as the board of directors and the board of corporate auditors, we have put in place internal control mechanisms such as the Risk Management Conference, the Environment Committee, the Corporate Ethics Committee and the Board of Executive Officers for the discussion of important management issues.



Slimmer Board of Directors and New Managing Officers

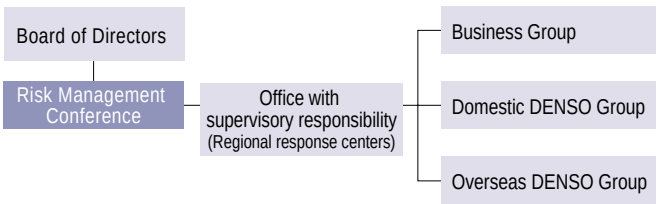
In June 2004, along with slimming down the board of directors, we established the positions of managing officers who are charged with the execution of specific assigned operations. We established these new positions to speed up decision making and operation. We also assigned a director to oversee each department and ensure that the opinions of all the divisions have a voice in DENSO's overall management strategy.


2004 General Meeting of Shareholders

Improving Risk Management

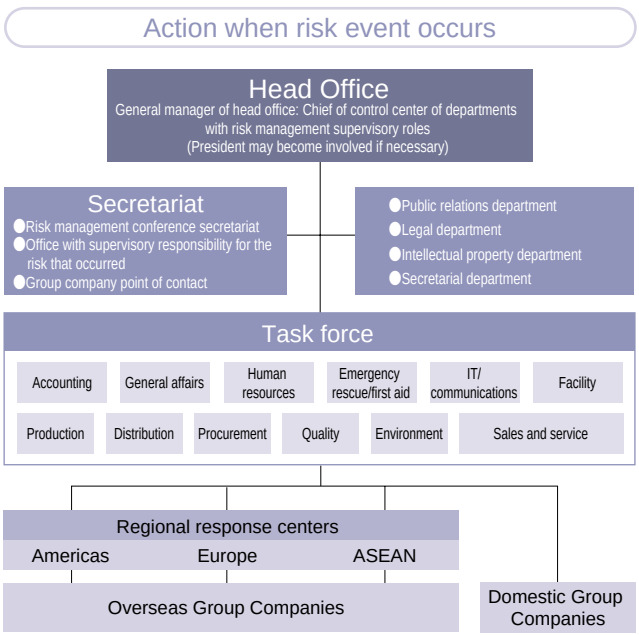
Major changes in circumstances such as the expansion of overseas operations, rapid growth of information technology and increased social responsibilities in relation to the environment make it essential to practice risk management with a global perspective. Risk factors formerly dealt with by the department in charge of management are now reviewed under unified management. As part of these measures, we established the Risk Management Conference in May 2003. This conference reviews risk factors and forms a task force that covers all divisions. DENSO is now better positioned to improve structures set up to prevent unexpected incidents and accidents, and to minimize the impact on business and hasten the restoration of normal operations in the event that any incidents do occur.

■Framework for Risk Management



■Major Risk Factors

Accident or mishap due to internal factors	Environmental pollution, disaster, user claim problems and incidents, employee issues, confidentiality leaks, product recalls, bad debts, traffic accidents, production hindrances, information systems failure, contractual obligation infringements, etc.
Regulation infringements	Infringement of anti-monopoly law, infringement of foreign exchange law, tax evasion, third party patent breach, employee, executive crime or misdemeanor, etc.
Accident or mishap due to external factors	Buyout of company shares, shareholder class action, product liability litigation, accident, distribution trouble, etc.
Natural disasters and accidents	Sudden change in exchange or interest rates, natural disaster, supplier calamity, etc.



Strengthening Compliance

Aiming for a corporate culture that strengthens trust

In fiscal 2003 we established Corporate Ethics Month, set up a Corporate Ethics Hotline was put in place, distributed booklets and launched a corporate ethics website.

Code of Conduct

Establishing and Promoting Compliance

At DENSO, we believe that for a corporation to fulfill its social responsibilities, it not only must obey the local and national laws and regulations, but also all employees must be committed to a high ethical standard. In 1997 we established the Corporate Ethics Committee (Secretariat: Legal Department) chaired by the vice president. The job of this committee was to create a Code of Conduct and ensure the commitmentt and approach required by this code be adopted throughout the company. Since that time the committee has convened several times each year, and continues to strengthen compliance by distributing guidelines, standardizing self-assessment and providing corporate ethic education specific to each level of the company.

Distributing the Code of Conduct

The Code of Conduct prepares DENSO employees for involvement in corporate activities. In 1998 we distributed the Code to all employees and set up a consultation section in our legal department. In 2002, in response to changes in social situations, we revised the Code to serve as a guide for day-to-day activities, urging each of our employees to maintain strong ethics. Our group companies also wrote guidelines based on this original code, and they continue to use them today.

Working Group for Corporate Social Responsibility

In reflection of society's increased focus on corporate social responsibility (CSR), we are making concerted efforts to further promote CSR in our corporate culture and reflect these principles in our activities. As part of these efforts, we established a cross-departmental working group in fiscal 2002. This working group is made up of CSR officers from the departments of Corporate Communications, Environmental Planning, General Affairs, Management Planning, Human Resources, Legal and Services. As part of its ongoing activities, the working group invites outside professionals to give lectures and researches case studies of other companies.

CSR working group study session

Code of Conduct

Corporate activities

Fair dealings / Protection of smaller suppliers

Heeding customs in international business

Intellectual property rights

Handling of competitor information

Environmental protection

Product safety

Corporate racketeering and extortion

Exchange of gifts, entertaining and monetary gifts

Relationship between the company and its employees

Environment of workplace

Confidential information

Internal information

Acting appropriately as a member of society

Manner and etiquette

Traffic safety

Violation of legal regulations

URL For more details on the Code of Conduct: http://www.denso.co.jp/ENVIRONMENT/report/2003/index.html

Compliance Framework

■Intranet Website on Corporate Ethics

Website Content

■DENSO's code of ethics
・Code of Conduct
(Guide for implementation)
■Corporate Ethics Hotline
(outside points of contact)
■Corporate Ethics Hotline
(internal points of contact)

Contacts for various matters

workplace environment, sexual harassment, extortion, traffic accidents, mental health, personal issues

Handbook for the Corporate Ethics Hotline

Wallet card (help line card)

Ongoing Improvement at Every Level

Since fiscal 2002, we have been carrying out training specific to each level of the corporate hierarchy in the form of lectures to further promote understanding of corporate ethics.
We also established a company-wide standardized self-assessment system in fiscal 1999 to give each department more opportunities to discover problems and establish solutions autonomously. These assessments, conducted once a year, are based on the Code of Conduct and important management checkpoints stipulated by the Internal Auditing Department, which receives the results of assessments.

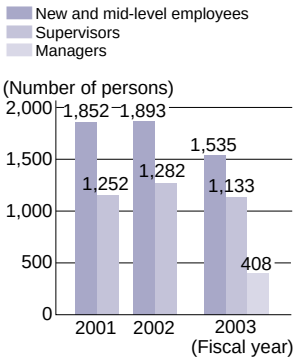
Internal Reporting (Corporate Ethics Hotline)

To improve ethical perspectives within the workplace, we initiated Corporate Ethics Month in October 2003. Part of this initiative was to set up an internal reporting system (Corporate Ethics Hotline) having points of contact managed by our lawyers. A handbook on how to use this system was distributed to all employees. We also established the Corporate Ethics Website, an intranet site designed to create an environment where employees can find information and report matters with the confidence that their privacy will be protected.
By the end of fiscal 2003 there had been a total of 60 requests for consultation (such as problems with workplace management). DENSO is now looking to expand the Corporate Ethics Hotline to include group companies.

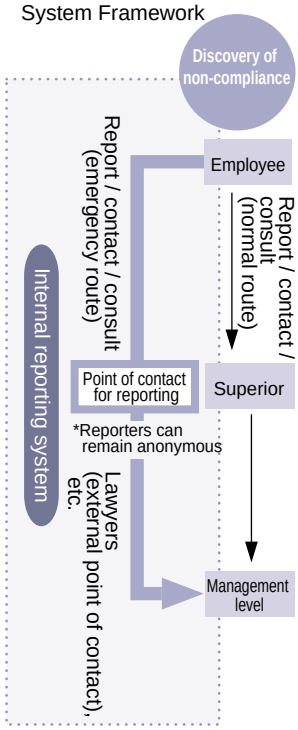
U.S. Compliance Officer Conference

Individual companies around the world obey the laws, regulations and customs of their respective countries or regions based on DENSO's philosophy, and expect their employees' conduct to earn community trust. In the United States, the implementation of a corporate ethics and compliance program in all U.S. group companies began in 1999. In 2000, a U.S. edition of the Code of Conduct based on federal guidelines was issued. Compliance officers* appointed by 14 companies now lead efforts to sustain and deepen the consciousness of compliance in accordance with the Code of Conduct.
The Conference on Corporate Ethics chaired by the vice-president of DENSO International America, Inc. (DIAM), our North American headquarters, convenes twice a year to review and improve this program. In February 2004, employees began receiving a wallet card listing the name of the compliance officer and the phone number of the help line to further promote awareness of this program's activities. In the future, we will work on standardizing our compliance systems throughout the world.

■Participants in Compliance Training in Fiscal 2003 (Non-consolidated)



■Internal Reporting System Framework



Conference on Corporate Ethics

*Compliance officer: Person charged with the duties of promoting education and awareness inside each company and checking that the conduct of business activities is in line with the law and the code of conduct.

A Global Company Meeting Society's Needs

Sharing and communicating our corporate spirit: Advancement, Reliability and Knowledge and Strength of the DENSO Group

When a large corporation establishes itself in a new region, the impact in terms of industry, economy and employment in a community is greater than one might expect. At DENSO, more than 95,000 people are engaged in manufacturing 31 countries across the world — so we are no stranger to such impact. We are well aware that if we cannot gain acceptance from local communities, DENSO will not continue to grow.

Crucial to a successful relationship with the community is a common set of values and ethics. Along with our philosophy, we have been shaping a spirit since our foundation that is centered on "advancement, reliability and knowledge and strength of the DENSO Group." Advancement leads us to take on what no one has attempted. Reliability is earned from understanding the region and learning its wisdom, and knowledge and strength are realized through cooperating together and sharing ideas.

I believe that the activities that best exemplify the DENSO spirit are human resource development at the DENSO College of Industrial Technology and our community service activities. The former is one of Japan's few company-run schools, and it provides a powerful resource of skilled technicians. Our community activities are concentrated in three main areas: social welfare for the physically challenged, nurturing youth, and environmental protection. We are achieving good results in all three areas.

However, there are issues still to be resolved. For example, although DENSO is an employer of a diverse range of employees, we still must work to make the workplace more empowering for female and non-Japanese employees. Once we have done this, then I think DENSO can be called a truly global company.

Masatoshi Ano
Senior Managing Director

Manufacturing Starts with Helping People Grow

What enables a company to live up to its social responsibilities as a global citizen is the people inside the company. DENSO believes that it is the power gained from helping people to grow that leads to creating a company that coexists well with the community.

Company-run College Education for Minds, Skills and Bodies

If asked about DENSO's human resource development, many employees would urge you to take a visit to the Denso College of Industrial Technology next to the Takatana Plant (Anjo, Aichi). What surprises people who visit the school are the loud greetings from the passing students. This is because of the school's emphasis on instilling fundamental social etiquette and morals. This is part of an education that balances both mind and body, placing importance on humanity and sociality.
This is not an education focused only on developing people with special technical skills. The school curriculum is also structured to provide plenty of time for general education and club activities, as the main focus of the school is to allow students to develop their minds, skills and bodies in a balanced way.

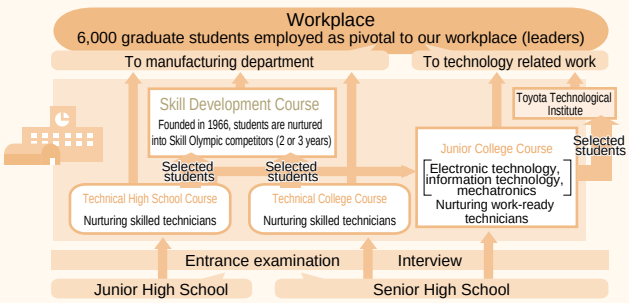
Half a Century of History and Success

In 1954, soon after the founding of the company, DENSO's first president Torao Hayashi established a technical school within the company to train technicians. This came about because of the conviction that it is the skilled engineers and technicians who are the foundation of the company.
One indication of the remarkable achievement of this college over the last fifty years is the performance of successive generations of students who have competed at the Skill Olympics (World Skills Competition). To get an idea of the school's achievements, you need only to look at the 37th World Skills Competition (Switzerland) held in June 2003, where all six competitors from the school won medals (three gold, two silver and one bronze). Yet achievements that are even more remarkable can be witnessed when these students begin work in development and production departments, where they demonstrate awesome skills and create products and technologies previously dismissed as impossible. As these high-class skills are steadily handed down to the next generation, the breadth of DENSO technology steadily expands.

Mechatronics research at the College of Industrial Technology

English lesson at the Technical College

■An Overview of the Denso College of Industrial Technology



Inspiring the Younger Generation

All six of our competitors in the World Skills Competition (Switzerland) received a medal.

One of DENSO's key management policies is a commitment to coexist with society and gain the trust of the international community. This is reflected in the philosophy behind our community activities. Back in 1973, as part of the Toyota Group, we received an invitation from the Japan Institute of Invention and Innovation to help with the Kariya Young Inventors Club. The club's purpose is to nurture scientific minds in the young people who will steer tomorrow, and give them opportunities to discover the joy of making something to be proud of. DENSO dispatched instructors and provided places to conduct activities, and continues today to support the club through active involvement.

Nurturing People Active in the Community

In 1984, DENSO's involvement with Operation Raleigh (hosted by Raleigh International), which provided exchange among the youth of the world through adventure and volunteer activities, was a significant turning point in DENSO's community activities. For the five years in which DENSO lent support, 110 Japanese youths took part in the program. Our objective was to develop our identity as a global corporation and nurture the youth who will become tomorrow's leaders. From our involvement, we witnessed the personal growth that these participants underwent and gained tremendous insight into issues involving globalization and in helping young people to find their potential. This provided DENSO with invaluable support for our future contributions to society.
Some DENSO initiatives are Wheelchairs and Friendship Center of Asia (WAFCA), a non-profit organization to increase wheelchair availability in Asia and help the physically challenged achieve greater autonomy; DENSO Cup Soccer, aimed at promoting university soccer around the world; and DENSO Heartful Club, which contributes to activities in the local community and to overseas initiatives. The biggest underlying supportive force of our vast array of social contribution is what DENSO placed most importance on: helping people to grow and reach their full potential.

P. 25-26

Operation Raleigh (1980s)
- a turning point for DENSO

Kariya Young Inventors' Club
- fostering innovative minds

DENSO Heartful Club
- firefly habitat protection

DENSO Cup Soccer
- international competition for universities

Ensuring Trust and Satisfaction

A Commitment to Optimum Quality for Our Customers

In fiscal 2003 we took decisive steps to dramatically reduce the risk of unexpected quality incidents, strengthen the quality management system in overseas production and eliminate possibilities for human error.

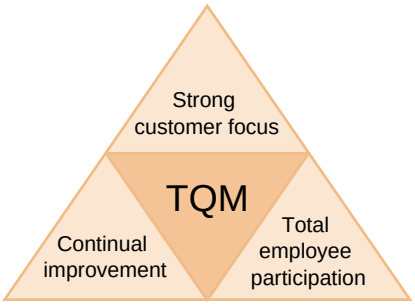
At DENSO, Quality Always Comes First

Automotive parts help keep passengers safe. This has been our belief since the company was founded. All employees at DENSO are focused on the customer and committed to continuous quality improvement. We work under the principle that quality always comes first: the entire product manufacturing process is the process of quality control. The standard of quality that earned us the Deming Prize* in 1961 and allowed us to receive QS9000 accreditation** in 1996 is still present in our Total Quality Management (TQM) activities. As part of TQM, DENSO's top executives determine quality objectives, create frameworks, and lead the Consumer Satisfaction (CS) Improvement Committee, Quality Assurance Council, and TQM contests, which serve an important motivational role for employees. Each year the CS Improvement Committee defines the main goals, then directs focus on improving these areas.

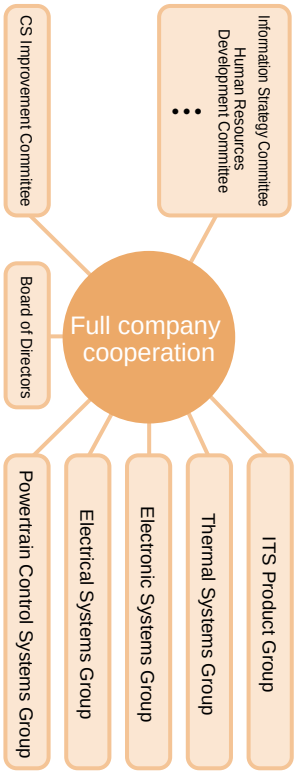
In fiscal 2003 attention focused on strengthening the quality assurance system at DENSO's production bases in Europe, ASEAN member countries and China.

In addition to this, in March 2004, all companies (all business departments and departments with associated roles) received the European automobile industry quality management system qualification, ISO/TS 16049:2002.***

■Core Approach to TQM



■Quality Improvement System



Tests on ice
(Abashiri Test Center, Hokkaido)

High-speed circuit tests
(Nukata Course, Aichi)

Rigorous Evaluation on Actual Vehicles

As part of the quality assurance process for new products, the Quality Assurance Council conducts four reviews throughout the engineering process, from planning and design through mass production. Top executives join the council and contribute to the quality examination. During design, quality assurance covers more than simply looking at each individual product -- the total vehicle system must be highly reliable and durable. To verify this quality, we conduct repeated testing on all road conditions including high-speed circuits, poor roads, low temperatures and on ice.

* Deming Prize: Established in 1951 by the Union of Japanese Scientists and Engineers to commemorate Dr. W. Deming, who contributed greatly to quality control in Japan. The prize honors both companies and individuals for advancing quality control.

** QS9000: Quality standard based on ISO9000 with added requirements from the Big Three U.S. automobile manufacturers.

***ISO/TS16049: Quality management system standard for the automobile industry integrated from QS9000 and German, French and Italian standards.

Column

Acclaim from Carmakers

Each year the major automobile manufacturers honor their best suppliers to encourage improvement in supplier quality. DENSO and its group companies around the world are receiving high praise from various customers for our quality, cost, reliable delivery and technical development.

2003 Global Supplier Award
(DaimlerChrysler)

■Awards from Customers

Name	Customer	Recipient	Reason
Supplier of the Year 2002	GM (USA)	DENSO	Technology, quality and service (10 years in a row)
Volkswagen Group Award (2003)	VW (Germany)	DNDE (Germany)	Strong performance over five categories
2003 Global Supplier Award	DaimlerChrysler (Germany/USA)	DENSO	Electronics (technology, quality and supply of electrical systems)
14 awards including Global Contribution Award	Toyota Motor Corporation (Japan)	DENSO	DENSO's performance in fiscal 2003 (Global contribution, cost improvement, technological development etc.)
Qualitas Award 2003	Fiat (Italy)	DNTS (Italy)	Quality of thermal systems
Supplier of the Year Award	Mitsubishi Motors (Australia)	DIAU, AAA (Australia)	Three-way performance: cost, quality and delivery time

Our website to help locate the nearest service station

Training for overseas staff

Customer service team

URL DENSO's Service Network
http://www.denso.co.jp/ja/products/servicenetwork/

URL Privacy Policy
http://www.denso.co.jp/ja/privacypolicy/

Service and Skill Training for Improved Customer Satisfaction

To establish a network to deliver after-sales service for DENSO products in Japan, we have tie-ups with nearly 800 DENSO-designated and authorized service stations and eight local sales companies throughout Japan. Each service station inspects and repairs parts from automobile dealers and repair shops. They also sell replacement parts and offer services such as CFC recovery from car air conditioners. Approximately 80 to 95 percent (by weight) of all parts brought in (starters, alternators and car air conditioner compressors) are repaired and reused, thereby saving resources and reducing disposal tonnage.

DENSO provides services similar to its domestic service outside Japan. To ensure the service stations always provide advanced technical expertise, DENSO provides technical training to staff both domestically and overseas at our own service training centers. We also keep all service stations up to date with the latest information and provide DENSO Eco Service Station certification to service stations who provide environmentally excellent service (Japan only).

Rapid Response for Quality Issues

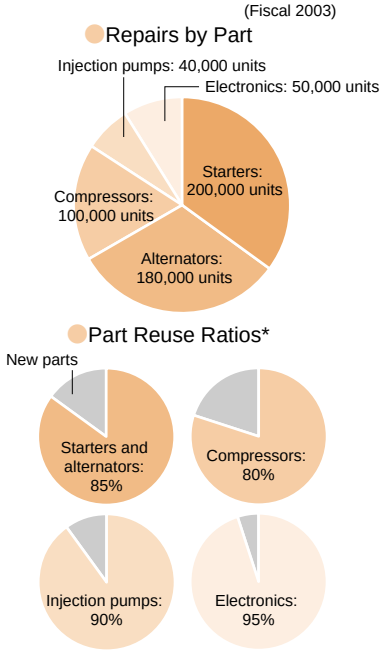
In addition to local sales companies and service stations, customers are able to directly contact the customer service staff of the Service Department at DENSO's Head Office. We welcome your opinions and comments, and provide this feedback to the appropriate departments.

If by rare chance a product has a serious defect, we have a strict procedure whereby we collect the product, analyze it, and take necessary action to rectify the problem to ensure the problem does nothappen again.

We have arranged for the retail stores or customer support centers of automobile manufacturers to deal with complaints regarding quality and warranty issues for OEM (original equipment manufacturer brand) products such as the car air conditioners and engine related systems that we supply to automobile manufacturers.

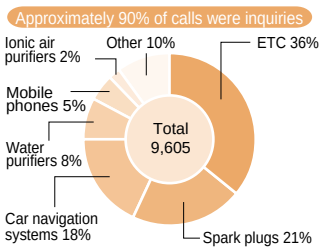
We operate under a strict security policy regarding the personal information from our customers.

■Repairs by Part and Part Reuse Ratios at DENSO Service Stations (570,000 Units) (Fiscal 2003)

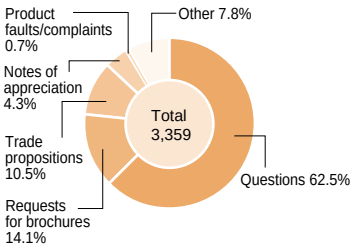


*Part reuse ratio
= Part weight reused in component / Total part weight

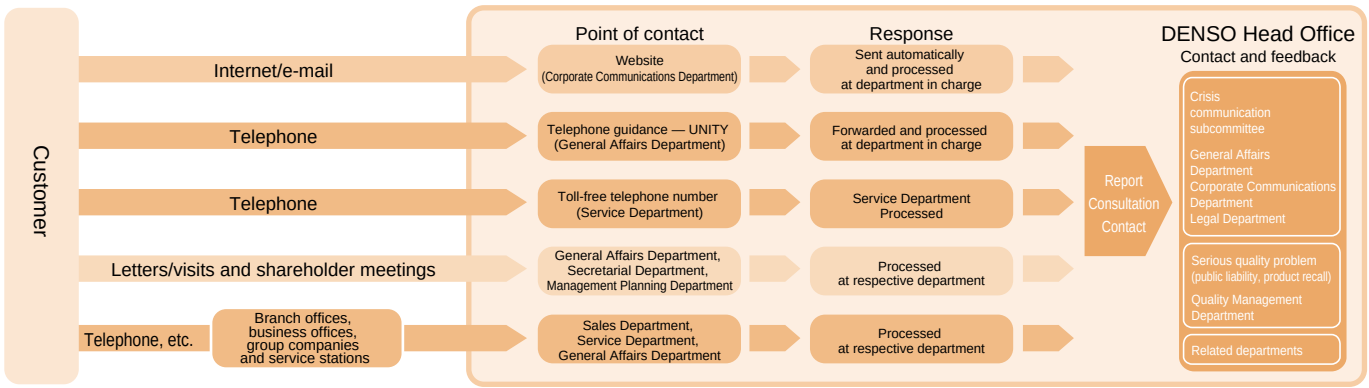
■Inquiries and Feedback Received by Customer Service (Fiscal 2003)



■Inquiries and Complaints Received over the Internet (Fiscal 2003)



How Customer Feedback Is Communicated Through the Company



Helping to Make Cars Safer and More Passenger-friendly

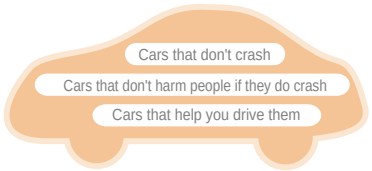
Setting the Highest Standard for Safety and Comfort

In fiscal 2003, a wider range of models adopted headlamp control systems and millimeter-wave radar systems.

Making Cars Safer

At DENSO, the fundamental requirement for automobile manufacturing is safety, and we focus on working toward a society free from automobile accidents and the damage they can cause. This is the driving force in our three-tiered focus in product development: we strive to make cars that don't crash, cars that don't harm people (passengers and pedestrians) if they do crash, and cars that help you safely drive.

■Basic Safety Mission



1 Cars That Don't Crash (Enhanced Preventive Safety)

To enhance car safety, it is crucial to improve the preventive safety features that operate before an accident occurs. DENSO teamed with Toyota Motor Corporation and Koito Manufacturing to develop a headlight control system (AFS*) designed to enhance visibility for the driver. This system automatically adjusts the direction of the headlights when the car is turning so that they point in the direction the car is moving. In Japan, the 2003 Harrier and the 2003 Celsior are equipped with AFS. In addition, we have developed a sensor that is a core element in a vehicle stability control system (VSC) that controls the sideways skidding of a vehicle.

P. 34

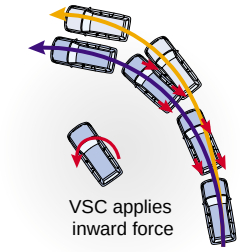
Millimeter-wave Radar

By emitting radio waves, this radar detects the position and speed of obstacles, stationary vehicles, cars ahead or oncoming cars, and sends the information to the system.

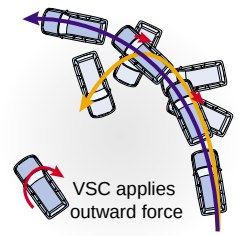
2. Cars That Don't Harm People If They Do Crash (Improving Collision Safety)

The Pre-crash Safety System is designed to reduce damage from a collision by rapidly activating safety fixtures when the system determines that a collision is unavoidable. DENSO has been jointly developing with Toyota Motor Corporation,products such as millimeter-wave radar and ECUs** (computers), the core technologies of this system. Like AFS, these features have been adopted in the Harrier (as an optional extra) and the Celsior. In the fiscal 2003 "Automobile Assessment" (published by Japan's Ministry of Land, Infrastructure and Transport) for safety of drivers and passengers during a collision, the Toyota Harrier received the highest rating of six stars.

◎When the front wheels skid sideways



◎When the rear wheels skid sideways



Car with VSC Car without VSC

Vehicle Stability Control (VSC)

When the driver is cornering on a slippery road or turns the steering wheel sharply, a sensor detects the sideways skidding of the vehicle. VSC stabilizes vehicle by individually controlling the braking force on each wheel and adjusting the engine output.

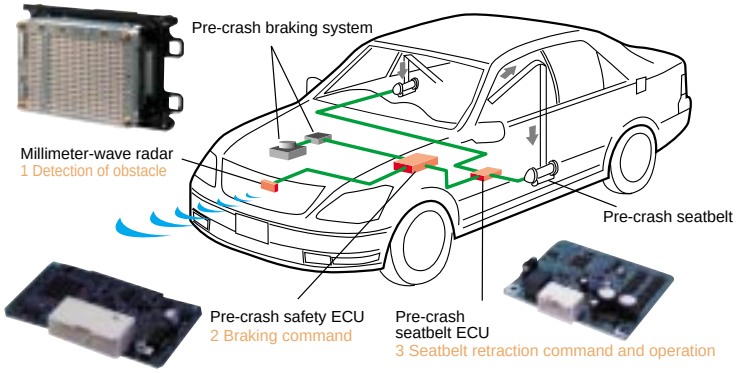
* AFS: Adaptive Front-Lighting System

** ECU: Electronic Control Unit

Column

New Groundbreaking Pre-crash Safety System Integrates Technologies

It has been calculated that a mere 5 km/h reduction in a car's speed the moment before impact reduces the chances of a fatal accident by 20 to 30 percent. This system is designed to reduce vehicle speed by detecting obstacles that the car will unavoidably collide with and sending a signal to an ECU, which immediately applies the brakes and retracts the seatbelts. This system incorporates technologies developed for the already commercialized Adaptive Cruise Control (automatically controlled cruising speed) and electronic power steering (easier steering wheel operation).



Instrument cluster head-up display

The instrument cluster information is displayed as a video image projected on the windshield to allow easy reference with little eye or head movement.

Easy-to-use switches

With one touch of a button you can adjust the temperature setting or fan speed of the air conditioner.

Car navigation systems

Maps of 26 countries around the world are on DVD.

Onboard ETC

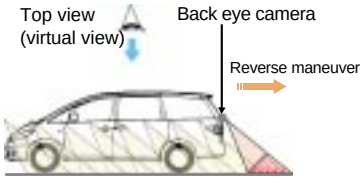
In March 2004, domestic sales for DENSO's onboard ETC broke the 1 million mark.

3. Cars That Help You Drive Them (Engineering People-friendly Products)

DENSO is committed to developing products that are universally designed to provide ease of use to all people, regardless of age, sex or physical ability. Products representative of this ideal are the instrument cluster head-up display designed to minimize movement of the driver's line of vision, and the top view parking assist, which makes it easier to manuever into a parking space by converting the image from a camera at the rear of the vehicle into a top-view picture displayed on the car navigation screen. A common theme in these products and in designs such as easy-to-operate air conditioner switches is our ongoing effort to improve human-machine interface. Our goal is interaction between humans and devices that is completely seamless.

ITS for Smoother Traffic Flow

Around the world, there is an ongoing effort to develop ITS* . These systems use information and communications technology to reduce traffic congestion, traffic accidents, environmental impact and energy consumption. DENSO is developing ITS products such as car navigation systems that reduce exhaust emissions and improve fuel efficiency by routing drivers around traffic congestion through access of traffic data and onboard ETC** (electronic toll collection systems) that reduce traffic congestion at toll gates. We are also active in research and development into Internet ITS, which establishes data communication by connecting the car to the Internet.



Top view parking assist (under development)

This system is designed to help the driver by showing the movement of the car using an aerial view on the navigation system.

Car navigation communication module compatible with Toyota G-BOOK

G-BOOK is a system that links a car with a data center by satellite communication and which can establish a two-way exchange of various information.
DENSO has developed this mobile phone compatible communications module.

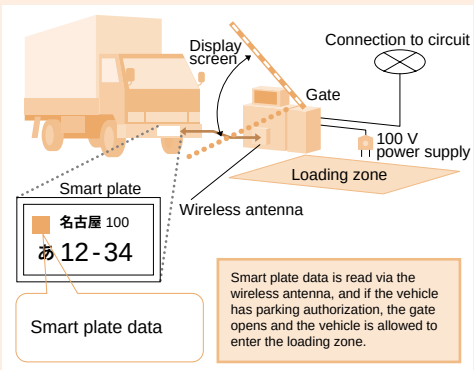
* ITS: Intelligent Transport Systems
** ETC: Electronic Toll Collection System

ITS at Work

Testing a Loading Zone System Using Smart (Electronic) License Plates

Chojamachi, the wholesale textile district in Nagoya, Japan, is notorious for illegal parking and traffic congestion due to the never-ending collection and delivery of goods in the area. In this demonstration exercise, DENSO worked with the district, government, universities and businesses to resolve these problems using the ITS technology smart plate.
The smart plate is designed to optimize freight logistics and traveler mobility by installing wireless modules to license plates, linking them to data control systems and assigning IDs (digital certificates) to vehicles. It is also incorporated in the national ITS Promotion Plan. DENSO, a participant in the plan since 1994, is continuing development of this system.
As part of the Chojamachi demonstration exercise Dec. 1 to 7, 2003, parking spaces (off-road loading zones) were established in several locations in the wholesale district, and identification by automatic entry/exit parking control was conducted through data links with trucks equipped with smart plates.

■Overview of the Demonstration Exercise



In-house smart plate testing at the Nukata Test Course

Becoming a Spirited and Lively Workplace for a Wide Range of People

Creating a system that allows employees to experience the joy of expanding their potential

DENSO's human resource system emphasizes respect for initiative. As part of this, in fiscal 2003 we made progress in reinforcing practices such as fostering local executives in overseas companies, ensuring equal opportunities for women and providing employment opportunities for the physically challenged.

DENSO's Human Resource Philosophy

[Mission Statement]

To promote a culture that encourages the realization of full potential, elevates the self-confidence of each employee and meets the management goals of DENSO so that both DENSO and its employees can grow and prosper together.

[Human Resource Guidelines]

1. Promote individual morale and the sense of being part of a team to encourage positive and active involvement in employee business activities.
2. Employ and develop people who are full of creative spirit and possess the will and capacity to contribute to ongoing business growth.
3. Establish and implement fair and just human resource policies and systems that earn high praise from both company and employees.

DENSO Human Resource Management Philosophy (Japanese/English version)

■Overview of ACTIVE 21

DENSO's Human Resource Philosophy

Our Basic Approach

The mission statement for human resources in DENSO is to create an environment where both DENSO and its employees can grow and prosper together by promoting a culture that encourages employees to reach their full potential. To achieve this, the DENSO Group works as one to implement the human resource guidelines of creating a sense of being part of the one team and raising the morale of each individual, securing and nurturing personnel who are creative, and constructing fair and just human resource policies and systems.
We believe that complying with all laws and regulations regarding human resources and respecting local culture and customs are the keys to this strategy. We are fully committed to eliminating discrimination based on differences such as race, religion, sex, age, nationality, injury or illness.

Human Resource Development

Respecting Initiative and Maximizing our Human Resource Potential

A powerful force that drives the growth of the DENSO Group is our commitment to broadening the possibilities and opportunities of our employees who hold diverse values. That's why we established ACTIVE 21 – human resource policy guidelines based on respecting the initiative of our employees and maximizing our human resources potential. We have designed five guidelines that foster three desired attributes: a willingness to take on challenges, a professional mind, and a global outlook. We are committed to ongoing improvement in these areas.

Career Mobility Directed by One's Own Vision

There are several important factors in motivating employees, including the opportunity to take on work that improves their skills and abilities; proper recognition for contributions and experiencing the joy and sense of achievement associated with accomplishment. One system that incorporates such factors is the Development Oriented Rotation System, which allows employees to propose a vision of where they want to be in the future and to establish and undertake goals that will help them get there. We also support autonomous career mobility in other ways, including our In-house Personnel Recruitment System, which promotes the relocation of an individual to another department that requires an immediate asset, and the Free Agent Rotation System, whereby individuals can relocate to positions that they have nominated themselves. We also believe it is important to make a wide range of choices

Guidelines to Achieve Our Philosophy

1-1 Build relationships based on mutual trust through communication and teamwork

- Promoting communication between managers and general employees
- Developing positive teamwork in workplaces

1-2 Foster motivated and confident employees

- Disseminating company and department guidelines and describing the roles expected of employees and teams
- Motivating participation by employee
- Providing objective assessment and feedback to employees
- Giving positive reinforcement for employee involvement

2-1 Secure personnel in accordance with management guidelines

- Drafting and promoting personnel plans based on mid- to long-term vision
- Ensuring workplace conditions conducive to providing a competitive edge
- Performing total personnel cost management for efficient and effective management

2-2 Develop the abilities of each employee

- Describing the roles of managers and supervisors for personnel development
- Creating human resource development systems to support employee career mobility

3-1 Create a framework for fair and just human resource management

- Complying with laws and regulations and respecting cultures and customs
- Creating reasonable and just human resource policies and systems

3-3 Execute human resource policies and systems with fairness

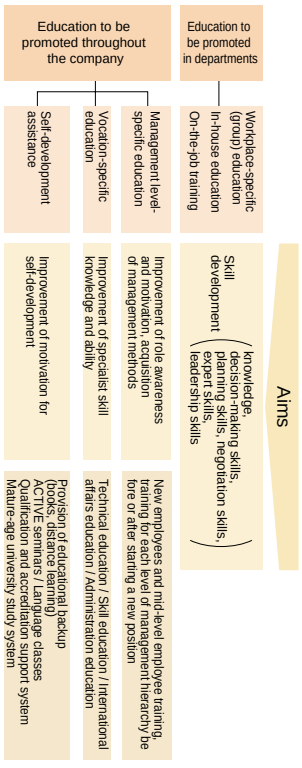
- Implement human resource policies and systems in a broad and consistent manner

ACTIVE 21 Booklet

■Activities Based on Five Guidelines

Guide-line	System/Program	Features
Respect initiative	•Path reporting system •Career-planning workshops for employees in their 30s	Create opportunities for employees to think about their own careers
	•FA rotation system	Change from on-site to general affairs jobs
	•General affairs job-change system	Allow employees to transfer without getting the approval of their superiors
Reward based on merit	•Reform employee evaluation and wage systems	Create an environment that allows performance to be better reflected in evaluations
Diversify human resources	•Reform system of administrative and technical positions •Reform system of skilled positions	Go from a system in which everyone's goal is to become a manager, to one in which specialization and expertise are given the focus
	•In-house recruiting system	Move to departments where ready reserves are needed
Prepare for broader roles	•Career-planning workshops for employees in their 40s	Recognize own strengths and take advantage of them in future company activities
Support globalization	•Enhance foreign language and international management education •Training for local overseas employees	Support development of skills for acting globally

■In-house Education Systems



available through these programs, enabling employees in all vocations to specialize to suit current needs. For example, a wide range of programs are currently available, such as education tailored to respective management hierarchies that allows selection from a range of problem-awareness oriented courses, a system for mature-age postgraduate study to deepen specialist knowledge, and globalization and management training.

Promoting Global Personnel Involvement

For our 115 overseas offices operating in 31 countries and regions, localization of management practices is an important step in making sure that management better integrates with the local community. Since fiscal 2002 we have been actively training and promoting local personnel to management roles at overseas offices.

Global Labor Diagnosis and Global HR Forums

We have been carrying out a global labor diagnosis, which entails evaluating human resource and labor policies at overseas offices. The human resource departments at our headquarters and overseas offices work together to comprehensively assess the environment, safety and hygiene, compliance with labor regulations, and human resource policies. As part of this process, employees are interviewed directly on salary and conditions and welfare benefits. We analyze the results and use them to improve systems at our business locations. These activities are now limited to business locations in North America and Europe, but will gradually be expanded to other regions.

We also hold global HR forums once a year. At these, human resource staff from overseas business locations come together and discuss ways of advancing and improving global personnel policies. In January 2004, 48 participants ranging from human resource staff to vice presidents from various business locations around the world participated in the forum.

Labor Relations

Labor Relations Based on Mutual Trust

Our core philosophy on labor relations rests on the following tenets: mutual trust in labor relations and improvement of labor conditions through company growth. We developed this philosophy in response to the tumultuous labor disputes in 1950, soon after DENSO was founded. To deepen mutual understanding, DENSO Corporation in Japan (DNJP) holds forums at three levels: one attended by the company's executive management, one for the executive management of group centers and functional centers, and one at the workplace level. The labor relations forums for worksites, held six times each year, increase employee awareness of management involvement through discussions of issues that emerge in the workplace.

■System Use
(Per year average:
DENSO non-consolidated)

Development-oriented rotation system
1,200 employees (1998 to 2003)

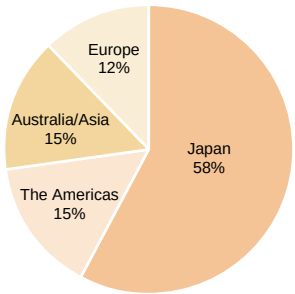
In-house personnel recruitment system
15 employees (1998 to 2003)

Free-agent rotation system
10 employees (2001 to 2003)

Participants in an international training program

Global HR forum

■Employees by Region



Labor relations forum

Individual Rights and Equal Opportunity

Examples of Equal Opportunities for Men and Women

Increasing opportunities for female employees has long been an important issue. Starting with ACTIVE 21, we are striving to expand opportunities for highly skilled and motivated female employees and promote fair and just treatment, and to create a comfortable workplace environment for both men and women. As a result of these measures, the number of female employees in DENSO as of March 2003 was 3,634, 9.4 percent of the total workforce, and the number of women employed increases each year.

In 1999 we also revised the human resource systems for clerical and technical work course to enable career mobility that allows a transition from office administration to a management career that offers a wider range of opportunities. Five to 10 employees follow this path each year.

Systems for Care-giving and Re-employment

To enable employees to look after their children or provide care for others, DENSO has instituted systems that allow for time off from work and limit the amount of overtime hours. These systems are available to both men and women. We also introduced the New Senior Associate System in 2001 as one career option based on one's own life plan. It provides for re-employment of skilled employees who wish to resume a working life after retirement. In fiscal 2003, 42 employees made use of this system.

Multifaceted Support for the Physically Challenged

We began hiring hearing-impaired people in 1978, and we have been carrying out education and training and providing special facilities for physically challenged workers since that time. We give special attention to providing human-based assistance, including helpers to assist dormitory life and team leaders available to provide assistance in the workplace. Some DENSO employees who are physically challenged have passed qualifying exams, and we anticipate that some will even participate in the International Abilympics, an international occupation competition, to be held in 2007. In fiscal 2003, the percentage of employees with disabilities was 1.99 percent, higher than the Japanese government guideline of 1.80 percent, for a total of 406 employees (358 in production-related departments and 48 in administration-related departments). All of these employees are full-time workers whose average length of employment at DENSO is 17.2 years.

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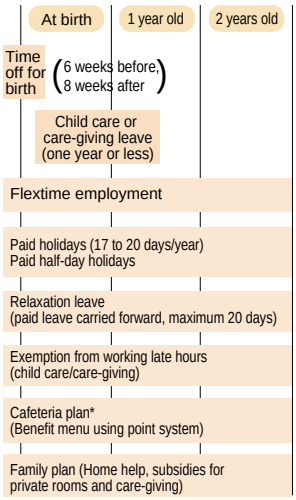
■Promotion and Employment of Women (DENSO Non-consolidated)

	Fiscal year	2000	2001	2002	2003
Employment	Office administration (university graduates)	6	8	10	10
	Engineers	4	7	11	4
	Factory floor technicians	8	37	40	51
Managers	Team leader and above	20	28	34	46

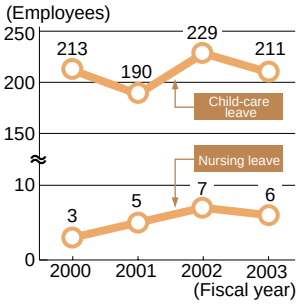
■Employment System for Care-giving



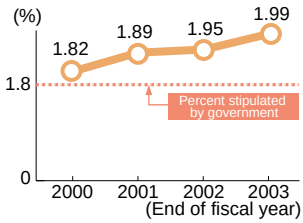
* Subsidies for child-care facilities or care-giving goods

Employees undergoing training

■Employees Taking Leave for Child-care or Care-giving (DENSO non-consolidated)



■Percentage of Physically Challenged Employees (DENSO non-consolidated)



* Abilympics: A competition for skilled technicians with disabilities. Challenges include assembling machines and computer operations.

Transferring to a Management Career

"It took some courage to decide to transfer to a management career, but I gained confidence once I overcame this hurdle. After starting in management I was given the opportunity to be involved in jobs that encompass the entire system. As a designer I derive great joy from seeing my ideas take shape."

Yaeko Muramatsu
Air Conditioning Technology Dept. 4

Column

DENSO Taiyo: Ongoing Top-class Production

In 1984 we established a special subsidiary, DENSO Taiyo Co., Ltd., as a joint venture with Taiyo House, a Japanese social-welfare organization. DENSO Taiyo holds a share of about 50 percent in the production of combination meters for light motor vehicles. Suggestions from employees at DENSO Taiyo have continuously led to ingenious and creative solutions for problems, including creating a working environment with a barrier-free floor designed for wheelchairs, special height settings for belt conveyers, elevator systems for raising and lowering worktables and one-hand soldering equipment.

Equipment allowing one-handed soldering

Workbench adjustable to wheelchair height

"Handicapped Person Employment Award" for Corporate Social Responsibility Survey

As part of the 13th Enterprise Social Responsibility Survey, DENSO received the "Handicapped Person Employment Award" from the Asahi Culture Foundation for excellence in employing physically challenged persons. DENSO was hailed for establishing and operating DENSO Taiyo; for employing a high percentage of physically challenged workers; for developing work suitable for physically challenged employees, and for providing special training and other support.

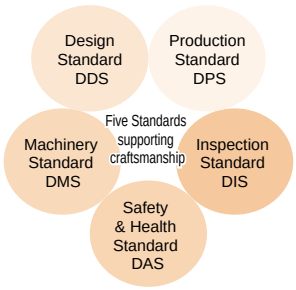
Receiving an award for employing physically challenged persons

Creating a Safe and Worker-friendly Workplace

Improving workplace safety and employee lifestyle and caring for the mind and spirit of our employees

In fiscal 2003, we reduced the rate of workplace accidents throughout the DENSO Group and placed emphasis on improving the workplace environment and preventing lifestyle-related diseases.

■DENSO Safety and Health Standard (DAS)



Expertise in preventing workplace accidents has been compiled for each piece of equipment and tasks as basic rules, with 534 standards published on the intranet.

DENSO Group environment safety conference

DENSO India (DNIN)
— winner of environment, safety and hygiene award

Major Initiatives on Health Management in Fiscal 2003

- Health classroom (voluntary participation): 422 persons
- Health guidance at workplace: 864 persons
- Mental health training: held 12 times (for managers)

Distribution of leaflet on keeping a healthy mind and spirit

Supporting Production Engineering Through "Safe DENSO"

In 1969 we formed the Safety and Health Committee on the precept that creating a safe, worker-friendly workplace is the best policy to achieve both respect for people and high productivity. The committee established the DENSO Safety and Health Standard (DAS) and to this day has continued to improve workplace environments and health management.
We attempted to reduce the work stoppage ratio to 0.15 for the entire DENSO Group by effecting a safety management system that supports the group's production engineering. This paid off with a work stoppage ratio of 0.06 in fiscal 2003. As part of these results, two plants established the longest period of consecutive work time without any recorded loss through accident for the respective industry (the Kota Plant with 120 million hours and the Toyohashi Plant with 26.7 million hours). However, 11 incidents of work stoppage through accident did occur (four at DENSO and seven at domestic and overseas Group companies). This led us to enforce stricter compliance with rules and improve equipment and infrastructure to prevent the same incidents from reoccurring.
In fiscal 2004, we are working to strengthen the entire group's efforts to implement preventive measures, achieving Safe DENSO to support the group's production engineering.

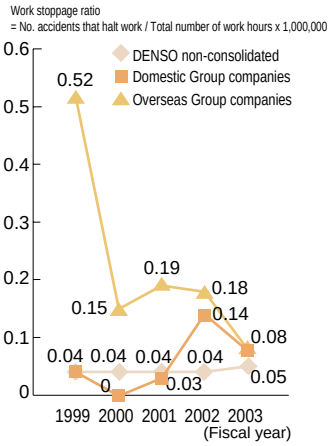
Easier Tasks and Augmented Health Management

Since fiscal 1998 DENSO has been alleviating the burden of tasks at manufacturing plants. Improvements are the result of new engineering approaches developed in response to employees' ideas for making the workplace environment more comfortable. For example, we have already improved 343 (85 percent) of the 402 processes that place a strain on the back and the legs.
Also, in addition to having 100 percent of our employees undergo annual health checkups, we encourage activities that lead to a healthy mind and body, including expanded consultation services and training and advice for preventing lifestyle-related diseases and for mental health care.

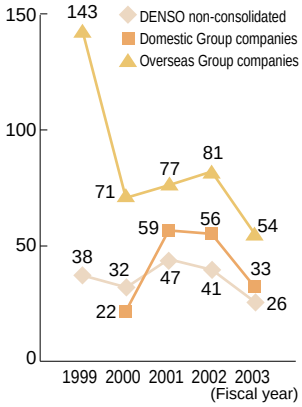
■Managed Items and Results for Fiscal 2003

Managed item	DENSO			Domestic group companies			Overseas group companies		
	Target	Result	Evaluation	Target	Result	Evaluation	Target	Result	Evaluation
1. Safety	60	26	○	75	33	○	120	54	○
2. Work stoppage ratio	0.05	0.05	○	0.08	0.08	○	0.30	0.08	○
	(Consolidated) Target: 0.15 Result: 0.06 Evaluation: ○								
3. Incident of serious accident or fire	0	0	○	0	0	○	0	0	○
4. Incident of work-related sickness	0	0	○	0	0	○			
5. Health checkup participation rate	100	100	○						

■Incidence of Work-related Accidents (Work Stoppage Ratio)



■Safety Points (Points are given in relation to extent and type of accident)



■Awarded the Safety, Hygiene, and Comfort Idea Gold Award from the Japan Industrial Safety and Health Association for developing an elevating device for carrying jigs (October 2003)

Before improvement

After improvement

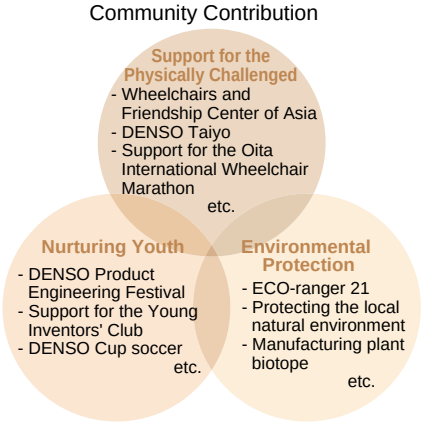
90% reduction of task strain

Participating in the Community as a Good Corporate Citizen

Our three core areas: support for the physically challenged, nurturing youth and environmental protection

In fiscal 2003 we continued our efforts to enrich the content in our three core areas of community contribution and encourage greater participation in our volunteer activities.

■Three Core Areas of Community Contribution



Pamphlets outlining our social contributions

Spreading the DENSO Spirit

Our employees are at the heart of our activities that give back to communities through our philosophy of existing in harmony with society and gaining the trust of the international community. Our efforts are focused on the three core areas of support for the physically challenged, nurturing youth and environmental protection. Our DENSO spirit lives on in our financial donations, original events and support for volunteer activities.

Moving Forward Through Collaboration with Individuals

To give momentum to our community activities, we established the Social Contribution Committee (Secretariat: General Affairs Department) to discuss and examine new methods and directions for our activities. This committee in the General Affairs Department works together with the DENSO Heartful Club (established in 1998 with 1,200 members), which consists of employees who have an interest in volunteer work, to undertake a wide range of activities.
In fiscal 2003, we sought to enrich our communication with communities to disclose information, and expanded participation in volunteer activities by better promoting in-house bulletins and information on our intranet. The DENSO Heartful Club received recognition in the form of the 4th Chunichi Welfare Volunteer Award (Chunichi Shimbun Community Services Administration, fiscal 2003).

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【Major Achievements in Fiscal 2003】

- Employees involved in volunteer activities (outside the three core areas)
  Approximately 2,500 employees
- Employees who used the leave system for volunteering
  One employee
  (environmental education in Cambodia)
- Matching gifts*
  202 donations amounting to about 4,640,000 to 40 organizations

Receiving the Chunichi Welfare Volunteer Award

* Matching gifts: When an individual or group donates to a charity organization recognized by DENSO, the company will donate the same amount as the original donor.

Wheelchair factory in Thailand employing physically challenged workers

Support for the Physically Challenged: Wheelchairs for Autonomy Wheelchairs and Friendship Center of Asia

The Wheelchairs and Friendship Center of Asia (WAFCA) is a non-profit organization established in 1999, on DENSO's 50th anniversary. By passing on our product-engineering expertise, we assist production in a wheelchair factory run by a foundation in Thailand. We buy products from this factory and donate wheelchairs to physically challenged children in Asia. The factory produced 1,200 wheelchairs in fiscal 2003, and we had donated 567 wheelchairs by the end of that fiscal year. In September 2003 we also held a Japan-Thailand wheelchair basketball tournament in which eight teams competed.

* WAFCA: Wheelchairs and Friendship Center of Asia

Message from a WAFCA Member

WAFCA Activities: The Essence of the Spirit of Giving

"The Kariya Higashi Junior High School student government has been donating wheelchairs to local institutions for more than 10 years, raising revenue by collecting aluminum cans and other recyclables. I wanted to broaden our activities and became a member of WAFCA in 2002. In February 2003, I took part in a Thailand Friendship Tour, and working hard with everyone on a wheelchair repair project made me realize that the work of WAFCA was the essence of the spirit of giving."

Yasushi Takahata
Teacher,
Kariya Higashi
Junior High School

URL WAFCA activities
http://www.tns.ne.jp/wafca/


Making a car out of wood

Nurturing Youth: Teaching Children the Joy of Making Things
DENSO Product Engineering Festival

Once a year we hold an education program aimed at teaching children the joy of making things through handicrafts. In August 2003, nearly 3,000 parents and children of elementary, junior high and senior high school ages participated in a two-day event at the Takatana Plant (Anjo, Aichi), where they faced the challenge of building electromotive cars, electronic clocks, kaleidoscopes and tile art. A total of 300 DENSO employees, teachers and students assumed the role of instructors from the DENSO College.


Soldering an electronic clock


Viewing micro-hydro generator at DENSO's Nishio Plant

Environmental Protection: Embracing Nature's Wonder and the Importance of the Environment ECO-ranger 21

ECO-ranger 21 is a program designed to help elementary school children understand the importance of environmental conservation by providing an enjoyable experience with local nature. It emphasizes the themes of plants, water and air. The program started in fiscal 2001 and to date three courses have been established (Kariya-Agui, Nishio-Kota and Anjo). It consists of projects to create things made from natural materials and field trips to the forest and waterside. In fiscal 2003, 85 elementary students took part in the program and 109 employees volunteered their time.


An electrical generator made from a PET bottle

Activities at Overseas Group Companies

DENSO's overseas companies are contributing to the community as corporate citizens.
They are involved in many activities to help build better communities.

Helping California Wildfire Victims (DENSO North America Foundation — USA)

In November 2003, we donated $100,000 to the American Red Cross Disaster Relief Fund for victims of the wildfires of Southern California. Also, DWAM and the Los Angeles Research Center (DIAM) donated $1,000 to the San Diego Red Cross.


Hybrid car competition (AAA)

Assistinga Hybrid Car Competition (AAA — Australia)

In 2003, AAA provided assistance for a hybrid car competition for high school students. The competition aimed to help students learn about automotive technology and environmental measures by building and competing in hybrid cars. AAA sponsored the competition and provided technical assistance for making the cars.

Detroit Greening and Volunteer Activities (DIAM — USA)

For the past three years, DIAM has been volunteering and "greening" the Detroit area. As part of these activities, 20 employees have cleaned up the neglected grounds of a technical school and hand-built activity facilities for physically challenged students.


Building activity facilities (DIAM)


24-hour bicycle race for fund-raising (DIAU and AAA)

Charity Fund-raiser for Sufferers of Heart Disease (DIAU and AAA — Australia)

DIAU, the company responsibility for operations in Australia, and manufacturing company AAA participated in a 24-hour bicycle race to raise money for people with heart disease.

Assisting a University Technical Education Program (DIAM — USA)

Michigan Technological University is actively supporting technical education for women and high school students who want to become technicians. DIAM supported these actions by assisting with a two-week basic education program for engineers.


Students touring a manufacturing plant (DIAM)


Visiting home for the aged (DNBR)

Donations and Visits to Homes for the Aged (DNBR — Brazil)

In 2003, employees held a flea market to sell articles they had donated. The profits and donated goods were then given to homes for the aged. Approximately 30 employees visited the homes, handing out food and entertaining residents with a concert.

P. 59 See page 59 for more information on our community contributions.

Procurement That Builds Trust

Focusing on activities that earn trust from our suppliers and society

In fiscal 2003, along with a continuing focus on an open door policy and mutual trust, we reinforced our efforts to become a good corporate citizen in the interests of corporate social responsibility (CSR).

Basic Considerations for Procurement

1 Open-door policy

We fairly and justly seek suppliers from inside or outside Japan and base our choices on not just quality, technology, cost and delivery conditions, but also on their ongoing commitment to improvement.

2 Growing together based on mutual trust

We aim for relationships built on strong trust developed through intensive communication, in which both parties can grow.

3 Promoting green procurement and emphasizing environmental considerations

We seek commitments and provision of environmentally friendly products that fit in with the DENSO Group's overall reduction of environmental impact.

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4 Contribution to the local economy

We actively look for opportunities to use local production and procure locally in order to give back to the community.

5 Compliance with relevant regulations and maintenance of confidence

We ensure that in matters relating to procurement, we comply with all laws and regulations and handle confidential information with due care.

URL DENSO's procurement activities
http://www.denso.co.jp/PURCHA-e/contents/act/index.html

Business Manners for Buyers

An Open Door Policy for Mutual Growth

DENSO has an open door policy based on the core policies listed at the left that allows domestic and overseas businesses to enter into fair and equal contracts. This enables us to procure parts, materials and equipment from a world market that are the best in the six areas of quality, delivery condition, cost, environmental consideration, safety and management. Our procurement policy, point of contact for our procurement department and procedures for establishing contracts are published on our company website (in English and Japanese) and can be accessed from anywhere in the world.
Each year we also assess our major suppliers according to CAPS,* which covers all six of these areas. The results of the CAPS assessment not only influence on what we decide to order, they also encourage suppliers to improve their business strengths.

Creating Closer Partnerships

Each year we hold a Supplier General Meeting where we explain the DENSO Group's procurement policy to our main suppliers. In May 2004, we invited 270 main suppliers, including overseas suppliers, and requested their commitment with DENSO to address cost, production engineering and management. We have also assessed the overall results of quality, cost and deliveries, selecting and commending our exceptional suppliers in fiscal 2003, and we are working to strengthen partnerships.

Fulfilling Social Responsibility Throughout the Supply Chain

At the 2004 Supplier General Meeting, we explained to our main suppliers DENSO's policy on social responsibility in relation to procurement. Our intention in doing this is to ensure that corporate ethics are practiced not just within the DENSO Group but also throughout the entire supply chain. These responsibilities extend to consideration for environment and safety, respect of human rights, compliance with laws and strict confidentiality. We requested that our suppliers work together with DENSO to fulfill these responsibilities.

Procurement That Enhances Trust

To ensure that procurement adheres to fair and equal contracts and compliance with laws and regulations governing procurement, DENSO distributes a booklet entitled, "Business Manners for Buyers" to staff members responsible for procurement. In June 2003 we issued a revised edition, which stipulates corporate ethics and basic manners for buyers and covers business manners for e-mail correspondence. We also distribute this booklet to departments that do not handle procurement but work with outside companies on design, production management and other activities. This helps ensure that the basic policy and code of conduct are deeply entrenched within the company.

General meeting and award ceremony for DENSO's suppliers

Supplier Assessment (CAPS)

Quality
- Commitment policy
- Quality system
- Document management
- Supplier management
- Process management
- Nonconformity management
- Continuous improvement
- History of delivering defective products

Cost
- Commitment policy
- Cost management
- Cost improvement
- Technological development
- Cost flexibility
- Proposal and performance of VA/VE

Delivery
- Commitment policy
- Production management
- Continuous improvement
- Delivery results

Management
- Commitment policy
- Corporate management
- Management improvement
- Financial situation
- Overseas presence

Safety and environment
- Commitment policy
- Environmental management
- Safety and fire prevention management
- Environmental and safety technology
- ISO 14001 or Eco-Stage certification

Social responsibility
(Areas to be strengthened in the future)

* CAPS: Constitution Assessment Program for Suppliers

A Look Back at Our Social and Environmental Activities

Note: Events related to products are shown in blue

Social Activities

Training school for technicians (1955)

●1954 - Established a training school for technicians (forerunner to the DENSO College of Industrial Technology).

●1956 - Formulated the guiding precepts of DENSO.

●1961 - Received the Deming Application Prize.

●1963 - Initial participation at the Skill Olympics (World Skills Competition).

●1964 - Established a labor relations forum for workplaces.
- Adopted QC Circle activities.

Recognition of exceptional quality control -- the Deming Application Prize (1961)

Announcement of company precepts by Chairman Torao Hayashi (1968)

●1977 - Gold medal at the World Skills Competition.

●1978 - Began regular employment of persons with impaired hearing.

●1980 - Adopted of QC Circle activities at overseas business locations.

Operation Raleigh for nurturing youth (1980s)

●1984 - Established DENSO Taiyo Co., Ltd., a welfare factory employing physically challenged workers.
- Began sponsorship for Operation Raleigh (nurturing youth -- until 1988).

●1986 - Established the Technology Training Center.

●1987 - Established the DENSO College of Industrial Technology.

●1990 - Established the Social Contribution Committee.
- Adopted a flextime system for employees.

●1991 - Formulated the basic code of conduct for corporate activities.

●1992 - Began DENSO Cup Soccer (nurturing youth).
- Began sponsorship for the Oita International Wheelchair Marathon.

●1994 - Formulated the DENSO Basic Philosophy.
- Reorganized the Quality Assurance Council to form the Consumer Satisfaction (CS) Improvement Committee.
- Established the Volunteer Support Center.
- Founded the DENSO Heartful Club.

House renovation volunteers for the socially disadvantaged (DIAM, USA)

●1997 - Formulated DENSO Vision 2005.
- Acquired QS9000/ISO 9001 certification at all automotive-related departments.
- Formulated the basic policies for social contribution.
- Began supporting the Young Inventors' Club.
- Established the Corporate Ethics Committee.

●1998 - Formulated the Code of Conduct.
- Launched ACTIVE 21 human resource system reforms.
- Introduced the Matching Gift fund.
- Established the corporate ethics consultation office.

Sponsorship of the Oita International Wheelchair Marathon

●1999 - Established Wheelchairs and Friendship Center of Asia (WAFCA), a non-profit organization.
- Introduced and implemented a compliance program for all US group companies.

●2001 - Established the DENSO North American Foundation.
- Launched ECO-ranger 21 and the Product Engineering Festival (nurturing youth).
- Formulated the DENSO Human Resources Philosophy.

●2002 - Formulated "DENSO-WAY."
- Revised the Code of Conduct.
- Established the Corporate Social Responsibility (CSR) working group.

●2003 - Established the Risk Management Conference.
- Formulated an internal reporting system.
- Launched the NPO Support Network Program.

●2004 - Formulated DENSO Vision 2015.
- Adopted the managing officer system

Environmental Activities
(Featured Product Development Includes Safety-related Products)

1950

●1950 - Developed an electric automobile.

The "DENSO" Electric car (1950)

1960

1970

●1970 - Established the Automobile Part Research Center (Nippon Soken, Inc. -- research into treatment and safety for exhaust emissions).
- Established the Safety, Health and Pollution Department
- Formulated the Safety, Health and Environmental Standards (DAS).

●1971 - Renamed the Safety, Health and Pollution Department the Safety, Health and Environment Department.

●1974 - Established the Management Resources Application Council (to promote waste reduction and energy efficiency).

●1975 - Developed an electronic controlled fuel injection system (L-EFI --cleaner exhaust emissions and improved fuel economy).
- Developed the Wide U DENSO spark plug (cleaner exhaust emissions).

●1977 - Developed an O_2 sensor (cleaner exhaust emissions).

●1979 - Established the Energy Committee.

Analysis of exhaust emissions (1970s)

1980

●1980 - Developed a monolithic carrier (cleaner exhaust emissions).
- Developed the SR radiator (compact and lightweight).
- Developed an idle speed control valve (reduced exhaust emissions and improved fuel economy).

●1982 - Established a system for the prior toxicity evaluation of materials to be used for the first time.
- Developed the Type III alternator (resource savings and energy efficiency).
- Developed a diesel distribution-type fuel injection system (cleaner exhaust emissions and improved fuel economy).

●1985 - Developed an anti-lock braking system (safety).

●1988 - Established the Special Committee in Response to Restrictions on CFCs.

●1989 - Developed an airbag sensing system (safety).

1990

●1990 - Established the Special Committee on Resources and Energy.

●1991 - Established the Recycling Committee.
- Launched operation of cogeneration facilities (Nishio Plant).

●1992 - Established the Environment Committee.

●1993 - Formulated the DENSO Environmental Charter and Initiatives Action Plan.
- Established the Resource Saving/Recycling Subcommittee.

Troubleshooting training at a wastewater treatment plant (1990s)

●1995 - Halted use of ozone-depleting substances (with the exception of HFC/CFC substitutes).
- Commercialized the world's first electronically controlled common rail system.
- Developed an ECU (safety) for vehicle stability control (VSC).
- Created the Environmental Logo.
- Received the Global Environment Award.

●1996 - Formulated the Second Environmental Action Plan.
- Began procedure for ISO 14001 certification.

●1997 - Developed an iridium spark plug (longer life).

●1998 - Obtained ISO 14001 for all plants in Japan.
- Held the DENSO Environmental Exhibition.
- Established the Product Recycling Subcommittee.

●1999 - Issued the first Environmental Report.

2000

●2000 - Achieved zero emissions at Anjo and Kitakyushu plants.
- Formulated the DENSO group's Green Procurement Guidelines.
- Formulated DENSO EcoVision 2005.
- Established environmental committees for each of DENSO's worldwide regions.

DENSO Environment Committee

●2001 - Developed "Eco-Cute," the world's first natural refrigerant (CO_2) heat pump hot water system (protection of the ozone layer and energy efficiency).
- Established environmental accounting guidelines for the DENSO group.
- Adopted the Eco Indicator environmental index.
- Achieved zero emissions at all 14 facilities in Japan.

●2002 - Held the first Environmental Forum.
- Developed the world's first CFC-free car air conditioner (protection of the ozone layer).

●2003 - Completed ISO 14001 certification by all 67 companies in the DENSO group.
- Jointly launch a simpler EMS EcoStage.
- Established a project to address the problem of substances having environmental impact.
- Achieved zero emissions at 18 domestic group companies.
- Held the Environmental Forum Open House 2003.
- Developed a pre-crash safety system (millimeter-wave radar – safety).
- Developed refrigeration units for refrigerator vehicles that use the world's first ejector cycle (energy efficiency).

Environment Conference (DMUK, UK)


Special Reading of the Environment and Social Report


Tour of the Zenmyo Plant


Tour of the biotope


DENSO E & TS Training Center

Close-Up

Dialogue with Our Stakeholders

Seeing is Believing: Visit Us and See for Yourself

DENSO's Environment and Society Forum "Open House 2003"

Some of our stakeholders have toured automobile plants, but few have had the opportunity to tour a component manufacturing plant. This is why we want people to come and see us for themselves. Stakeholders may want to know, for example, what efforts DENSO is making in regard to zero emissions, or may wish to verify information given in the Environment and Social Report. To address such concerns, we launched the Environment Forum in 2001, and in fiscal 2003 we expanded the forum and held Open House 2003 over a two-day period. Highlights of the event included a reading of the Environment and Social Report, plant tours, and an opportunity to share views. The participants were 21 stakeholders from Tokyo, Osaka, Hiroshima, Fukui and other locations.

At the Reading of the Environment and Social Report

The participants first visited the DENSO Gallery, which features exhibits of technology and products in DENSO's history. Stakeholders viewed a wider-than-expected range of products on display, including the "Eco-Cute" hot water system, barcode scanners and our industrial robots, and many noted with surprise that they had not known DENSO made such products.

Some of the participants had read 100 or more different environmental and social reports (three participants), while for some, DENSO's Environment and Social Report was the first they had read (five participants). One report brought by a participant was already full of notes in red.

Many participants noted that overall the report was easier to read than the previous year. Other comments from readers included these: "I cannot see actual improvement measures for items where goals have not been achieved." "There are places where it is hard to distinguish between domestic operations and overseas operations." And, "I want to know where the parts that reduce environmental impact are being used." We were also presented with many questions, such as "How is DENSO employing the environmental index (EI value) in management practices?" and "Which stage from resource procurement to end-of-life disposal has the highest environmental impact?" The Environmental Planning Department and the Corporate Communications Department explained our stance and situation using examples, pointing out cases where implementation is not yet complete.

A report brought in by one participant with many comments in red

Plant Tour Exchange of Views

At the Zenmyo Plant participants toured the production line for the common rail system,* facilities for water quality control including rainwater treatment, and the biotope. At the Takatana Plant's E&TS Training Center, which plays a central role in our human resource development efforts, the visitors saw employees training assiduously for the World Skills Competition, and others engaged in on-the-job training.

The participants expressed some surprise at the thoroughness of the efforts demonstrated at the plant and the training center. This was reflected in the opinions expressed at the forum for opinion exchange: "You certainly showed us the extent of how high your engineering standards are. I was impressed at the insistence in reaching the precision of one one-thousandth of a millimeter. It was something I had to see first hand." "What I saw drove home for me DENSO's commitment to a complete education that concentrates on mind, skill and theory. In particular, the way the students greeted us at the training center confirmed for me how effective this education is." And, "I was especially impressed that you include rainwater in your water purification treatment."We also received various pointers, such as: "I think employees and people who take tours could be better informed of the improvements and achievements stated in the report by putting up notices in the plants." And, "I would have liked to have had more time to talk with the staff of the wastewater processing plant and the managers of biotope."

*Common rail system: A system for reducing exhaust emissions. One of DENSO's main products.


Forum for exchanging views

Overview of Open House 2003

- **Dates**: November 12 and 13, 2003
- **Schedule and locations**
  November 12 DENSO Head Office (Kariya, Aichi)
  - Tour of DENSO Gallery
  - Reading of environment and social report
  November 13 Tour of Zenmyou Plant (Nishio, Aichi)
  - Tour of DENSO E & TS Training Center (Anjo, Aichi)
  - Forum for exchanging view (DENSO headquarters)
- **Coordinator**: Hideto Kawakita
  (IIHOE — International Institute for Humans, Organization, and the Earth)
- **Participants**: Six corporate-related, Two NPO-related, Three general public, Six students, Three specialists and One customer

Taking Part in Open House 2003
"I was impressed by the technological persistence in various fields."

"It felt like I had been filled with about three days' worth of information. I was particularly impressed during the plant tour by the pursuit of technology and skill and with the importance DENSO places on training its people. However, I felt that the tour focused a bit too much on technology and would have liked to see more about the company's efforts regarding the environment, safety and quality assurance. At the reading of the report and at the forum for exchanging views, the quick pace kept it interesting for the participants, but I would have liked to have had more time for discussion."

Chiaki Terashima
Fukui Plant, Ricoh Company, Ltd.

Taking Part in Open House 2003
"It provided invaluable knowledge only gained from first-hand experience."

"We asked all the participants to take a good look at what they saw and give us their honest opinions. Although I was a bit nervous about how the tour would be received, we actually received a lot of praise regarding the plant's commitment to the environment and human resources development. One participant noted that seeing something first-hand has more impact than hearing it 100 times, which really made me realize how hard it is to properly convey the dynamic working spirit of DENSO in a report.
"We not only answered the questions directly, but also explained in detail on our website. We have also reflected the feedback and requests as much as possible in this report. [See some of the responses to the survey on page 62.] The feedback has provided us with a wealth of ideas that come from various perspectives -- matters that we had not noticed ourselves. We look forward to future opportunities for engaging in dialogue with a wide range of people."

Toshio Yamagata
Manager, Environmental Planning Department

URL DENSO Open House 2003
http://www.denso.co.jp/ENVIRONMENT/openhouse2003/report/

Forum for Open Dialogue with the Community

Our plants and other business locations have an impact on communities in various areas. This impact includes the environment, economy and employment. At each of DENSO's facilities, along with playing an active role in local events as a member of the community, we also promote disclosure of information and engage in dialogue with local citizen groups and government organizations.

Since fiscal 2000 every one of DENSO's places of operations has held community forums to which representatives from the community and government are invited. At these discussion forums, we explain our systems for environmental action, measurement results for environmental data (drainage, air, noise and the like), management system and emission rates for chemical substances, and other circumstances such as existing complaints. We then ask the participants to give us their views and tell us what they expect.
In fiscal 2003, we held discussion forums in 21 locations, including subsidiaries and affiliated companies. This included our fourth discussion forum in Kariya, Aichi, where our headquarters and Ikeda Plant are located. This forum was held jointly with six other Toyota Group companies (Toyota Industries, Aichi Steel, Toyoda Machine Works, Toyota Auto Body, Aisin Seiki, Toyoda Boshoku and DENSO). In responding to issues raised at the previous forum, we used non-technical language and diagrams to explain our approach to environmental criteria and the characteristics of chemical substances.

Environmental monitoring of areas surrounding our plants (Zenmyou and Nishio Plants)

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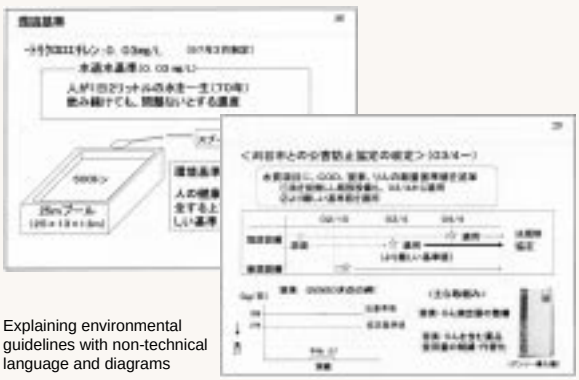


Explaining environmental guidelines with non-technical language and diagrams

We received various comments and questions from the participants: "I can clearly see your efforts to respond to upcoming revisions to the Pollution Control Agreement, such as in how you are upgrading facilities." "I now understand that DENSO has set stricter environmental standards than what is stipulated by law" (Kariya district). "Many companies have recently experienced explosions or fires. What is DENSO doing to prevent such accidents?" And, "I hope that you will continue to hold forums like this" (Daian Plant).

Economic Report

Raising DENSO's business value while adding value for customers

Steady growth: DENSO's assets and future developments

To earn the trust of our shareholders, investors, customers and local communities as a company with real value, we constantly strive to develop products and a corporate structure our customers can depend on, based on our two-prong corporate strategy of satisfying customers with attractive products and anticipating changes and evolution in the global market. In 2003 we recorded our highest-ever net sales and operating income in an automotive industry fiercely competitive in technological innovations and costs.

I believe that one factor behind DENSO's stability and continuing growth is the integration of our capacity for technological development and high quality. A car isn't simply a collection of parts – it's a complex interweaving of numerous components and systems. DENSO's development of a wide range of products is made possible by accumulating the many core technologies that form the backbone of those systems. Our corporate culture does not tolerate compromise in quality builds trust in our products and earns steady business from our customers.

Through the efficient development of business resources such as strengthening development and production capacity in Europe and expanding business opportunities in the Chinese market, we are striving for even greater improvements in business value while further contributing to the added value of cars through our focus on the environment, safety, comfort and convenience.

Takao Inukai
Executive Vice President

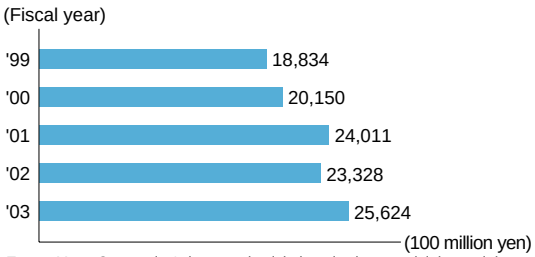
Financial Highlights (Consolidated)

Record Sales and Operating Income

With the automotive industry's expansion into China and the rest of the Australian and Asian market in 2003, DENSO expanded its sales to foreign manufacturers and manufacturers of Japanese origin doing well overseas, as well as expanding our uncompromising cost-reduction activities. We recorded consolidated net sales of ¥2,562,400,000,000 (an increase of 9.8 percent) and operating income of ¥196,200,000,000 (an increase of 18.0 percent), our highest ever, and were able to increase dividends by ¥4 to ¥24.

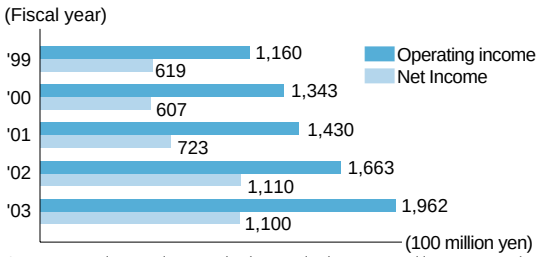
URL IR information
http://www.denso.co.jp/en/investors/

■Sales



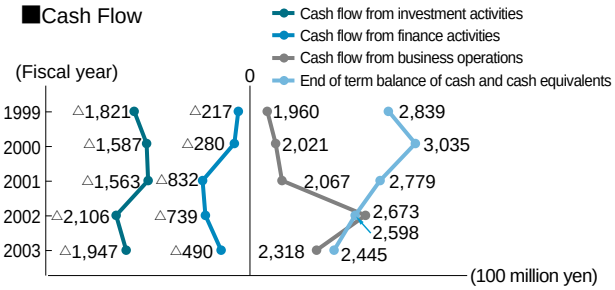
Toyota Motor Corporation's increase in global production, special demand due to truck emissions regulations and an increase in sales in Europe and Australia/Asia contributed to these figures.

■Profits



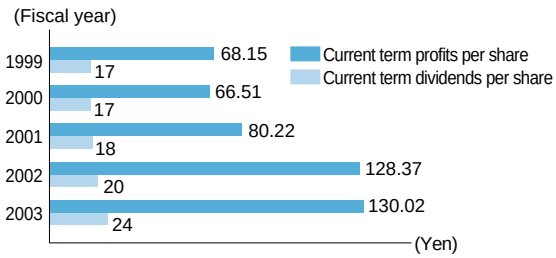
Improvements in operation capacity due to sales increases and improvements in productivity due to streamlining were plus factors, whereas the labor costs corresponding to production increases, the changeover to high-performance products, exchange-rate losses and cost increases in overseas operating bases were minus factors.

■Cash Flow



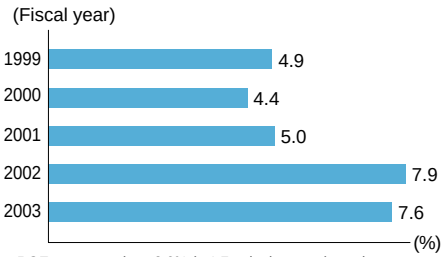
Cash and cash equivalents at the end of the term decreased from the previous term due to an increase in cash available to business operations and a decrease due to investment and finance activities.

■Current Term Profits and Dividends Per Share



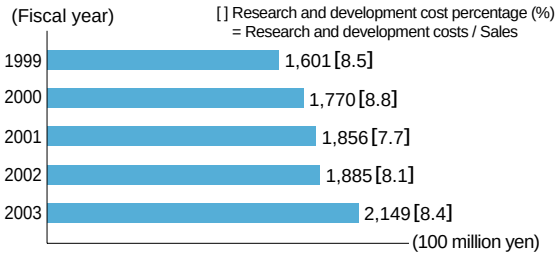
We plan to improve shareholder value and increase dividends to ¥24 after the announcement of the mid-term figures. Also, our companies' cross-holdings with financial institutions were completely dissolved through aggressive repurchasing of our own stock.

■Return on Equity (ROE)



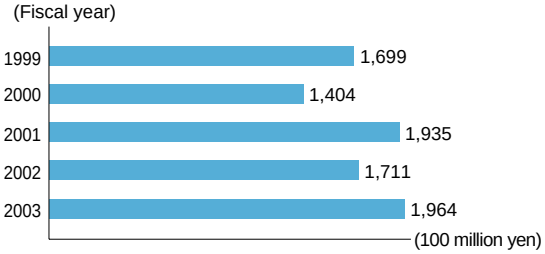
ROE corresponds to 8.0% (a 1.7 point increase) at a base conversion that excludes extraordinary profits and losses.

■Research and Development Costs



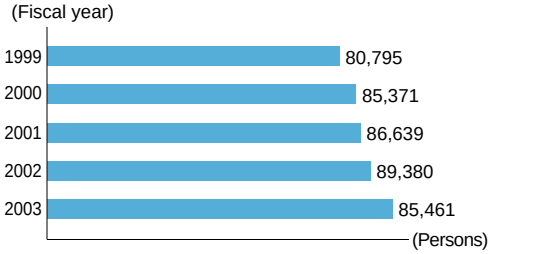
This is at 8.4 percent of sales, and our policy is to maintain the same level into the future in order to maintain a high technological development capacity and a top ranking in the industry.

■Capital Expenditures



These rose due to such factors as increased production in Japan, changeover to next-generation products that are highly competitive in terms of cost competitiveness and the construction of a common rail factory in Thailand.

■Employment Trends



The number of employees increased due to an expansion of bases, including the establishment of nine overseas companies in 2003.

Bringing High-Quality Products to an Expanding Global Stage

The production of high value added products and a well-developed supply system are what support DENSO's growth

In fiscal 2003, we planned an expansion of development and manufacturing bases in the four parts of the world that make up our operating area.

Announcing our European strategy at the Frankfurt Motor Show (September 2003)

Further Expanding Our Global Supply System

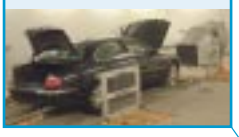
By establishing a global supply system with centers in Japan, the Americas, Europe, and Australia and Asia, DENSO is working to ensure supplies of high-quality merchandise to customers in a timely fashion and at low cost. We have made significant progress in this area, including receiving the first orders to a Japanese supplier for common rail systems from Ford in Europe and orders from Ford in the United States for meters.

Topics

Two-dimensional Quick Response Code Established As an International Standard

The Quick Response (QR) Code, developed by DENSO in 1994, is the de-facto standard for two-dimensional codes. It offers 20 to 100 times the recording density of bar codes, as well as support for the Japanese language. Uses are expanding rapidly and include automatic access to URLs, teleshopping purchases and access control for entry and exit at various facilities, all of which make use of mobile phones equipped with a code reader. Because DENSO has not exercised its patent rights for the QR code and has made the code available as open source, it has been designated as an international standard and is expected to become even more popular in the future.

September 2003
Added experimental facilities for engine management systems at DSUK in Great Britain to augment our development infrastructure.



December 2003
Established DENSO Sistemas Termicos Espana SA (DTSP) as a manufacturing company in Spain to accommodate expanding installation of car air conditioners. Worked toward expanding sales to new clients such as Opel and Peugeot.

2003
Expanded Tianjin DENSO Engine Electrical Products, a joint manufacturing venture, in response to increased production of engine ECUs and meters.

October 2003
To expand our supply system in northern China, we established Tianjin DENSO Air-Conditioner, a joint air conditioner manufacturing venture that became our ninth manufacturing base.

October 2003
Supplied fuel injection pumps for diesel automobiles to Chinese auto manufacturers, and established Shanghai DENSO Fuel Injection, a joint manufacturing venture, with a view to future common rail production.

June 2003
Established Guangzhou DENSO, a joint manufacturing venture, to expand our car air conditioner business in southern China.

Business: produce car air conditioners, bus coolers and radiators.

October 2003
Expanded experimental facilities for car air conditioning at DENSO Automotive Deutschland GmbH (DNDE) in Germany to strengthen our development infrastructure.

July 2003
Established DENSO Manufacturing Arkansas, Inc. (DMAR), a manufacturer of car air conditioners and radiators, to expand our supply system to the southern United States.

February 2004
DENSO Manufacturing Czech sro (DMCZ) began shipping full-scale, mass-produced air conditioner units (for VW and BMW).

August 2003
DENSO Manufacturing Vietnam Co., Ltd. (DMVN), greatly expanded its business operations for Toyota Motor Corporation in ASEAN.

Business: manufacture and sell engine-related components such as air-flow meters and actuators, three-dimensional CAD/CAE analysis.

May 2003
Established Advanced Driver Information Technology Corporation (ADIT), a joint business venture, with Bosch GmbH of Germany to jointly develop LSI and other technologies for car navigation.

Business: develop large-scale integration (LSI) technologies for car navigation and multimedia, and software for multimedia.

April 2003
Spun off a factory in Tennessee and established DENSO Manufacturing Athens Tennessee, Inc. (DMAT) to respond to rising production of powertrain products.

Business: manufacture oxygen sensors, injectors, stick coils, etc.

October 2003
GAC Corporation de Mexico SA de CV (GAC MX), an overseas affiliated company in Mexico, opened a factory for car air conditioner hose lines and spot coolers.

Research and Development for the Next Generation

Extending From Basic Research to Applied Technology

In fiscal 2003, we made an array of important developments in the key areas of the environment, safety, comfort and convenience.

Diverse Results from R&D Investment among the Highest in the Industry

At DENSO, research and development are what maintain our competitiveness, and the ratio of R&D expenditures to net sales, at more than 8 percent, maintains our world-class level in the automotive parts industry. This research covers a spectrum that extends from automobiles to such peripheral areas as semiconductors, information technology and control theory. We anticipate developments in various other areas in addition to our core technologies for automobile products. Listed below are the results of this broad spectrum of research in fiscal 2003.

Environment

The Piezo Injector and Common Rail Further Developing Common Rail Systems and Enabling Clean Exhaust

In 2001, DENSO developed the world's first common rail system that achieved 1,800-bar fuel injection control and vastly reduced nitrogen oxides (NOx) and particulate matter (PM) from diesel engine exhaust. It quickly cleared European exhaust-emission regulations. In 2003 we succeeded in reducing toxic substances and engine noise through a new type of fuel injector using piezo technology. Production is expected to begin in 2005.

Piezo injector

Piezo: This makes use of the phenomenon whereby the application of pressure to physical crystals results in an electric charge. Used to set precise positions in piezoelectric devices.

Comfort

Eva-Clean-Coat Greatly Reducing Odor in Car Air Conditioners

When a car has been in use for a number of years, its air conditioner may sometimes produce an unpleasant odor. This is because the air passing through it contains particles from cigarette smoke, body odor and exhaust emission that have built up on the heat exchanger. In December 2003, DENSO developed Eva-Clean-Coat, a resin film that provides a surface structure to repel and prevent the buildup of odor particles. This technology is used in Toyota's new Crown model and is gradually being expanded to other models.

Air conditioner with Eva-Clean-Coat

Safety

Adaptive Front-Lighting System Making Turning Corners at Night Safer

Improvements in measures to anticipate and prevent accidents are essential to increasing safety. DENSO teamed with Toyota Motor Corporation and Koito Manufacturing Co., Ltd., to jointly develop an adaptive front-lighting system (AFS) that improves visibility for the driver by rotating the headlights in the direction of movement when the car turns a corner. This technology was installed in the Harrier in February 2003, and on the new Celsior released in August 2003. AFS is the world's first system to calculate the angle of control of the headlights from the angle and speed at which the steering wheel is turned. The light seen by the driver is three times as bright, and the low beams extend 1.35 further than conventional headlights.

AFS headlight

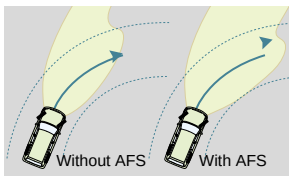


Diagram of AFS

Convenience

On-Board MultiOS Enhanced Convenience and Safety with Two Software Platforms

Sales of Japanese navigation systems in 2004 are expected to surpass 2,500,000 units. In the future, it will become necessary to install such features as computer-based multimedia, remote-access networking and car control (safety improvements). Because the multimedia features performed by the computer are fundamentally different from car control, problems arise when implementing them under a single operating system (OS). That is why we joined with Toshiba Corporation to develop the On-Board MultiOS. This system uses the μTRON*1 and Windows® CE*2 operating systems on a single computer, enableing the appropriate OS to be used for each function.

MultiOS Navigation screen

*1 μTRON: One of the built-in systems of Japan's basic TRON software developed by Professor Ken Sakamura of Tokyo University.

*2 Windows® CE: A Windows software platform for on-board information terminals.

Environmental Report

Creating Products That Protect People and the Earth: Leaders in Achieving a Sustainable Way of Life That Includes Automobiles

Moving Forward with DENSO EcoVision 2005

DENSO has consistently been committed to business operations that are compatible with the environment. Ever since we set up our own Safety, Health and Environment Standards in 1970 to properly deal with air and water quality issues, the company has adhered to self-imposed standards that are more stringent than required by law. In the 1980s, as soon as we became aware of depletion of the ozone layer, we acted to protect the ozone layer. In fact, we have given the environment highest priority in our operations. In 2000, we drew up DENSO EcoVision 2005, the objectives of which have been guiding environmental management and spurring us on to higher levels of excellence.

In fiscal 2003, DENSO made steady progress in strengthening environmental management at all of its global bases, and has been pursuing zero emissions. We also made progress with various products, including expanding production for the common rail system; developing the ejector refrigerating cycle, which has achieved radical new levels of energy efficiency, and mass-producing "Eco-Cute," which applies natural refrigerant (CO_2) technology from car air conditioning in an energy-efficient water-heating device. On the other hand, an ongoing rapid increase in production has thwarted our efforts to achieve absolute reductions in energy consumption and CO_2 emissions.

Because global warming remains an increasingly serious concern, we are determined to put still more effort into environmental management.

We are guided by DENSO Vision 2015, our new long-term policy, in our goal of achieving a recycling society. Along with demonstrating the highest levels of environmental efficiency in our operations and effective communications that deepen our partnership with society, we are working to contribute to an automotive lifestyle with products that embody more environmental consideration and more impressive performance than demanded even by our customers.

Shinro Iwatsuki
Senior Managing Director

Case Study

Promotion of Energy-Saving in Product-Creation Concept

More than simply cutting and excluding... radical advances from fresh approaches Using innovative concepts and techniques, the revolution continues in DENSO's manufacturing facilities.

Factory Manager Chiaki Oshima and the brazing furnace shut down over weekends, in defiance of conventional wisdom.

Picturing Invisible Energy

DENSO's Ikeda plant produces radiators. In 2000, as at other plants, its efforts to further improve energy savings seemed to have reached a limit.

Despite persisting with energy-saving measures by subdividing the organizational units concerned with energy saving into smaller units, from factory, to operational department, to production line, there came a point when it seemed as if they were trying to wring moisture from a dry towel. It proved difficult to continue saving energy in the face of rapidly increasing production output.

Even so, the issue was raised. It was noted that the matter had to be thought through, otherwise the idea of a "perfect energy factory" that works to minimize energy loss would be just a sham.

During the discussion, the monitoring units used to analyze energy savings were repeatedly called into question. Since 1996, to minimize manufacturing costs, at Ikeda they had been working with a system called PROFIT that broke down product costs and resulted in improvement. They wanted to make an energy-saving version of PROFIT.

"Visualizing" Energy

Various proposals were made, such as using wireless technology to transmit measurement data and several options for comparison and examination. In the absence of any "off-the-shelf" systems that met their needs, DENSO began joint development with system makers.

Although it took two years of trial and error with the software to get "visualizing" underway, the eventual benefits were greater than anticipated. Firm foundations for improvement had been laid as a number of issues became obvious. For example, Some machines with the same specifications used different amounts of electricity.

The line workers were particularly pleased to be able to check their results. Oshima noted, "Once you get such a sense of accomplishment, you will do anything that is likely to pay off with a similar feeling."

The system, dubbed ECOFIT, has been deployed in other plants.

"Actual Place, Actual Thing" Principles: Turning Off the Furnace

The conventional wisdom is that hardening furnaces and heat-retention ovens, once fired, should be kept continuously hot, except for long holidays The concern was that repeated stopping and starting may damage or shorten its life span, because of the greater energy required to reheat it.

When staff examined the data monitored by "visualizing," however, they began to doubt this. Analysis of the energy requirements and costs for the brazing furnace, which is used for aluminum jointing, showed that it was worth closing down the furnace over the weekend.

Even so, the voice of caution pointed out the risk of such an adventure, which might bring trouble in the wake of energy saving.DENSO technicians worked with a furnace caster to develop an original furnace which, used graphite as a material to provide resistance to high temperature. The supervisor of the development team commented, "Repeated refiring of the furnace will show up the weak points of the furnace design and provide specific feedback for developing an improved model."

At DENSO, the empirical approach, which involves investigating actual things in actual places, is basic to the thinking of our staff. Going straight to the source helps to uncover the truth by circumventing blinkered thought and self-righteous common sense. "Visualizing" energy also reaffirmed the value of empirical first principles.

CO_2 Cuts During Increased Production

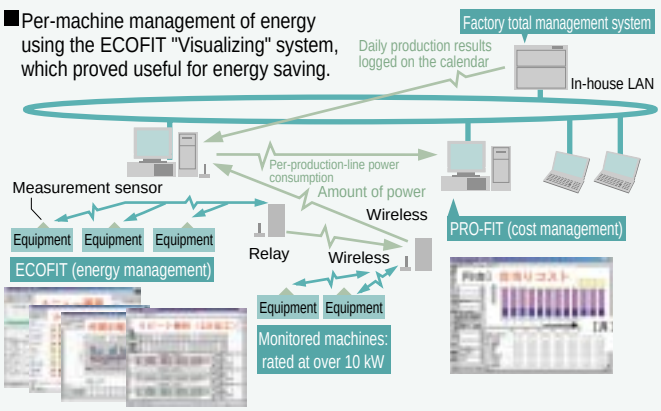
In fiscal 2003, despite a production increase of 6.5 percent, CO_2 emissions were reduced by 8 percent. Our entry for the Energy Conservation Award in 2003 (run by the Energy Conservation Center) was assessed by the examiners as, "Unique in the idea of comparing energy to cost," and as, "Puncturing common sense by turning off a large furnace..."

In January 2004, DENSO received the Prize of the Director General of the Agency of Natural Resources and Energy.

For environmental measures, we applied the same method of identifying the problems from various viewpoints as we use in our product creation methodology. In the absence of existing measures, DENSO developed its own environmental methods. This proved a satisfying way of successfully building problem-solving technology.

DENSO solves problems on site.

■Per-machine management of energy using the ECOFIT "Visualizing" system, which proved useful for energy saving.



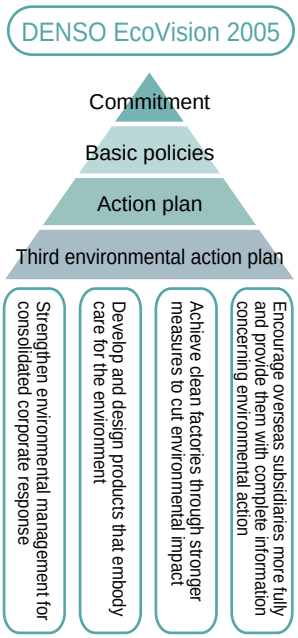
Energy-saving promotion project worked out by energy experts

Corporate Activities bassed on Environmental Considerations

Our corporate vision leads us to support a recycling society.

In fiscal 2003, we strengthened our organization for to make steady progress toward achieving the goals of DENSO EcoVision 2005.

Fiscal 2003 targets	Fiscal 2003 results
1. Strengthen the consolidated management of the business group. 2. Strengthen the organization of the environment committee for European-specification parts; revise region-specific environment action plan guidelines. 3. Establish India-China environment liaison committee.	1. Group environmental planning managers committee established. 2. Function-specific committees established at European base and action plans revised. 3. Liaison committee established in China.



DENSO EcoVision 2005

Implemented as a mid-term plan in 2001, EcoVision 2005 represents a radical overhaul of the Environmental Charter and Environmental Initiatives Plan adopted in 1993. To create the type of enterprise that can act with due consideration for the environment, we knew that we had to create a renewed form of corporation. In a union of DENSO's first principles and EcoVision 2005, the DENSO Group is now guided by the ideals of "environmental preservation and harmony with society." We are determined to bring together the strength of the entire Group to become a front-runner in dealing with environmental issues. With a system in place to verify our progress, we have identified issues and set targets in a 10-year environmental plan.

Basic Policies of DENSO EcoVision 2005

1 Bring together the total global strength of the DENSO Group to increase environmental management performance.

2 Implement environmentally aware development, design and production.

3 Provide information, promoting communication with all stakeholders.

URL The entire text of DENSO EcoVision 2005 is available at http://www.denso.co.jp/ENVIRONMENT/e-report/2002/Vision/v_03.html

Strengthening the Promotion System and Consolidated Environmental Management

In 1992, to promote environmental management, an Environmental Committee chaired by the company president was set up. This committee convenes to decide policies and targets for the company as a whole, and to evaluate results. In fiscal 2003, to give more power to developing and implementing strategies, five subcommittees were merged into three.

Furthermore, to promote dealing with environmental issues on a Group basis, the committee set up common policies and measures for subsidiary and affiliated companies in Japan and overseas, and is drawing up action plans and deployment measures that depend on the current situation at each company. Here, the committee has identified seven common items that are to be dealt with. For companies in Japan, these items are monitored by the Domestic Environment and Safety Committee. Overseas, progress is monitored by DENSO Regional Environment Committees. The evaluations of these committees are issued in reports.

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DENSO Environmental Committee meeting

■ Environmental Management: Consolidated Business Response

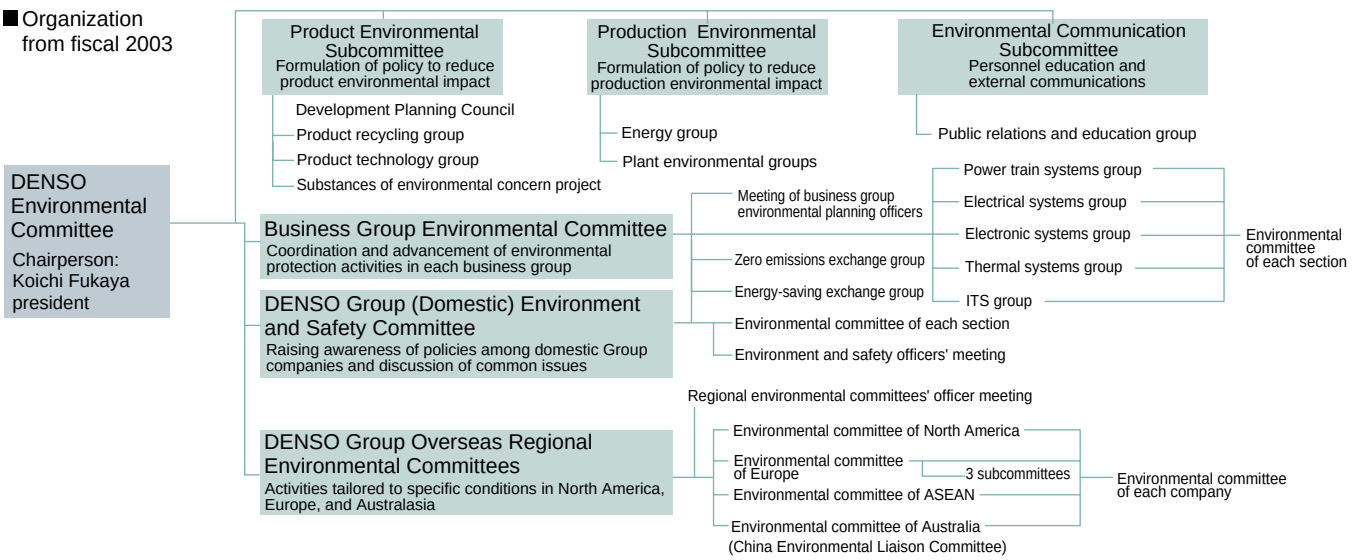
Groupwide common measures and policies

- Sharing basic policies and monitoring indicators
- Working out and implementing action plans
- Acquisition of ISO 14001 certification
- Organization of Environmental Committee
- System for sharing environmental information
- Environmental accounting

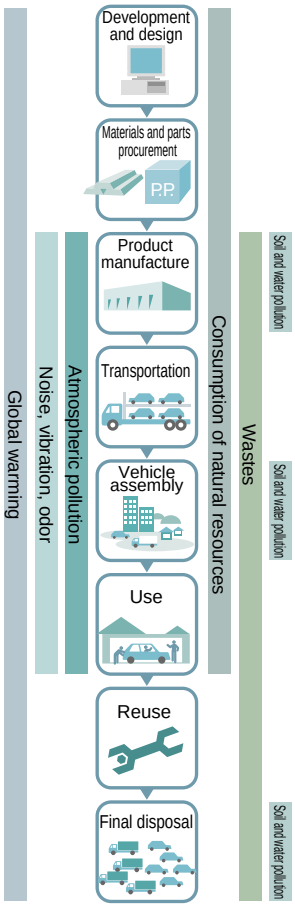
Seven items for common action

1. Cut waste.
2. Cut substances that have environmental impact from factory environments.
3. Avoid global warming (reduced CO_2 emissions).
4. Build up environmental management system (ISO 14001).
5. Advance review of environmental performance of products.
6. Implement green procurement.
7. Streamline distribution.

■ Organization from fiscal 2003



■Environmental Effects of Automobile Parts Manufacturing



Environmental Management Based on Product Life Cycle

The majority (approximately 96 percent by value) of DENSO products are sold to automobile manufacturers. They have an environmental impact from the initial development and manufacturing stages to the final stage of disposal of the automobile. Recognizing that the environmental performance of the automobile depends on fuel economy, the environmental impact of emissions during use, and recyclability and environmental impact when scrapped, we are promoting environmental management from the viewpoint of the product life cycle.

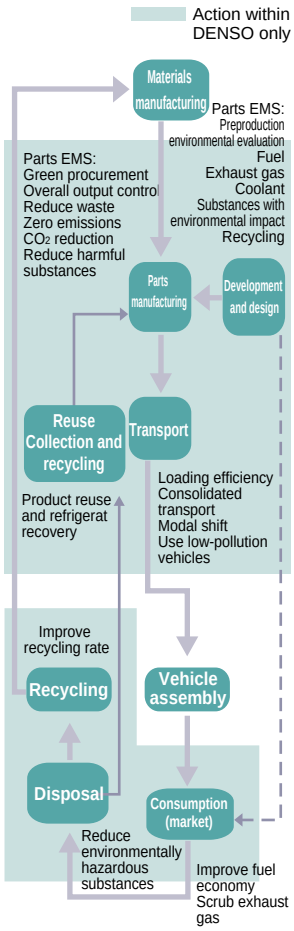
To ensure safety, DENSO has developed and produced its own leading technology for handling materials from procurement and processing to final production, and for composite parts manufacturing.

Improving Resource Use While Boosting Production

In the midst of production growth, DENSO has learned to use resources more efficiently. While carrying out operations, we get a clear picture of the amount of energy and resources that are used — input — and the level of emissions — output. Armed with this knowledge we work out the best comprehensive and effective strategies for minimizing environmental impact.

In fiscal 2003, we surpassed our original forecast for year-on-year increases of 6 percent when production jumped by 11.5 percent. This created the need for greater input of energy and resources and was likely to lead to more output of emissions and gray water. We met the challenge by strengthening production efficiency and cutting resource losses.

■DENSO's Way of Managing the Life Cycle of Automobile Parts



■Manufacturing Material Input and Environmental Impact (Results for last year shown in parentheses)

Input

●Raw materials 603,000 t (+26%)
●Metals 555,000 t (+28%)
●Non-metal materials 48,000 t (+10%)

■Energy 8,847,761 MJ (+18%)
■Electric power 1,725,033 MWh (+19%)
■Light fuel oil 34,223 kl (+25%)
■Heavy fuel oil 2,675kl
■Kerosene 8,376 kl (-11%)
■City gas 114,740,000 m³ (-16%)
■Propane 3,911 t (-20%)

Chemical substances
■Chemical substances 1,364 t (-16%)

Water
■Water 13,716,000 t (+29%)

Office supplies 634 t(-17%)
●Copier paper

[Legend] ●Domestic production group
■Domestic and overseas production group, including some non-production subsidiaries

DENSO

Stamping
Welding
Painting
Mechanical forming
Forging and casting
Assembly

Output

■Greenhouse gases 1,175,000 t-CO_2 (-1%)
■CO_2 1,054,000 t-CO_2 (-1%)
■Other key greenhouse gases* 117,000 t-CO_2 (±0%)
* Greenhouse gases other than CO_2

●Release to atmosphere 390 t (+17%)
●SOx 80 t (+10%)
●NOx 286 t (+20%)
●Fly ash 24 t (+9%)

●Release to water systems
■Wastewater 11,080,000 m³ (+19%)
●Chemical oxygen demand (COD) 46 t (-17%)
●N_2 81 t (-23%)
●Phosphorus 6 t (-3%)

●Chemical substances 362 t (-14%)
●Toluene/xylene 274 t (-24%)
●Other 89 t

■Reused materials 185,000 t (+21%)

■Landfill waste 9,000 t (-0.9%)

■Recycling ratio 95%

■Environmental Impact of Distribution

Input

■Packing materials 22,000 t (+1%)

Output

●CO_2 emissions 58,000 t-CO_2 (+12%)

Progress in Environmental Management

Environmental Action Expanded Throughout the Group Company Through EcoVision 2005

In fiscal 2003 DENSO achieved 26 out of 28 targets that it had set. Even so, some CO_2 emission issues remain.

Fiscal 2003 targets	Fiscal 2003 results
1. Implementation of environmental accounting across the DENSO Group. 2. Implementation of Eco Indicator by the DENSO Group.	1. Deployed by 18 of 18 companies in Japan and 25 of 32 overseas 2. Partly applied in one group company.

■Eco Indicator Computation

Measurement of environmental impact
↓
Ranking
Three categories, according to environmental impact
↓
Weighted averaging
Integration
Average of items from categories A, B, and C
↓
Index creation
↓
Trend observation

■Environmental Impact Items and Categories

Category A (key factors)	Category B	Category C
1. Recyclability ratio	1. Processed waste tonnage	1. Packaging material tonnage
2. Lead content	2. Number of low-pollution vehicles	2. Number of low-pollution vehicles
3. Manufacturing CO_2 emissions	3. Green purchasing ratio	3. Green purchasing ratio
4. PRTR substance emissions	4. Water consumption	4. Water consumption

Total 5 factors Total 9 factors Total 20 factors

↓

Overall environmental impact indicator

$$\text{Eco Indicator} = \frac{\text{Environmental impact (ecology)}}{\text{Revenues (economy)}}$$

Note:
Indexed to results for fiscal 2000 as 100.

Results of Application of DENSO EcoVision 2005

In fiscal 2003 we succeeded in setting targets for 26 of 28 items. Steady progress was made both in the development of products that contribute to energy saving and in the extension of zero emission activities across the DENSO Group. Worldwide, there were some noticeable local differences in the amount of progress made. In Japan, however, we successfully set targets for the reduction of CO2 emissions, which are a factor in global warming. We are currently working on introducing factory coordination by fiscal 2010, which will increase our rate of progress.

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Environmental Efficiency Boosted by Some 17% in Three Years

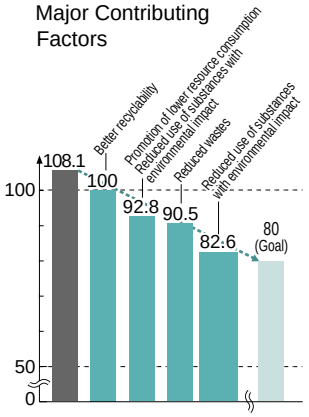
To get an objective view of effectiveness of environment action, DENSO drew up the Eco Indicator (EI) system in fiscal 2002. We identified 34 factors that have a measurable environmental impact. Divided into three categories of factors ranked in order of importance, an environmental index is derived and used to set targets and monitor progress. According to this system, we found an overall improvement in our EI index of 17.4% from fiscal 2000 through fiscal 2003.

Environmental Accounting for the Group

Environmental accounting is a useful tool, especially for facilitating three objectives: quantification that enables objective judgement of the cost effectiveness of different environmental actions, motivating employees, and enhancing understanding and awareness of the issues among stockholders and business partners. For the 44 DENSO subsidiaries in Japan, we have implemented environmental accounting according to the guidelines of the Ministry of the Environment.

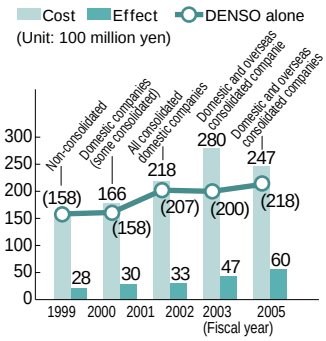
P. 60 for details about costs and effectiveness of environmental conservation

■Eco Indicator Trends and Major Contributing Factors



Note: Indexed to results for fiscal 2000 as 100.

■Environmental Protection Costs and Value of Environmental Effect



■Progress of DENSO Groupwide Environmental Action

○: Target achieved X: Implementation delayed or target not reached

Action item (☆: major)	Domestic group			Ev	Group overseas		Ev
		Target (T) and Result (R)				Target (T) and Result (R)	
☆1. Waste reduction	T	Achieve zero emissions (by fiscal 2005)		○	T	Reduce landfill waste (by 'fiscal 2005) fiscal 2003 target: less than 10,000 t	○
	R	All 18 of 18 companies succeeded			R	Waste, 9,300 t, zero emissions at 4 sites	
☆2. Reduced use of high-impact substances	T	PRTR substances -30%. Annual target: under 135 t	Tolulene, glycerine -50% (by fiscal 2005). Annual target: under 77 t	○	T	Reduce tolulene and glycerine (by fiscal 2005) Annual target: under 117 t	×
	R	Emissions: 125 t	Emissions: 73 t		R	Emissions: 118 t	
☆3. Global warming	T	Reduce annual CO_2 emissions to under 128,000 t-CO_2 in fiscal 2003		×	T	Reduce annual CO_2 emissions to under 370,000 t-CO_2 in fiscal 2003	○
	R	CO_2 emissions: 130,000 t-CO_2 (+2%)			R	CO_2 emissions: 340,000 t-CO_2	
4. Complete environmental management system	T	Acquire ISO 14001 certification (achieved by fiscal 2002)		○	T	Acquire ISO 14001 certification (achieved by fiscal 2002)	○
	R	All 18 of 18 companies certified			R	All 32 of 32 companies certified	
5. Preproduction environmental evaluation of parts	T	Work out and implement basis of evaluation for each part		○	T	Develop and implement basis of evaluation for each part	○
	R	All 11 of 11 companies worked out basis			R	Began to work out and implement basis of evaluation	
6. Implement green procurement	T	Implement groupwide DENSO Green Procurement Guidelines		○	T	Implement Green Procurement Guidelines	○
	R	Implemented by all 18 of 18 companies			R	Began procurement based on Guidelines	
7. Streamilining of distribution	T	Improve transportation efficiency; voluntarily reduce amount of packaging materials		○	T	Improve transportation efficiency; reduce amount of packaging materials	○
	R	All 17 of 17 companies achieved targets			R	Each company drew up own targets	

DENSO EcoVision 2005 Targets and Results for Fiscal 2003

Legend: ○: Annual target achieved ×: Annual target not achieved

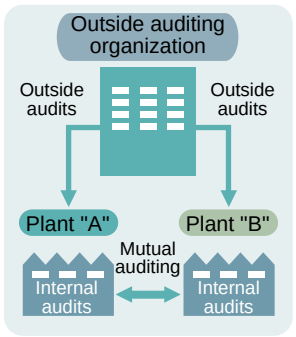
DENSO EcoVision 2005 (Third Environmental Action Plan)				Targets and results			
Policy	Action items	Goals and targets for fiscal 2005	Evaluation	Fiscal 2003 goals	Fiscal 2003 achievements	Evaluation	Page No.
1. Reinforcing environmental management compatible with consolidated management	(1) Strengthen actions taken as a group (2) Expand the Environmental Management System (3) Strengthen environmental group	(1) Consolidated subsidiaries will follow the same policies and guidelines, but each will also draw up and pursue an individual environmental action plan (2) Acquire ISO 14001 certification by fiscal 2002 (3) Enhance the environmental committees of domestic Group companies (4) Establish and operate environmental committees in each overseas region	○ ○ ○ ○	(1) Strengthen the consolidated management of the business group (2) Strengthen the organization of the environment committee for European-specification parts; revise region-specific environment action plan guidelines. (3) Establish India-China environment liaison committee.	(1) Group environmental planning managers committee established (2) Function-specific committees established at European base and action plans revised. (3) Liaison committee established in China	○ ○ ○	37 56 —
	(4) Expand environmental management tools	(1) Create internal environmental accounting standards (2) Disclose environmental costs and benefits	○ ○	(1) Implement environmental accounting across the DENSO group (2) Implement Eco Indicator throughout the DENSO Group	(1) Implemented by 18 of 18 domestic companies and 25 of 32 overseas (2) Partly applied in one group company	○ ○	39
2. Environment-friendly development and design	(1) Enhance environmental evaluations at the development and design stages	(1) Implement prior environmental evaluations for products (2) Provide environmental information on products to customers	○ ○	(1) Improve environmental performance of products through Eco Diagnosis	(1) Revised techniques for managing the targets for prior environmental evaluations for substances that have environmental impact, and implemented improvements	○	43
	(2) Strengthen connections with suppliers	(1) Formulate Procurement Guidelines and implementation with focus on suppliers (2) Promote Green Purchasing	○ ○	(1) To provide support, survey the status of EMS formation (2) To control and reduce use, survey chemical substances information	(1) ISO acquired by 80% of sites - Company seminars held for managers, staff and internal auditors (2) Chemical register information entered for 56% of chemicals used	○ ○	46 45
	(3) Improve fuel efficiency	(1) Promote fuel consumption regulations as well as development of new technologies and products (2) Promote efforts to lessen the weight of auto parts (3) Promote development of new technologies and products for making ITSes a reality	○ ○ ○	(1) Establish basic component technology for compliance with 2008 European fuel consumption legislation	(1) Moved forward in developing new technologies and new products to support automakers' self-imposed fuel economy improvement standards; mass production of electric compressors and lithium ion batteries	○	44
	(4) Cleanse exhaust gases	(1) Promote development of new technologies and products that meet exhaust-emissions regulations and self-imposed standards	○	(1) Gasoline vehicles: Develop basic component technology for Europe and USA regulations in 2005 (2) Diesel vehicles: Establish basic component technology for Europe and Japan regulations in 2005	- Moved forward with development of new technology and new products to meet the low emission standards of exhaust gas regulations (Mass production of exhaust gas cleaning filters)	○	44
	(5) Improve recyclability	(1) Increase the recyclability of auto parts with the goal of reaching an effective recycling rate of 95% for end-of-life cars by fiscal 2015 (2) Increase ability to dismantle/disassemble cars and easily use recycled materials; standardization of materials (3) Promote advances in materials-recycling technologies	○ ○ ○	(1) Keep parts recyclability ratio at above 95%	(1) Recyclability ratio of 96.9%	○	46
	(6) Manage and reduce environmentally hazardous substances	(1) Expand list of substances requiring management and strengthening of monitoring systems to satisfy domestic and overseas regulations and suppliers' standards (2) Take an active approach to self-management standards and substitute technologies	○ ○	(1) Review system for handling controlled substances (2) Conform with European directives for scrap vehicles - Work out and implement plan for replacing hexavalent chrome (3) Comply, as requested, with the self-imposed substance control rules of customers	(1) Reviewed relevant substances and reflected outcome in design standards (2) Replacements found for 3 substances subject to legislation in July 2003 - Moving forward with plan to completely replace hexavalent chrome by 2005 (3) Moving forward with plan to completely replace lead solder by 2005	○ ○ ○	45
	(7) Global-warming measures with regard to car air conditioners	(1) Develop air conditioners that use new refrigerants (CO2) in place of HFCs	○	(1) Carry out development to resolve technical issues for mass production	(1) Set up basic organization of CO_2 system; set up ejector cooling cycle - Commenced development of compact, lightweight, high-efficiency, low-cost parts for mass production	○	8
3. Achieving clean factories through further reduction of environmental impact	(1) Advancement on the resource-efficiency and zero-emissions fronts	(1) Zero emissions · Reduce landfill waste products to zero at all plants by fiscal 2003 (2) Develop materials-usage and resource-reuse management systems to reduce volumes of waste and recyclable materials from manufacturing processes	○ ○	(1) Implementat zero emissions at group companies Japan: Achieve sero emissions at all group companies Overseas: Model action suitable to locality (2) Implement action to cut resource loss at all companies Reduction target: 800 t or more	(1) Implemented at all 18 domestic plants and at 3 overseas bases (DNTW, DNHA, DNIN) (2) Total consolidated reduction: 1,700 t	○ ○	51 52 51
		(3) Progress toward paperless workflows through effective application of Internal Information Network Systems	○	(1) Keep annual amount to below the year before i.e., below 149.6 million sheets (previous year's total procurement)	- Year-on-year reduction (procurement for year: 129.7 million sheets)	○	54
	(2) Stronger measures to manage and reduce environmentally hazardous substances	(1) Thorough PRTR management - Reduce targeted emissions to 70% of fiscal 1998 level by fiscal 2005 (2) Reduce volatile organic-compounds emissions - Reduce toluene and xylene emissions to 50% of fiscal 1998 level by fiscal 2005	○ ○	(1) Cut emissions of PRTR substances by 34% against fiscal 1998 (2) Emissions of VOC Cut emissions by 38% against fiscal 1998	(1) Cut by 67% (2) Cut by 70%	○ ○	53 53
	(3) Energy conservation	(1) Reduce CO_2 emissions from manufacturing plants to 90% of 1990 level by fiscal 2010 (2) Promote creation of Perfect Energy Factories, which aim to minimize energy losses	— ○	(1) Reduce CO_2 emissions to or below 103% of 1990 level Annual target: below 563,600 t-CO_2 Target reduction: over 49,100 t-CO_2 - PEF action, encourage horizontal spread of effective practical themes suggested by energy-saving process research group - Increase level of coordination	(1) CO_2 emissions: 108% of 1990 level Actual annual total: 589,200 t-CO_2 Actual annual reduction: 67,100 t-CO_2 - Energy-saving process research group case studies demonstrated cumulative annual reduction equivalent to 6,387 t-CO_2 - Coordination: plans at Kota and Nishio	×	49
	(4) Advances in logistics rationalization	(1) Stabilize CO_2 emissions associated with logistics activities to below 1990 level by fiscal 2005 (2) Reduce volume of packaging material used to 80% of fiscal 1995 level by fiscal 2005	— ○	(1) Stabilize at or below fiscal 2002 level Annual target: below 43,300 t-CO_2 (2) Stabilize at or below fiscal 2002 level Annual target: below 14,000 t	(1) Transportation CO_2 emissions: 46,800 t-CO_2 (2) Amount of packaging materials used: 14,000 t	× ○	55
4. Promotion of external environmental-action alliances and enhanced disclosure	(1) Connect with external parties for the realization of a recycling society	(1) Establish company for reusing used parts (fiscal 2000) (2) Promote parts-recycling technology (3) Consider automobile-parts recycling system	○ ○ ○	(1) Support liaison with auto makers to identify recycling issues	(1) Investigated constituent materials of parts	○	48
	(2) Enhance information disclosure	(1) Environmental Report - Expand number of companies subject to environmental activities to include all consolidated domestic and overseas subsidiaries by fiscal 2003	○	(1) Extend the data published in the Environmental Report to include domestic and overseas affiliates (2) Provide even greater environmental communication	(1) Environmental performance data included 18 of 18 companies in Japan and 25 of 32 overseas (2) Held Open House 2003 and exhibited at Eco Products 2003	○ ○	60 29 30 42
	(3) Strengthen relationships in local areas	(1) Stage environmental exhibitions at individual plants (2) Hold local discussion meetings on the environment	○ ○	(1) Complete extension of the Eco-ranger 21 environmental education program (2) Continue and complete environmental forums	(1) Agui and Anjo courses added to Eco-ranger 21, establishing the course at three locations (2) Environmental forums held at every place of business	○ ○	26 30

Promotion of Environmental Management System (EMS)

EMS ensuring systematic and continuous environmental preservation

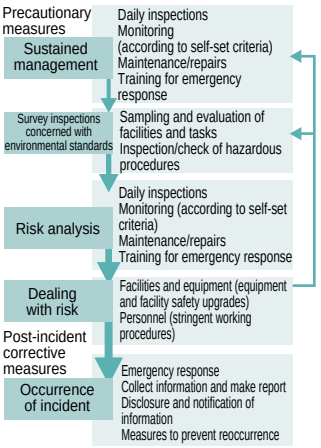
Working to improve environmental performance: 67 business locations acquired ISO 14001 certification (DENSO, 14; domestic group, 19; and overseas group, 34) by fiscal 2003

■DENSO's Internal and Outside Audits



■Environmental Education System

■Environmental Risk Management System



Environmental Audits

DENSO uses both internal and outside audits to confirm the efficiency and performance of our EMS. For internal audits, the audit sheets cover some 400 items. In addition to self-auditing based on these sheets, audit accuracy is improved by having peers from other locations perform the audits. No serious issues arose from the audit findings in fiscal 2003. Whether discovered by internal or outside auditors, identified issues were promptly rectified.

As part of the special environmental education that DENSO provides, we also encourage employees to train as environmental auditors. At the end of 2003, we had 342 internal auditors (including 12 internal audit supervisors).

P. 59 See p. 59 for list of sites with ISO 14001 certification.

Environmental Education

In support of our basic approach to environmental management, DENSO encourages employees to have a high degree of environmental awareness. Consequently, we carry out systematic education for everyone, from new employees to managers. Our system includes compulsory education tailored to various types and levels of job, and study to earn qualifications.

In fiscal 2003, we logged 4,742 hours of environ-mental training, which involved 3,119 participants in total. One of the trainees commented, "I gained the ability to see things both generally and relatively." Another said, "I got to un-derstand the importance of numerical values."

Environmental Education

Environmental Risk Management

DENSO has identified potential hazards to the environment that might, for example, result when factory air or water does not meet our own stringent standards or from incidents involving oil or chemical spills. Along with regular inspections and ongoing monitoring, we hold annual emergency drills. For underground pipes and other installations that are difficult to directly inspect, we have implemented alternative evaluation procedures.

The number of times we failed to meet legally stipulated limit values in fiscal 2003, along with complaints, and environmental incidents are shown in the table (above right). No legal penalties were imposed, either in Japan or overseas, and corrective action was taken in each case.

■Environmental Audit Results in Fiscal 2003

Internal audit	Outside audit
Improvement directives issued: 48	Points noted for improvement: 63
Violations: 0	Follow-up items: 32

Participant in senior-level "global environmental technology" training

In addition to the lecture, I visited EcoPlaza (sorting of materials) and DENSO REMANI Corporation, which rebuilds used starters, and gained a strong awareness of how much design can contribute. It became clear that we should design products with consideration for the tough task of separating waste, because this may help bring about change at reuse and recycling sites.

Shigenori Kobayashi
Safety & Chassis System Eng. Dept. 3

Environmental quiz screen on DENSO intranet

■Employee Environmental Education in Fiscal 2003

Employee category	No. of people
New employees	767
Technical mid-level employees	610
Assistant managers, group leaders	1,554
Managers of technical sections	12
Management-level employees of sections, departments, plants and others	38

Note: Excluding domestic and overseas group companies

■Environmental Incidents and Complaints in Fiscal 2003

Category		DENSO	Japan group	Overseas group
Legal violation		0	0	0
Lawsuit, penalty		0	0	0
Incident		0	0	0
Complaint	Noise	1	1	0
	Other	1	0	0

Promoting Environmental Communication

Awareness of DENSO's Thinking Broadens and Deepens Trust

In fiscal 2003, we revamped our environmental events, publicity, environmental and social report, website and other activities.

Fiscal 2003 targets	Fiscal 2003 results
1. Extend the data published in the Environmental Report to include domestic and overseas affiliates. 2. Provide even greater environmental communication.	1. Environmental performance data included for 18 of 18 companies in Japan and 25 of 32 overseas. 2. Held Open House 2003 and exhibited at Eco Products 2003.

Tokyo Motor Show
(October, Makuhari)

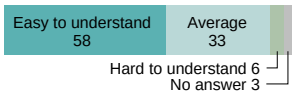
Emphasis on Communication

In our effort to ensure that our commitment to the environment pays off quickly in practical results, it is essential to get stakeholders to understand our business activities and to build strong bonds of cooperation. Effective communication is the most powerful way of bringing this about.

This year, communication activities were reviewed, mainly by the Environmental Communication Subcommittee of the Environmental Committee, and radical reinforcement was advised. This prompted numerous suggestions from various sources and we were able to discover a number of areas for improvement and innovation. In the future, we hope to present more detailed information in more interesting ways.

■User Feedback for Last Year's Environmental Report

Overall impression (%)



■Opinions and impressions (excerpts)

- Your zero emissions efforts are commendable.
- The column items and case studies were easy to understand.
- Sometimes it was hard to tell if the information specifically concerned only DENSO itself, or also domestic and overseas subsidiaries.
- There were too many specialized terms that were hard to understand.

Publication of Environmental and Social Report

Japanese and English versions of the Environmental and Social Report have been published annually since 1999. As well as reporting on DENSO's environmental efforts, the publication provides substantial information about the effectiveness of our social and economic activities.

Receiving the "Award of Excellence"

Evaluated for its clear expression of vision and evaluation of ongoing progress, the Environmental and Social Report 2003, published in August 2003, was awarded the "Award of Excellence" in the 7th Environmental and Social Reporting Prize organized jointly by the company Toyo Keizai Shinposha and the Green Reporting Forum, a non-profit organization.

Participation in External Environmental Exhibitions

Eco Products 2003
(December, Tokyo)

To raise the awareness and appreciation of DENSO's environmental technology and environmental protection activities and to encourage dialog with stakeholders, DENSO participates in exhibition events. In fiscal 2003 we were able to reach the public through the Eco Products Exhibition, the ITS World Convention, motor shows in various countries, local shows and other events.

DENSO is also committed to the use of reused and recycled products for the booth materials. This year the disposal rate was reduced to less than 1 percent from the previous 6.29 percent.

Communication Via Our Website

Index page for the environment section of DENSO's website

As a tool to enable two-way communication with more people, DENSO set up an environmental section on the company website. In fiscal 2003 we created more complete content concerning our commitment to the environment, case studies, environmental reports, and detailed information about DENSO's environmental publicity. These pages logged an average of 16,000 hits per month.

URL
http://www.globaldenso.com/en/environment

Environmental Advertising

We placed ads with friendly messages in newspapers and magazines. These advertisements dealt with topics including the common rail system, our CO_2 air conditioning system, and DENSO's care for quality and the environment.

On the website, we provided additional information on the topics covered by the advertisement.

The underlying message of our ads

URL
http://www.globaldenso.com/en/environment/ad/index.html

2003 Open House Meetings

Our environmental meetings in 2002 were occasions where we could elicit questions and opinions from stakeholders. In 2003, with larger attendance for site visits and environmental meetings, total participation doubled. We were able to hear valuable opinions about various issues, including the completeness of the guided environmental tours that we provide.

P. 29 Close-Up: Open House 2003

Participation in EPOC

EPOC (the Environment Partnership Club) is a private organization formed in fiscal 2000 to promote the creation of a sustainable society through cooperation between industry, the academic world and government in the Chubu area. This area still ships more industrial products than anywhere else in Japan. As a core member, DENSO took part in international exchange, seminars, forums, study meetings and production of publications. DENSO President Koichi Fukaya is working to develop EPOC activities as its vice-chairman.

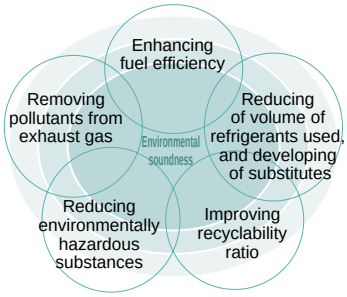
Improved Sustainability Through Product EMS

Cutting environmental impact by working on five themes to get the most from the life cycle

We set environmental targets for fiscal 2003 and promoted effort to attain them.

Fiscal 2003 targets	Fiscal 2003 results
Improve environmental performance of products through Eco Diagnosis. Fiscal 2003 results	Revised techniques for managing the targets for prior environmental evaluations for substances that have environmental impact, and implemented improvements.

■Five Key Evaluations Made Before Mass Production



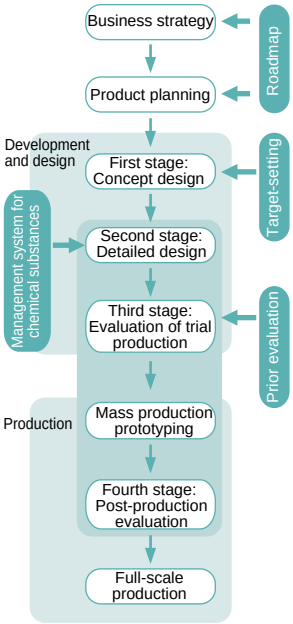
Prior evaluation form

Five Prior Evaluation Criteria Made More Stringent

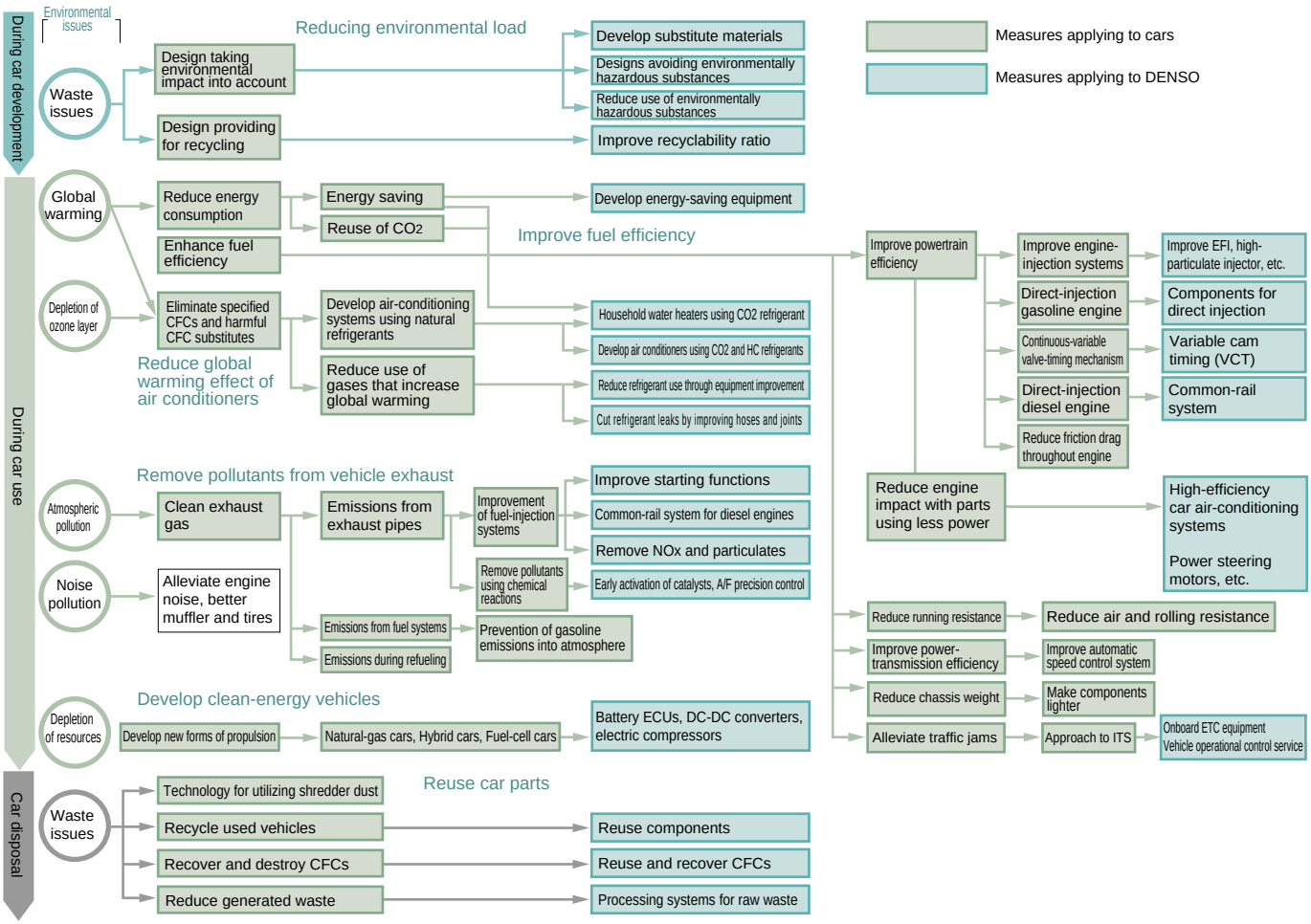
To minimize the impact on the environment at every stage of the product — development and design, materials procurement, manufacture, use, recycling (reuse), and disposal — DENSO believes it is crucial to act at the early product development and design stages. To accomplish this more effectively, in 2000 DENSO established the product environmental management system (EMS) and acquired ISO 14001 certification. During development and design, factors affecting the five priority items for environmental improvement are identified and a process of ongoing improvement that includes prior evaluation is initiated for each product. In fiscal 2003, environmental performance targets were added to our prior evaluation forms.

Furthermore, the secretariat of the Environmental Committee and product EMS office carry out Eco Diagnosis through periodic surveys. When issues are identified, support is provided for solving latent problems. Lessons learned from valuable case studies are applied. We have established a system for continually raising our standards.

■Product Development and Product EMS



■Automobiles, Environmental Impact and DENSO Products



Improving Fuel Efficiency

Improved fuel efficiency prevents global warming and resource depletion

In fiscal 2003 lithium ion battery development helped improve fuel efficiency

Fiscal 2003 targets	Fiscal 2003 results
Establish basic component technology for compliance with 2008 European fuel consumption legislation.	Moved forward in developing new technologies and new products to support automakers' self-imposed fuel economy improvement standards; mass production of electric compressors and lithium ion batteries.

■Themes in DENSO's Fuel-efficiency Improvement Projects

Theme	Improvement method	Effect*
Reduce engine pump losses	- Direct injection gasoline engine	10%
	- Common-rail system diesel engine	20%
	- Variable cam timing (VCT)	3%
Reduce cooling losses	- Thermal storage system	1.5%
Increase efficiency of auxiliary equipment	- SC* alternator	1%
	- Electric water pump	3%
	- High-efficiency air conditioner	2.5%
Reduce tire frictional resistance	Lighter products	0.2% per 5 kg
Improve fuel efficiency when stationary	- Anti-idling function	5% to 15%
Regenerative braking energy, optimized engine operation	- Hybrid engines	10% to 20%

* DENSO data

* Segment conductor

Improving Fuel Efficiency: Approaches and Results

To improve fuel efficiency, we are developing products through advances in the following three areas.

1. Developing new technologies and products that comply with fuel-efficiency regulations and the self-imposed regulations of automobile manufacturers
2. Making automobile parts even lighter in weight.
3. Developing the requisite new technologies and products for intelligent traffic systems (ITS).

In September 2003 we launched the sale of an electric compressor for the new model Toyota Prius that allows the car air conditioner to be used, even when the engine automatically shuts down when the car is stopped. Using high-output, durable lithium ion batteries (jointly developed with Toyota Motor Corporation), the system helps to improve fuel efficiency by 8 percent to 10 percent (in 10/15 mode driving).

Electric compressor

Column

The Lithium Battery: Just the Thing for Hybrid Vehicles

Although lithium ion batteries now are commonly used for mobile phones and notebook computers, they have not yet had levels of output and durability that are suitable for automotive use. To rectify this, DENSO focused its expertise on basic research, which has paid off in effective production technology. Lithium ion batteries are now excellent candidates for use in next-generation hybrid vehicles.

Lithium ion battery

Cleaning Exhaust Emissions

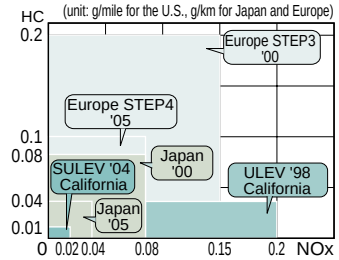
Complying with Standards for Both Gasoline and Diesel Engines

Fiscal 2003 marked the market launch of diesel emissions filters

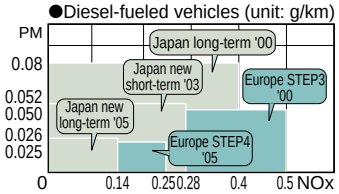
Fiscal 2003 targets	Fiscal 2003 results
1. Gasoline vehicles: Develop basic component technology for Europe and USA regulations in 2005. 2. Diesel vehicles: Establish basic component technology for Europe and Japan regulations in 2005.	Moved forward with development of new technologies and new products to meet the low emission standards of exhaust gas regulations; mass production of exhaust gas cleaning filters.

■Major Exhaust-emission Regulations

●Gasoline-fueled vehicles



●Diesel-fueled vehicles (unit: g/km)



Note:
1 ULEV (Ultra Low Emission Vehicle) defined under California state law.
2 SULEV (Super Ultra Low Emission Vehicle) defined under California state law.

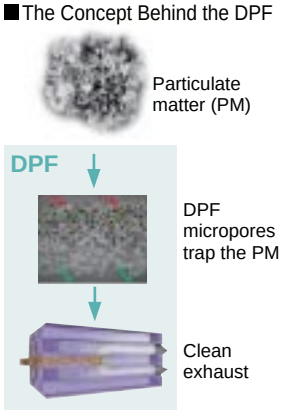
Exhaust-emission Purification: Approaches and Results

Gasoline-fueled vehicles produce three major substances with environmental impact: hydrocarbons (HC), nitrogen oxides (NOx) and carbon monoxide (CO). Diesel-fueled engines add a fourth: particulate matter (PM).

DENSO is working to produce cleaner exhaust gas by developing fuel-injection technologies and chemical reactions that will make it possible to meet new exhaust-emissions regulations scheduled to be implemented in Japan, America and Europe.

Of particular note is our DPF (diesel particulate filter). This has proved highly effective at cleaning exhaust gas, and production began in 2003. The DPF has been adopted in the European model of the Toyota Avensis and will be added to a succession of other vehicles. More than 90 percent of the PM is burnt away or removed when the DPF is used in conjunction with a common rail diesel engine: after diesel fuel undergoes highly efficient combustion, the exhaust gas is scrubbed while passing through the catalyst-lined micropores of the DPF.

■The Concept Behind the DPF



The filter's micropores trap PM and scrub the exhaust emissions.
Using the DPF in conjunction with common rail and EGR technology achieves excellent levels of cleaning.

*DPF: Diesel particulate filter

Reducing Substances of Environmental Concern

Complying with domestic and foreign laws and regulations, we are going forward by tackling the issues comprehensively in association with our clients and the industry

To proactively enable more rapid response, in fiscal 2003, the Product Environment Subcommittee launched the Task Force Project for Substances of Environmental Concern.

Fiscal 2003 targets	Fiscal 2003 results
1. Review system for handling controlled substances. 2. Conform with European standards for scrap vehicles; work out and implement plan for replacing hexavalent chrome. 3. Comply, as requested, with the self-imposed substance control rules of customers.	1. Review conducted of relevant substances and outcome reflected in design standards. 2. Replacements found for 3 substances subject to legislation in July 2003; moving forward with plan to completely replace hexavalent chrome by 2005. 3. Moving forward with plan to completely replace lead solder by 2005.

List of materials provided at seminar on environment-impacting concerning substances

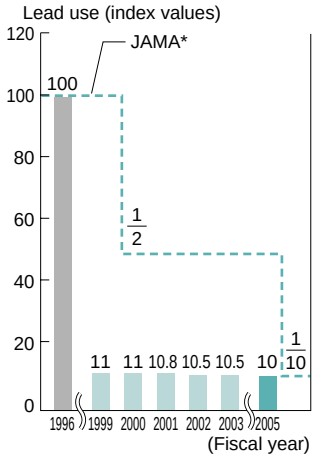
Minimizing Disposal-stage Environmental Impact

Automobile parts use a variety of heavy metals and chemical substances to improve performance or assure quality. However, these substances can have adverse effects on human beings or ecological systems when they are disposed of. Many nations have imposed laws and regulations to control this, while the automotive and parts industries are also working under their own standards to reduce environ-mental impact. Under the guiding concepts of expanding the list of substances requiring management and strengthen monitoring systems to satisfy domestic and overseas regulations and suppliers' standards, and taking an active approach to self-management standards and substitute technologies, DENSO has defined managed substances and established reduction goals for fiscal 2005. To proactively enable more rapid response in advance of changes in legislation, in fiscal 2003, the Product Environment Subcommittee launched the Task Force Project for Sub-stances that have an Impact on the Environment.

Working with Suppliers to Report Substance Inclusion to Customers

We provide automobile manufacturers and other customers with reports of any potentially harmful substances in our products. One of the main roles of the Task Force Project for Environmentally Harmful Substances is to enforce control in line with the design standards and guidelines of our customers and, through alliance with our suppliers, to produce complete and detailed reports.

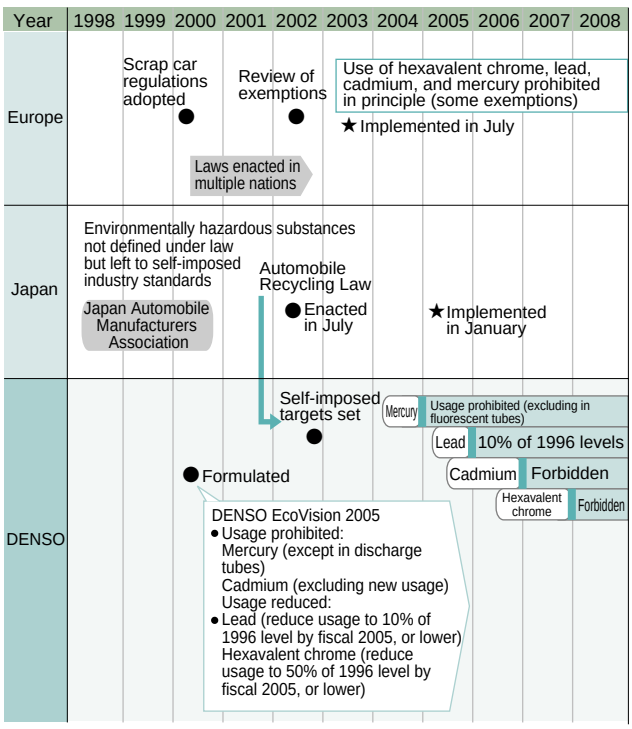
■Self-imposed Industry Standards and Progress in Lead Elimination at DENSO



* JAMA: Japan Automobile Manufacturers Association

■Communicating with Business Partners to Control Environmentally Hazardous Substances

■DENSO's Response to Laws and Regulations



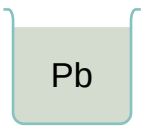
■Progress During Fiscal 2003 and Plans for the Future

Lead (Pb) in motor brush

Cadmium in contacts and fuses

DENSO: Completely substituted — End of 2002

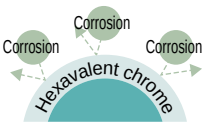
European standards for scrap vehicles: Use prohibited — Jul 2003



Lead in electrostatic coatings

DENSO: Completely substituted — Mar 2004

European standards for scrap vehicles: Use prohibited — Jul 2005



Anticorrosive use of hexavalent chrome

DENSO: Completely substituted — Mar 2003 — In evaporators

DENSO: Substitution planned — Jun 2006 — Zinc galvanizing

European standards for scrap vehicles: Use prohibited — Jul 2007

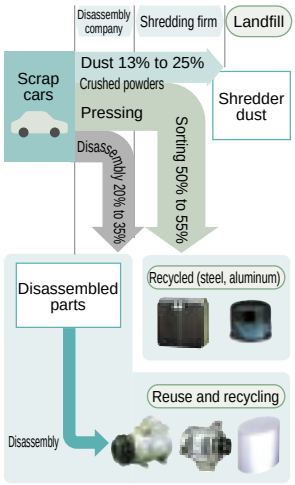
Improving Recyclability

Factoring Recycling into Design to Prevent Release of Harmful Substances During Disposal

In fiscal 2003 we focused on measures to reduce environmental impact from end-of-life incineration and landfill seepage.

Fiscal 2003 targets	Fiscal 2003 results
Keep parts recyclability ratio above 95%.	Recyclability ratio of 96.9%.

■DENSO Product Recycling

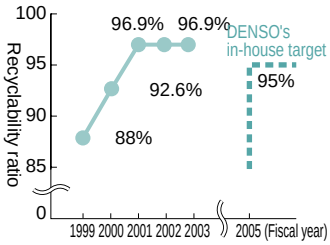


Improved Recyclability and Advances in Recycling Technology

DENSO defined three major targets, which include increasing the recyclability ratio for auto parts; improving dismantling and disassembly; using easier-to-recycle, standardized materials and developing new materials-recycling technologies. We have incorporated these targets into our own production-recycling evaluation process, and are engaged in a wide range of projects to raise recyclability.

We achieved the EcoVision target of "increasing the recyclability ratio for DENSO parts to at least 95 percent by fiscal 2005," four years ahead of schedule, in fiscal 2001. We are now maintaining this at an improved level of 96.9 percent, and are working to develop recycling technologies that reduce the environmental impact of used products after incineration or landfill.

■Recyclability Ratio of DENSO Automobile Products



■An Example of Success in Recycling Research

Casing made of recycled plastic (PP) from used air-conditioner cases

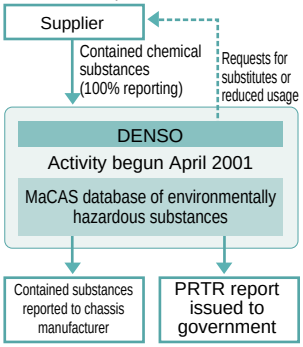
Promoting Green Procurement

Requiring Suppliers to Help Us Achieve Our Goals: Purchasing Parts and Materials with Minimal Environmental Impact

In 2003 we made further progress in securing supplies from companies complying with ISO 14001 or Ecostage.

Fiscal 2003 targets	Fiscal 2003 results
(1) To provide support, survey the status of EMS formation. (2) To control and reduce use, survey chemical substances information.	(1) ISO 14001 acquired by 80% of sites; company seminars held for managers, staff and internal auditors. (2) Chemical register information entered for 56% of chemicals used.

■Report Flow Diagram for Environmentally Hazardous Substances

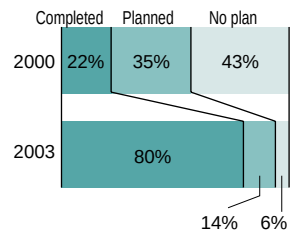


Green Procurement Policy and Support for Supplier Certification

In dealing with environmental issues, working closely with suppliers to achieve green procurement is essential. In 2000, DENSO drew up its Green Procurement Guidelines. As the basis for instituting EMS, the guidelines call for each group company to acquire ISO 14001 certification and require disclosure of complete statements of the substance content and percentage of materials and parts. We have been promoting presentations and seminars, courses to train internal auditors and other means to increase awareness and skills. By the end of fiscal 2003, 620 of 780 companies had acquired ISO 14001.

A presentation for suppliers, held on April 21 and 22, concerning environmentally harmful substances.

■Progress in Constructing an Environmental Management System (EMS)



Generalization of Environmental Management Systems

Acquiring and maintaining ISO 14001 certification is challenging for small- and medium-scale businesses. As part of our support for these suppliers, DENSO joined with other industrial enterprises and educational organizations to set up a research committee for the Ecostage system of environmental management. This system has simpler procedures, lower certification costs and, through a ranking system, motivation for improvement after certification. By the end of fiscal 2003, 26 of our suppliers had acquired Ecostage certification.

URL Green Purchasing
http://www.denso.co.jp/PURCHA/contents/green/index.html

URL Ecostage
http://www.ufjms.co.jp/ecostage/eco-p.html

Close-Up

DENSO Deals with Total-lifetime Reduction of the Environmental Impact of Automobile Parts

To make progress in reducing the environmental impact of automobiles, we must consider every aspect of the product life cycle, including resource extraction, use, recycling and final disposal. Working with suppliers, DENSO is committed to ensuring that the upstream elements of our operations have as little environmental impact as possible. Concerned with all stages of the product life cycle, we design products for easy recycling and low-impact disposal.

Avoiding Global Warming and Reducing Waste

DENSO develops products with an eye to improving vehicle fuel efficiency and minimizing environmental impact at the final-disposal stage.

To achieve better fuel efficiency, we developed new winding technology for our SC alternator

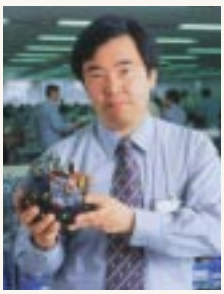
To improve generator efficiency, we needed to reduce the resistance of the electricity-generating stator coil, which gets hot. Efficiency usually means making the coil thicker, but this would make the coil heavier and bigger. This led us to consider the new technique of segment conductor (SC) high-density winding. While yielding a more compact device that generates electricity much more efficiently, this innovation also enabled us to halve resistance and thermal energy loss, thereby reducing overall vehicle fuel consumption.

Reducing Size and Noise — Minimizing Waste in Manufacturing

Our constant challenge is to make alternators even smaller. Along with working to improve starter efficiency by making the devices more compact, DENSO is also striving to use thinner metal and improved materials. By minimizing the machining allowance, we also attempt to reduce waste when pressed parts are finished. In other words, from the concept and design stage, we focus on conserving resources by reducing waste. The innovation of double winding has also allowed us to reduce noise during electricity generation.

Target Substances Eliminated in Advance of EU Standards for Vehicle Disposal

Before new EU standard deadlines for vehicle disposal, intended to minimize environmental impact when vehicles are scrapped, DENSO has reduced and eliminated the four substances specified in the legislation: mercury, lead, cadmium and hexavalent chrome. DENSO parts will comply even before the new standards come into effect.

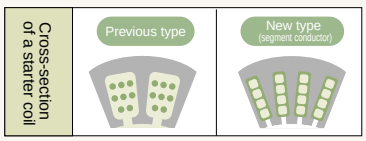


Atsushi Umeda,
Grade II Electrical Technician

Technical Term

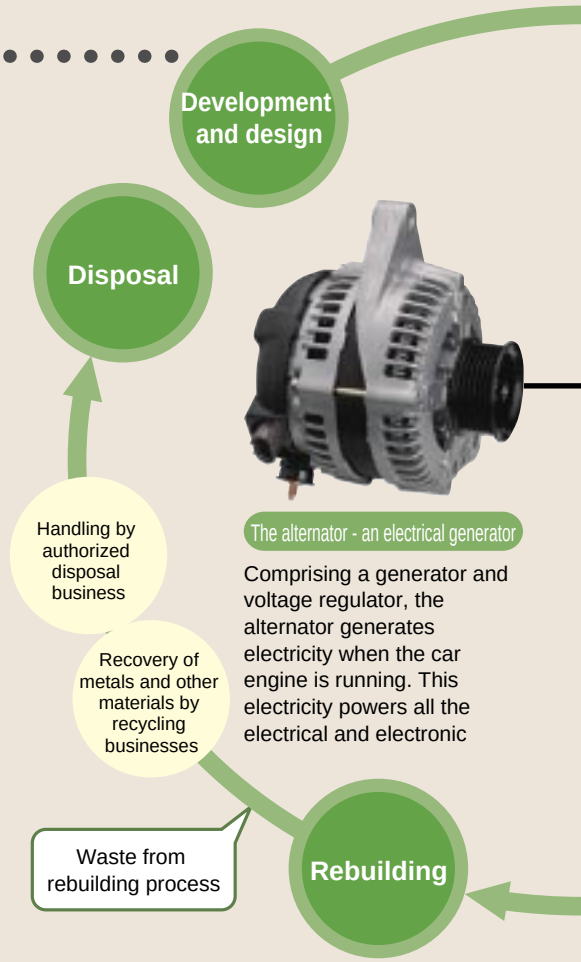
European standards for vehicle disposal
In 2000, the European Union passed ELV (end-of-life vehicle) regulations that are intended to improve recyclability and prohibit the use of environmentally hazardous substances.

Segment conductor high-density winding has enabled great improvement of generator efficiency



50% improved coil resistance
10% improved generation efficiency

Helps improve fuel efficiency throughout life of vehicle



The alternator - an electrical generator

Comprising a generator and voltage regulator, the alternator generates electricity when the car engine is running. This electricity powers all the electrical and electronic

Resource Conservation

Playing our part in recycling, DENSO ships 53,000 repaired and refurbished units per year to the rebuild market

Misako Ishikawa
DENSO REMANI Corporation

Many alternators recovered from end-of-life vehicles can be reused if they are overhauled and have brushes, bearings and other worn parts replaced. DENSO REMANI Corporation provides the market with this kind of rebuilt product.

Along with alternators and starters, the company deals with 1,345 different types of items. We have about 30,000 items bought from service stations and recovery companies in inventory at any given time. Our veteran workers are former employees from DENSO's Anjo plant. All parts are assured by same kind of quality and performance testing that is applied to new products. REMANI ships 53,000 units a year.

Rebuilt parts are more in favor overseas than in Japan, and items from similar DENSO companies in North America and Europe also contribute to the business.

Before rebuilding

After rebuilding

■Steps in the Rebuilding Process

- Recovery, receipt, storage
- Disassembly
- Inspection (appearance, dimensions, electrical checks)
- Refurbishment (cleaning, polishing, painting)
- Assembly
- Inspection (output characteristics, voltage, appearance, etc.)
- Packing, shipment

Resource Conservation

Working with Suppliers to Conserve Resources by Using Less Insulating Paper

In 1998, for our latest alternators, we met with suppliers and proposed that we could conserve resources and save costs by using two layers of insulating paper for our alternators, instead of three. At that time, paper was used on both sides of PET film, which provides high thermal resistance and insulation. This sandwich structure is 0.22 mm thick. The change from three to two layers means the insulation is 0.01 mm thinner. For a single unit, this saving seems very slight, but, given our production of tens of thousands of alternators per month, the ongoing resource saving is substantial.

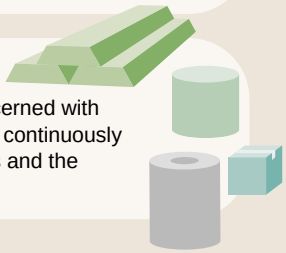
Naoki Mitsunaga,
Materials Procurement Section,
Procurement Dept.

●Insulation Structure

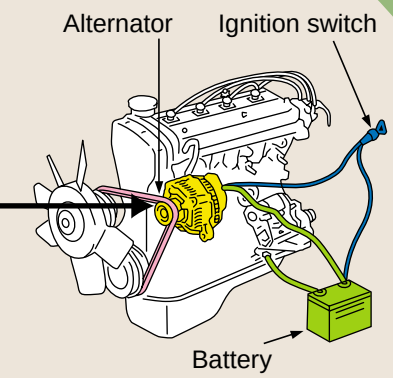
Procurement

Manufactureing of material and parts

All of our materials suppliers and parts makers are actively concerned with reducing environmental impact. As an added incentive, DENSO continuously encourages greater action through green procurement practices and the material chemical assessment system (MACAS).



Manufactureing



devices in the vehicle and recharges the battery. Alternating current, which is produced when a belt from the engine turns the alternator, is converted to direct current.

Use

Alternators are powerful devices that play a vital role in automobiles

Used alternator

Rebuilt product market

Avoiding global warming

Each new product provides an opportunity to rethink manufacturing facilities and methods, leading to greater energy savings

●Detailed analysis of energy consumption pays off in big savings

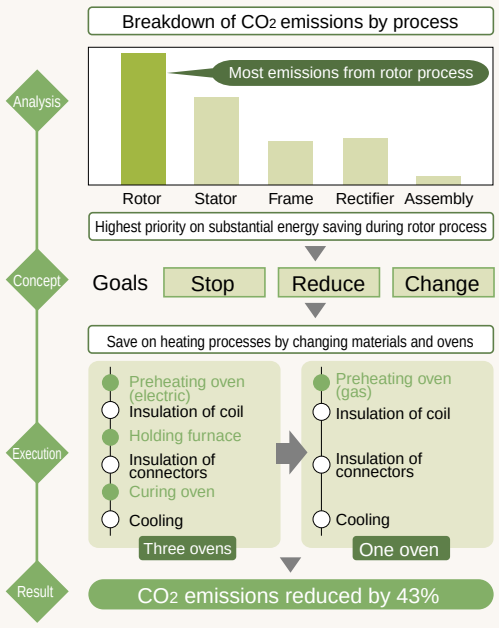
In addition to manufacturing alternators and starters, DENSO's Anjo Plant also serves as a model factory for overseas production bases. From materials to assembly, it leads the way in integrated production. Because it is not possible to upgrade existing models of SC alternator, major design improvements necessitate a complete model change. When this happens, the production facilities also have to be changed. We welcome such changes as opportunities to promote energy conservation and, as part of the process, to carry out energy analysis. Recently, we had the chance to completely rethink the rotor manufacturing process, which was the greatest user of energy. Savings, won by reductions in the three heating processes and by changing the materials, lowered energy consumption and CO_2 emissions by 43%.

●Implementing "visualizing": Stop, reduce, change

Two things helped up us achieve this improvement. First, "visualizing" energy consumption on computer screens made it easy to zero in on the problems and confirm results. Second, using "stop, reduce, change" as the key words, we rethought the process and the equipment involved. Naturally, because were trying to reduce energy waste while maintaining high quality, none of this happened overnight. We succeeded after two years of preparation, study and verification. Following this, our success was crowned by winning, in the Energy Conservation Awards of 2003 (run by Japan's Energy Conservation Center), the Prize of the Director General of Agency of the Natural Resources and Energy for exemplary practical energy conservation.

The Anjo Plant has acquired ISO 14001 certification for the entire site and works to reach zero emissions (no generation of landfill waste). Experience in zero emissions at Anjo is currently being used as an example for other DENSO plants.

Koji Horie,
Engine Electrical System Mfg. Dept.2



Energy Conservation

Reducing energy loss to help prevent global warming

In fiscal 2003, progress came from building a system to cope with changes in production volume.

Fiscal 2003 targets	Fiscal 2003 results
- CO_2 emissions: Reduce to no more than 103% of fiscal 1990 level. Annual target: Below 563,600 t-CO_2 Target reduction: Over 49,100 t-CO_2 - PEF action; encourage horizontal spread of effective practical themes suggested by energy-saving process research group. - Increase level of coordination.	- CO_2 emissions: Reduced to 108% of fiscal 1990 level. Actual annual total: 589,200 t-CO_2 Actual annual reduction: 67,100 t-CO_2 - Energy-saving process research group case studies demonstrated cumulative annual reduction equivalent to 6,387 t-CO_2. - Coordination: Plants at Kota and Nishio

Cogeneration facilities in the East Factory of the Anjo Plant

Declaring our strengthened commitment to energy conservation in the mass media (Nikkei Shimbun, February 26, 2004)

On course to achieve EcoVision 2005 targets

To achieve EcoVision 2005's target of reducing CO_2 emissions from manufacturing plants to 90 percent of our 1990 level by fiscal 2010, DENSO is focusing on three major efforts: we are developing the "Perfect Energy Factory" (PEF) with the smallest possible energy loss; developing new energy-conservation technologies, and installing cogeneration facilities.

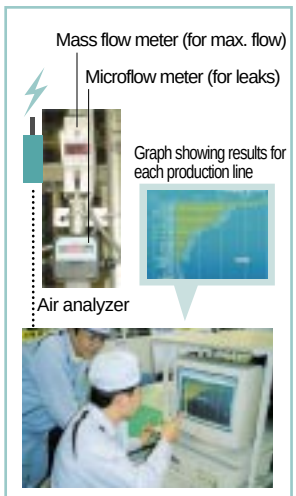
Systematically Reducing CO_2 Emissions

In 2003, aware that we missed the targets for the previous year, we were determined to make ourselves more able to respond to changes in production. Applying more stringent policies, we raised the target for 2005 by aiming to get the level of CO_2 emissions down to 92 percent rather than 96 percent of 1990 levels. Practical action included merging two of the subcommittees of the Environmental Committee and simplifying the chain of command. We also revised our quarterly targets to enable us to cut CO_2 emissions, even while coping with increased production, as the table below shows. At the same time, we encouraged energy conservation, technical development and improved support for Japanese and overseas subsidiaries.

Global demand for automobiles, however, resulted in the largest increase in production in the last five years and despite our efforts, with CO_2 emissions rising to 589,200 t-CO_2 (108% of 1990), we could not meet our target.

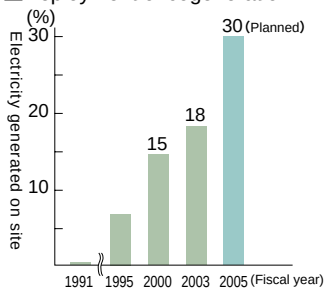
In fiscal 2004, eight of our plants followed PEF policies and we emphasized cogeneration throughout the company. From fiscal 2003 to fiscal 2005, this will result in a nearly two-fold increase in cogeneration facilities.

■Air Analysis Systems Installed on All Production Lines in the Performance Products Manufacturing Section



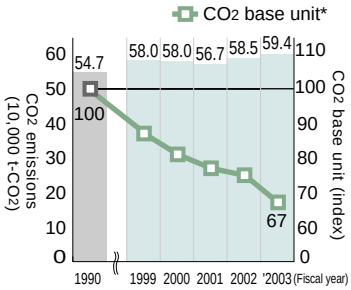
Energy control system

■Deployment of cogeneration



Proportion of electricity generated on site = Amount of power generated / Amount of power consumed
(Total supplied from outside + amount generated on-site)

■CO_2 Emissions from Manufacturing Processes and Changes in Index Values (DENSO only)



*Base unit: CO_2 emissions per unit revenue

■Status of Control and Improvement Measures

Type of action			Fiscal 2003 target	Action and evaluation		Issues
Management			Target: 563,600 t-CO_2 Plans to enable quarterly adjustment to production changes	Results: 589,200 t-CO_2 Unable to adjust because of greater-than-anticipated changes in production	×	Rethinking the situation
Reduction	DENSO only	Annual cut	Initial target: 49,100 t-CO_2	Results: 67,100 t-CO_2	○	
		Improvement	Reduce waste of compressed air, shut down ovens and furnaces, optimize with use of inverters	Practical application of proposed use of rollers	○	Wider application of effective solution via case study
		PEF Model	Set up energy-saving PEF model production lines and measures for groupwide deployment	Successfully set up according to plan at eight plants, issues relevant to groupwide adoption identified	○	Energy Conservation Process
		Research Council	Promotion for practical expansion of 14 themes for application	Application progressed at 189% over plan Build on and expand development themes	○	Build on and expand development themes
		Cogeneration	Planning installation of No. 2 cogeneration station at Kota No. 3 cogeneration station at Nishio	Began design work for installation	○	Optimize investment for expanded installation
	Consolidated	Groupwide response	Japan: Support CO_2 emission control and reduction	Aid given 33 times to support on-site energy conservation; three energy conservation seminars held	○	Ongoing support for onsite actions
			Overseas: Setting reduction targets for each site and support for reduction	Set targets for cutting base unit CO_2 emission values by 5% to 10% by fiscal 2005.	○	

Focus for 2004

Case studies of effective conservation and groupwide deployment

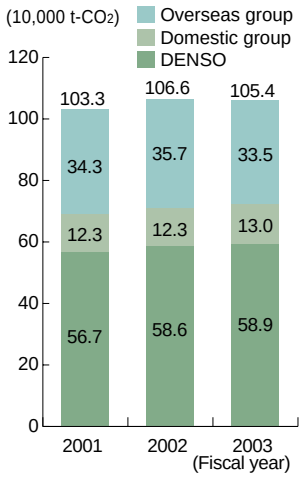
1. Wider installation of DENSO-developed ECOFIT system that monitors energy consumption of single units of equipment and displays results via computer terminal.
2. To thoroughly prevent power waste when equipment is not being operated, deploy EcoOperator, a system that prevents loss by ensuring automatic shut down and start up of equipment.
3. Prevent air leakage, and identify where inverters can save energy. Use thermal energy from heating ovens in ventilation system.

4. Install new types of energy-saving production lines

Case studies of effective conservation and groupwide deployment

5. Increase fiscal 2003 in-house 20% generation (426,000 kW; nine companies) to 30% (686,000 kW; 13 companies) in fiscal 2005

■DENSO Group CO_2 Emission Trends



Support for Domestic and Overseas Companies

In the DENSO Group, the ongoing effort to conserve energy is part of a wider consolidated environmental management system based on ISO14001.

In fiscal 2003 we held three energy conservation discussion meetings to share information among 17 domestic companies. Meanwhile, as part of our on-site support, supervisors from DENSO were sent out to local plants to provide guidance for improvement on 33 occasions. We plan to increase the frequency of these supervisory visits and to strengthen support.

All Overseas Bases Have Set Self-imposed Targets

In consolidated environmental management, a core issue has been local action taken by overseas DENSO companies to prevent global warming. We have been urging these companies to set targets appropriate to local and national conditions. In fiscal 2003, DENSO Group companies in the ASEAN and China region decided on a reduction target of 5 percent to 10 percent by fiscal 2010. Environmental analysis was carried out at DENSO Manufacturing Athens Tennessee, Inc. (DMAT) and DENSO Manufacturing Tennessee, Inc. (DMTN) in December 2003. It included a search for leaks. About 1,400 instances were subsequently included in guidance for improvement.

■Overseas Regional CO_2 Emission Targets

(Index value compared with fiscal 2000 results)

Region	Target	Year target set
North America	Reduce 5% by fiscal 2010	Fiscal 2002
European Union	Reduce 10% by fiscal 2010	Fiscal 2002
Australia	Reduce 5% by fiscal 2010	Fiscal 2002
ASEAN and China	Reduce 5% to 10% by fiscal 2010	Fiscal 2002

Column

Biotope Power Supplied by Solar Generation

At the Takatana Plant in Anjo City, Aichi prefecture, employee volunteers, working with elementary schoolchildren, have completed a biotope. Carried out in such a way that anyone was welcome to come and see what was happening, the project involved land adjacent to the factory site. Here, they constructed a pond and promenade alongside a stream, which also features a water wheel. Solar generation provides the power for the pumps that circulate purified factory wastewater into the pond, and for the LED illumination of the paths at night. The project was officially completed in April 2004, and the stream stocked with chub, killifish and firefly larvae.

Illumination using light-emitting diodes

The stream running through the biotope

Case Study

Special Task Force to Provide Commercially Viable Energy-conservation Technology and Expertise

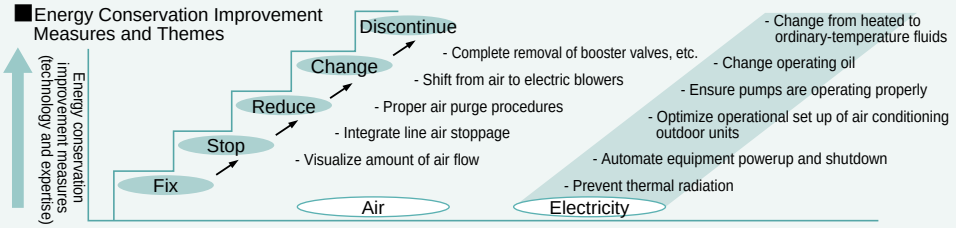
DENSO MTEC Corporation

Using DENSO expertise to contribute to energy conservation inside and outside the DENSO Group

In 2002, by providing services that ranged from energy-conservation diagnosis to improvement work, DENSO MTEC Corporation sought to broaden its area of expertise and become a fully fledged Eco business. On staff are a number of seasoned technicians who have built their expertise and reputation in a number of prizewinning projects. One of these, involving the DENSO Gasoline Injector Manufacturing Department, won a Minister of Economy, Trade and Industry award in 2001. In the citation he was lauded for "seeking out and treating underlying problems with the same care as the best physicians, and for cutting costs by thoroughly rooting out and curing every source of loss, whether large or small."

In an example from fiscal 2003, MTEC diagnosed air leaks in the DENSO Manufacturing Tennessee (DMTN) plant, resulting in great savings. Outside the group, MTEC took on a commission to cut losses from the compressed-air system of a major motorcycle manufacturer. Inside and outside the DENSO Group, the company has been consulted on various energy-saving issues, and we are confident that MTEC will continue making a difference in an ever-widening field of activities.

■Energy Conservation Improvement Measures and Themes



■Typical Consulting Services Provided by the Eco Business Group

Actual improvement
- Do utmost to seek out and repair leakage
- Rigorously minimize air flow

Transfer procedural skills
- Initially train in air system maintenance and repair skills
- Teach ways of getting most efficient air blow

Consolidation of routine procedures
- Seek to build energy-monitoring systems
- Move from conservation to proper control (reflected in new installation design and equipment)

Factory air diagnosis by the Eco business group

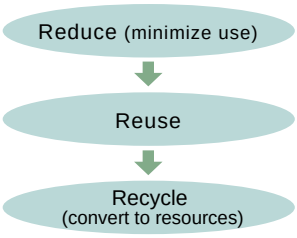
Promoting Resource Conservation

Our "3R" activities reduce resource consumption and achieve zero emissions of landfill waste.

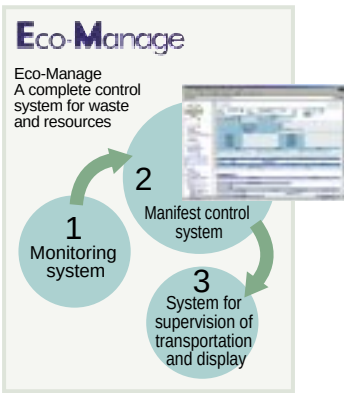
Progress in fiscal 2003 towards reducing resource losses and achieving zero emissions at group companies.

Fiscal 2003 targets	Fiscal 2003 results
1. Implement zero emissions at group companies. - Japan: Zero emissions achieved by all group companies. - Overseas: Model action suitable to locality. 2. Implement action to cut resource loss at all companies. Reduction target: over 800 t	1. Implemented at all 18 domestic plants and at 3 overseas bases (DENSO Taiwan Corp. [DNTW], DENSO Haryana Pvt. Ltd. [DNHA], DENSO India Ltd. [DNIN]). 2. Total consolidated reduction of 1,700 t.

■Reducing Overall Waste Tonnage (Encouraging 3R)



Area	Product design	Process design	Production
Method	Design to minimize waste output	Resource-conserving fabrication technologies	Improvements in the production line
Issues	- Material selection - Optimized product shape	- Fabrication method selection - Optimized process conditions	- Reduced number of defects - Elimination of waste



Rolling Out Resource Conservation Activities

We achieved zero emissions* at all 14 of our domestic locations in September 2002, reaching our EcoVision 2005 target a year ahead of schedule. Now, having cut waste, we are focusing our efforts to minimize resource consumption on more efficient use of resources.

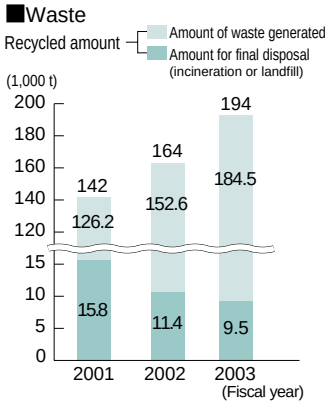
In March 2003, the Environmental Committee set a new target for the whole company: reduce waste oil and waste chemicals to 10 percent below the fiscal 2000 level. The committee identified 240 points where extended life or reduced usage could reduce waste, and formulated a plan to save a total of 3,400 tons of materials. During fiscal 2003, we used 1,700 tons less.

We also took a close look at ways to save metal and plastic, especially during casting and forming. Now we are moving forward with technology for processing with minimized raw material input.

A major control tool for setting targets and monitoring progress was developed in house: collecting data and displaying information, our Eco-Manage system analyzes the balance of material input and waste output. We also record effective practical measures in a database of case studies.

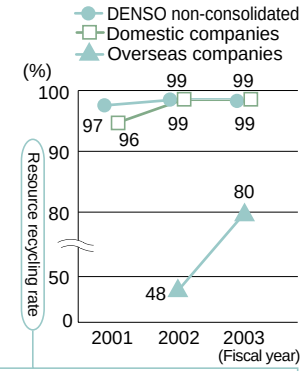
* The DENSO definition of "zero emissions":
- No landfill wastes, representing 100% recycling
- Scope: All industrial and general wastes
- Application range: Direct and indirect landfill

■Waste



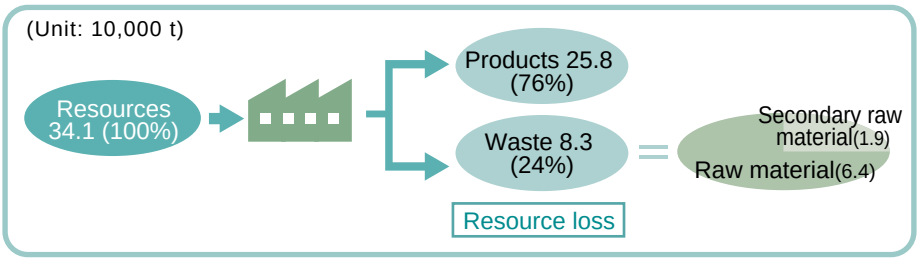
* Amount of waste generated: Fiscal 2001 data does not include overseas companies. Fiscal 2002 and 2003 figures show consolidated data including DENSO, domestic and overseas group companies.

■Trends in the Resource Recycling Rate

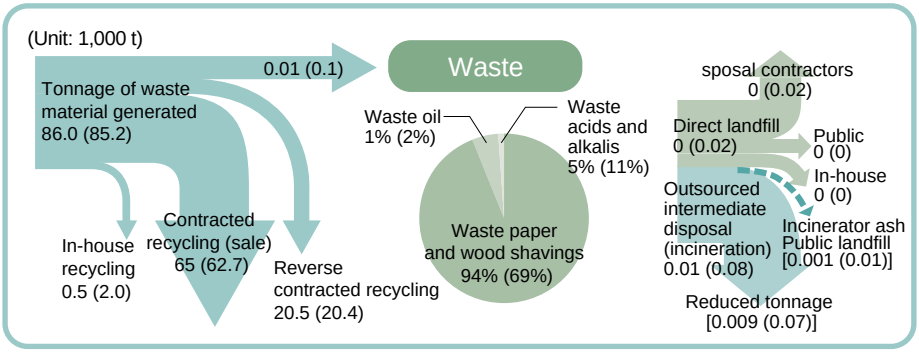


reverse contracting recycling + in-house recycling + contracted recycling / waste + reverse contracting + no cost + contracting recycling X 100

■Breakdown of Resource Loss (Non-consolidated)



■Progress in Waste-product Processing (Non-consolidated)　( ) fiscal 2002 value [ ] estimate



■Example of Reduced Resource Consumption

Machine-tool Cutting Oil Recycled By Purification Equipment

Fluid is recycled through vehicle-mounted cleaning equipment. Rather than being replaced, spent oil and chemicals are recovered and reused. This fluid recycling is carried out in two business groups, cutting resource input by 600 tons.

Machine tools, etc. (machining center)

Purification equipment mounted on a vehicle

Purification - recycling

■Achievement of Zero Emissions by Domestic Manufacturing Companies

Field	Fiscal 2002	Fiscal 2003
Powertrain mechanism	Hamanako DENSO DENSO Trim Kyosan Denki	Daishinseiki DENSO Preas
Electrical Systems	DENSO Remani	DENSO Katsuyama Nihon Pakkin Electronics Systems
Electronics Systems	DENSO Taiyo Techma	Techma JECO
Thermal Systems		DENSO Airs DENSO Kiko GAC Sankyo Radiator
Others	ASMO	Dens Elecs
Total	7 companies	11 companies

Observation at a group company during zero emissions discussion group meeting

All Domestic Companies Achieve Zero Emissions

For our group manufacturing companies in Japan, DENSO EcoVision 2005 set the target of achieving zero emissions by fiscal 2005. All 18 companies achieved this goal at least two years ahead of schedule: seven by fiscal 2002 and the remaining 11 by fiscal 2003. Now the companies are determined to continue minimizing consumption through rigorously efficient use of resources. This is promoted within DENSO by Minimizing Resource Depletion Discussion Meetings, in which information is exchanged and advice offered.

Three Overseas Companies Achieve Zero Emissions

Waste reduction is also a priority in DENSO's overseas companies. They are dealing with the issues according to local laws, the state of the company's capital equipment, the cost of processing, and other particular conditions. Proceeding in this way, DENSO Manufacturing Hungary Ltd. (DMHU) achieved zero emissions in fiscal 2002. DENSO Taiwan Corp. (DNTW), along with DENSO Haryana Pvt. Ltd. (DNHA) and DENSO India Ltd. (DNIN), followed in fiscal 2003. These three overseas bases are just the beginning. Working under local conditions, each overseas base is striving ever harder to accomplish zero emissions.

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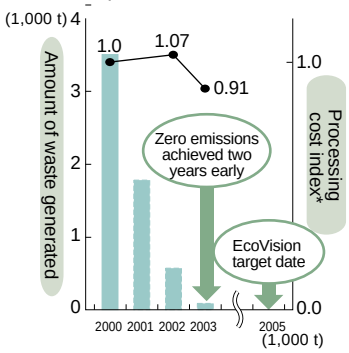
■Waste Generation and Cost of Processing for Domestic Companies



* Value of 1 set for fiscal 2000, before zero emissions

■Overseas Progress in Zero Emissions

Model		Target date	Result
Name of site	Location		
DMTN	U.S.A.	Feasibility study underway	
DMHU	Hungary	July 2003	Achieved (March 2003)
DMTW	Taiwan	March 2004	Achieved (October 2003)
DMKI	India	June 2004	Working towards target
DMHA	India	March 2004	Achieved (December 2003)
DMIN*	India	December 2003	Achieved (December 2003)

* Not included in model

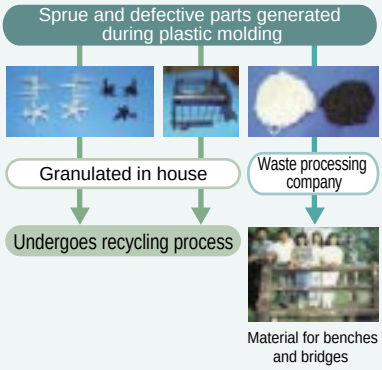
Activity Introduction

Waste: "See it, know what it is, then do something about it." DNTW (Taiwan)

DENSO Taiwan Corporation

DNTW makes and sells electrical components, radiators, air conditioners and other items. In 2000, DNTW started on the road to zero emissions by reducing the amount of packaging. To exclude all but the essentials, as a preparatory step all waste materials were brought to a single place so that everyone could "see it, know what it is, then do something about it." Awareness was also increased through "Environment News," a monthly newsletter. Waste was classified into 32 categories, and recycling began with shredding and recycling the plastic waste from the forming process, reconstituting waste cutting oil into fuel oil and collecting and recycling the residue from coating processes. The zero emissions target was achieved October 2003.

Li Tsunghung,
Safety and Environment Section



Material for benches and bridges

Making a Space Where People can Share the "Fun of Reduction" DNHA (India)

DENSO Harayana Pvt. Ltd.

In India there are few industrial resources and recycling flourishes. At DNHA, which makes fuel pumps, injectors and other products, even in the period leading up to becoming operational, they were recycling packing materials into things such as fittings. From there, they set up a Creative Idea Area (CIA) as a place in which people could share the fun of developing ideas for improving the factory. For example, to encourage action, there is a notice board showing the cost difference between using recycled resources and buying new. In the end, they even set up a product line that uses waste materials. As a result of these efforts, the company achieved zero emissions in December 2003.

Safety and Environment Supervisor Delraj Kohl

CIA: A place for working out how to practically apply ideas

Made from waste materials: machine for checking the mix of similar parts

Production line using pipe, sheet metal, cardboard and other waste materials

Managing and Reducing Substances with Environmental Impact

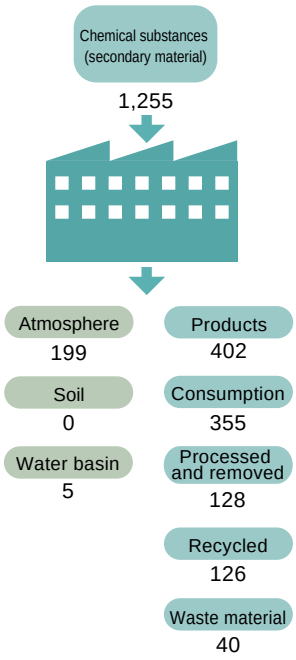
We are making progress with stringent control and steady reduction in the use of controlled chemical substances.

In fiscal 2003, DENSO reduced the use of environmentally hazardous substances through use of substitute materials and other means.

Fiscal 2003 target	Fiscal 2003 results
1. Reduce emissions of PRTR substances by 34% against fiscal 1998.	1. Reduced by 67%.
2. Emissions of VOC Reduce emissions by 38% against fiscal 1998.	2. Reduced by 70%.

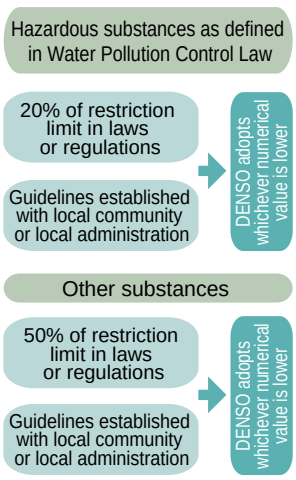
■Flow of PRTR-listed Substances

(Unit: t/year)



Note: Domestic DENSO Group companies

■Self-imposed Water Quality Standards



Achieving Goals Through Technologies

Hazardous substances contained in products and materials, and those used during production processes, are managed on an integrated basis using DENSO's MaCAS system.

Our goal calls for a reduction in emissions of PRTR-listed substances of 30 percent of fiscal 1998 levels by fiscal 2005, coupled with zero emissions for five hazardous substances (hexavalent chrome, lead, cyanide, and their compounds, formaldehyde and tetrachloroethylene). The reduction goal for volatile organic compound (VOC) emissions such as toluene and xylene, both widely used in painting processes, is a 50 percent reduction from fiscal 1998 levels by fiscal 2005.

In fiscal 2003, as shown in the chart at right, emissions reached 120 tons for the year, resulting in a 67 percent reduction, considerably better than our original target. Toluene and xylene emissions were reduced by 70 percent, achieving our targets for the fiscal year.

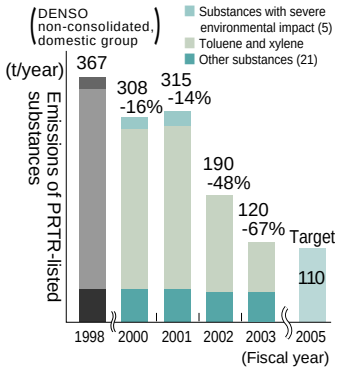
Water Management

One key part of DENSO's environmental activity is our effort to prevent pollution by switching to substitute materials, or cleansing wastewater of substances with environmental impact, and reusing the water instead of discharging it to rivers. As the chart on the left shows, we actually set standards that are tougher than national or local regulations. DENSO also is reducing the amount of chemicals used and finding substitutes to reduce the amount of nitrogen and phosphorous released. Excess nitrogen and phosphorous lead to eutrophication, which can severely damage the local environment.

Atmospheric Management

Plant emissions are controlled through three key measures: 1) improving fuels and combustion techniques which generate pollutants, 2) reducing the amount of materials used with environmental impact, and 3) improving performance capacity of filters and other equipment. Along with a rapid production increase in fiscal 2003, atmospheric emissions increased. Consequently, the sulfur oxides (SOx) and fly ash discharged from boilers, melting furnaces, and other equipment are being reduced through the switch from fuel oil to natural gas and low-sulfur fuels, and installing new particle collectors.

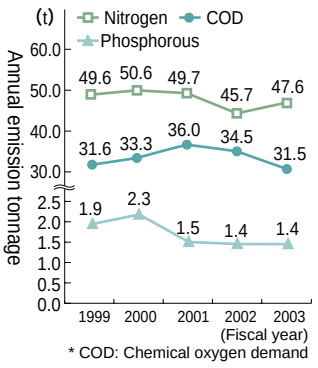
■Reductions of PRTR-listed Substances



■Technologies Used in Reducing Chemical Substances

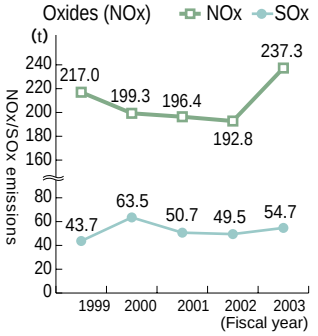
Substance used	Xylene	Toluene, xylene
Usage	Electronic circuit boards for engines, airbags, ECUs, etc.	Coating on aluminum heat exchangers
Reason for use	To prevent circuit faults caused by humidity and condensation	Improved durability
Substitute or reduction technology	Improved coating methods	Changeover from solvent-based coating to recyclable powder-based coating

■COD* and Nitrogen and Phosphorous Containding Wastewater

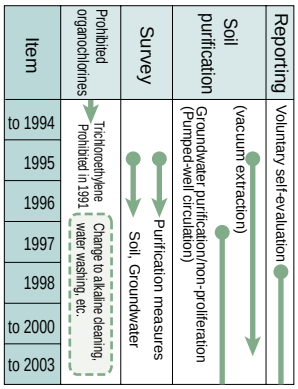


* COD: Chemical oxygen demand

■Sulfur Oxides (SOx) and Nitrogen Oxides (NOx)



■Status



Soil and Groundwater Purification Report

Soil purification measures begun at headquarters and the Ikeda, Anjo and Nishio plants since end of 1995 were completed in fiscal 2001. In addition to the pumping aeration of groundwater, we have also been using the permeable groundwater-purification wall method.
Measurements in fiscal 2003 showed that levels of trichloroethylene (including dissolved cis-1,2 dichloroethylene) exceeded environmental standards (as indicated in the table on the right) while levels of trichloroethylene were acceptable. We reported the measurement results and purification measures to the appropriate government agencies, and discussions are continuing with local communities involved.

■Fiscal 2003 Trichloroethylene Measurement Data

Environmental standard: below 0.03

Plant	Groundwater concentration at site (mg/l)	Current Status
Headquarters	Less than 0.002 2.106	Cleanup in progress
Ikeda Plant	Less than 0.002 0.548	Cleanup in progress
Anjo Plant	Less than 0.002 1.236	Cleanup in progress
Nishio Plant	Less than 0.002 0.625	Cleanup in progress

Notes:
Measurements made at all plants and business locations.
Measurable levels detected only at above-listed plants.

Administration Department Activities

Going Paperless

We reached our targets for critical items in fiscal 2003.

Fiscal 2003 target	Fiscal 2003 results
1. Keep level to less than that of previous year (less than the total 149,600,000 sheets purchased in the previous year)	1. Level below that of the previous year (total annual purchase: 129,700,000 sheets)

Waste-separation poster

Inspection and guidance by environmental promotion officers

In both the production and administration departments the goals are to create a paperless corporate culture by performing administrative tasks entirely by computer. To support zero emissions, we enforce separation of office waste, and always switch off unattended computers. Each workplace also has an environmental promotion officer who carries out checks and provides guidance.

Energy conservation checklist

Activity Introduction

Electronics Eng.Dept.

See, Become Aware, and Take Part By Visiting the Easy-to-Understand Website

Using the knowledge gained from a university post-graduate correspondence course, information is circulated around the division in an easy-to-understand form.

In the electronics technology division, the results of environmental activities are displayed on special environmental pages of the section's website. The editorial policy for the interactive pages is to be "accessible and enjoyable." At the launch of the site, environmental promotion officer Kumiyo Ikebe was determined to change a common perception that the environment is a "difficult" subject. To gain a proper understanding of the subject, she chosed to take a post-graduate correspondence course in environmental management
She began by inviting employees to suggest a familiar name for the website. Meanwhile, she distributed stickers urging people to turn off their computers before leaving their workstations, and posted the findings of her energy conservation patrols. At the same time, she developed materials that were useful for educating new recruits about DENSO's approach to environmental issues. The tool that she created is now an indispensable aid to the 600 employees in her division.

Kumiyo Ikebe,
Prototype Group,
Electronics Eng.Dept.2

The name "Ecology Island" was chosen after employees were invited to name the website.

Clear analysis and presentation of energy conservation check results provide motivation for improvement.

Winning entries of the environment poster competition are displayed at recycling stations.

A glossary makes it easy to look up specialized environmental terms.

Stickers remind people to switch off computers before leaving their workstation had an immediate effect.

Logistics

Using less energy for transport and making advances in resource recycling

In fiscal 2003 we jointly developed a plastic container with superior recycling characteristics.

Fiscal 2003 targets	Fiscal 2003 results
1. Stabilize at or below level of fiscal 2002. Annual target: below 43,300 t-CO_2	1. Transportation CO_2 emissions: 46,800 t-CO_2
2. Stabilize at or below level of fiscal 2002. Annual target: below 14,000 t	2. Tonnage of packaging material used: 14,000 t

■Improvement and Implementation

- ●Improved loading efficiency
- ●Review of packaging
- ●Simplified packaging
- ●Change in materials

↓

- ●Even simpler packaging
- ●Returnable packaging

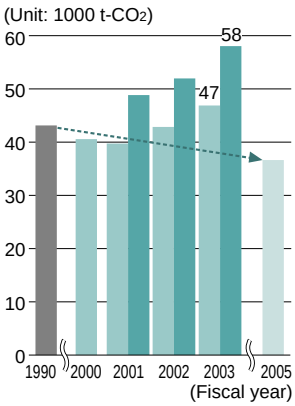
↓

- ●Global standardization
- ●Support for improvement

Effective Groupwide Activities

DENSO products are delivered via truck, train and ship, both in Japan and overseas, to auto manufacturers and other customers, including dealers and parts companies. Here we work closely with our wholly owned logistics company DENSO LOGITEM Corp. to promote a reduction in CO_2 emissions by improving loading and transporting efficiency and reducing the use of packaging materials. Streamlining logistics is a common issue throughout the DENSO Group, and we strive for ongoing improvement.

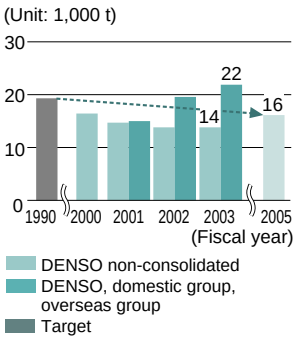
■CO_2 Emissions



Increased Shipments Led to Higher CO_2 Emissions

To reduce the environmental impact of CO_2 in logistics, we have established three key objectives: implementing a modal shift from trucking to railroad and water transportation, making joint shipments with other companies, and switching to lightweight plastic pallets to improve loading efficiency.
Due to the sharp rise in production volume for fiscal 2003, however, the volume of goods transported rose to 6.7 million cubic meters, an increase of 18 percent over the prior year. This overshadowed our efforts to improve efficiency and resulted in 46,800 t-CO_2 emissions in 2003, an increase of 8.1 percent over the prior year. To improve efficiency during the current fiscal year, we will strengthen measures to achieve our three key objectives.

■Use of Packaging Materials



■How Recyclable Containers Are Made


Shredding of end-of-life containers

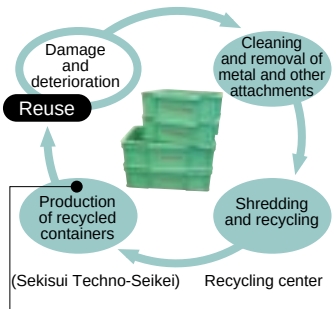

Sandwich molding


Resulting recycled containers

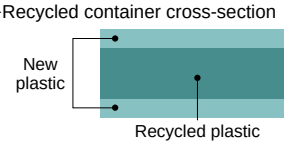
Jointly Developing Recyclable Containers

To reduce packaging materials, we have improved the designs and quantities of packaging for prepackaged items delivered to auto manufacturers, and implemented a phased changeover to collapsible returnable cardboard cartons at overseas sites. As a result, packaging material use was 14,000 tons, about the same as the prior year, and a 30 percent reduction from fiscal 1995.
Recently, we have been tackling the material recycling of plastic containers. In the past, when plastic containers reached end of life due to deterioration and damage, they were thermally recycled, mainly as blast furnace reducer. From the viewpoint of material circulation, however, it is preferable to recycle. Consequently, in cooperation with Sekisui Chemical Co., Ltd. and other companies, we took advantage of the recovery system for end-of-life containers and developed new recycling technology to make containers. Since fiscal 2003 these containers have been in use in the main plants and group companies such as HAMANAKO DENSO, ASMO, and TECHMA Corp.

Material Recycling for End-of-life Containers



Recycled container cross-section



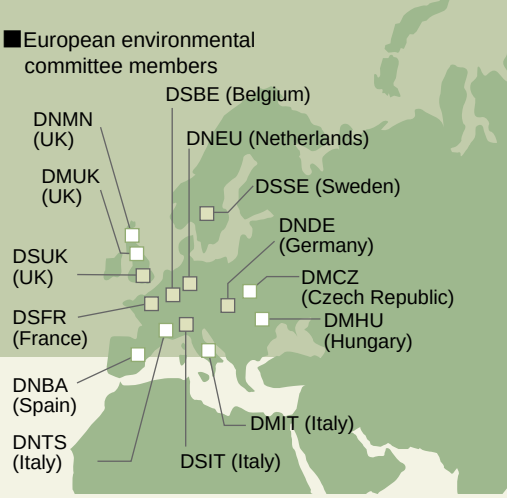
Sandwich molding should lead to energy savings and reduced costs by using recycled materials from shredded end-of-life containers.

*1 Returnable: Used repeatedly.
*2 Thermal recycling: Using material to create heat energy during incineration.

Global Highlights

Here we report on the annual activities of the DENSO Group Overseas Regional Environmental Committees, which have been established all over the world. These reports appear in the order in which the committees were established.

■European environmental committee members



□ Manufacturing companies
▨ Non-manufacturing companies

Activities of the European Environmental Committee

To provide a regional model for dealing with the environment, the committee is strengthening its organization and promoting effective methods derived from case studies.

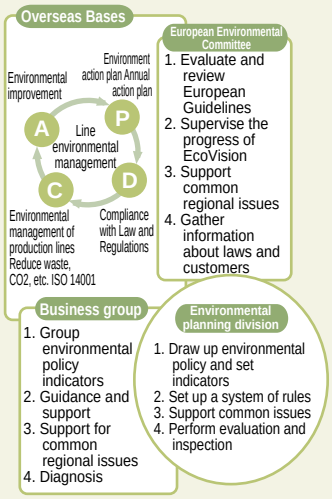
We reviewed fiscal 2003 European guidelines and promoted our zero-emissions activities.

European environmental committee members

■Accomplishments of European Group Companies in Fiscal 2003

Local subsidiary	取り組み成果
DNEU (Netherlands)	Acquired ISO 14001 certification
DNBA (Spain)	Published Environmental report (4th edition)
DMHU (Hungary)	Achieved zero-emissions Awarded environmental prize, etc.

■Links Between the Head Office with Overseas Bases and the European Environmental Committee



Strengthening the System for Environmental Improvement

Through consolidated environmental management, overseas production and sales companies are encouraged to carry out measures that match local circumstances. Accordingly, the DENSO Environmental Committee has established four DENSO Group Overseas Regional Environmental Committees in North America, Europe, the ASEAN region, and Australia.

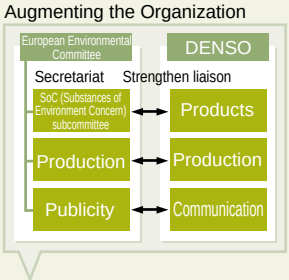
The membership of one of these, the European Environmental Committee, comprises seven manufacturing and seven non-manufacturing companies. Each company has been developing ways to deal with environmental issues as set forth in DENSO EcoVision 2005. Steady progress is evident in results such as the achievement of zero emissions and publication of environmental reports.

In fiscal 2003, we formulated a plan to encourage general adoption of the lessons learned from individual successes by presenting them to all of our global concerns as strategic model cases. The 2001 European Guidelines cover reduction of environmentally hazardous substances, meeting the challenge of zero emissions, sales company operations and strengthening of publicity activities. We reviewed the guidelines and set up a new special group to promote these activities.

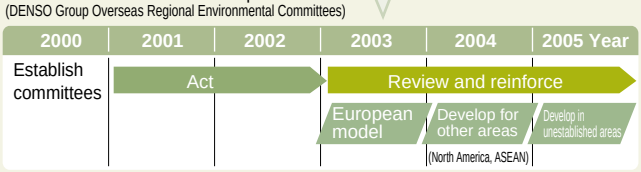
Training Sessions Promoting Effective Zero Emissions Activities

All over the world there is a growing movement to create a society geared to recycling, resulting in widespread effort to reduce the generation of garbage and promote recycling. Against this background, we are moving more quickly to achieve zero emissions — a high priority for the DENSO group. In July 2003, the 16 zero-emissions promotions officers from DENSO manufacturing companies in Europe took part in a training seminar held at DNMN (UK), one of our model plants. The sessions included a briefing on current developments in Japan, effective methods of promotion and simulation training.

Augmenting the Organization



DENSO EcoVision 2005 Development Plan
(DENSO Group Overseas Regional Environmental Committees)



Aggressive Development of Advanced Activities

To maintain a balance between economy, society and environment, Europe has proposed advanced regulations such as environmental ISO, the EU end-of-life vehicle directive, and material and chemical assessment. To plan sustainable activities in such a region, we must implement advanced environmental practices. Here DENSO has an excellent track record and expertise. Our current goal is effective development linked with DENSO EcoVision 2005.

Michio Fukuzaki,
President
DENSO Europe (DNEU)

Zero-emissions study group at European manufacturing subsidiary (DNMN)

Making Sustainability the Central Issue in Socially Acceptable Factories

Progressing toward a manufacturing society that balances social, economic, and environmental imperatives.

Comprehensive approach in fiscal 2003 - results recognized with the award of several prizes

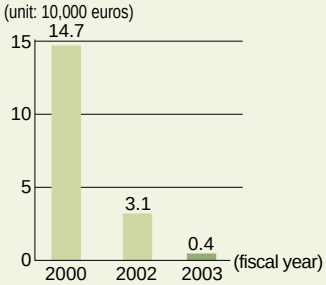
DMHU

DENSO MANUFACTURING HUNGARY LTD.

Main products: Diesel injection pumps, exhaust valve system products
Established: 1997. No. Employees: 1,905. Ratio of ownership: 100%

Rigorous management of waste separation

■Progress in Reduction of Cost of Waste Processing



Introducing the activities of DMHU as part of the environmental education curriculum at high schools and universities

An Enterprise Making Products that Embody Care for the Environment

Owing to its production of the common-rail system, which greatly reduces harmful emissions of diesel-fueled vehicles, in the automotive industry DMHU has been attracting attention for its environmental contributions. As the center of attention, pursuing the goals of DENSO EcoVision 2005, the company is going forward by tackling important issues such as energy conservation, reduction of the amount of water used, and zero emissions.

In particular, remarkable progress has been made in the effective use of resources. Fired with the determination to reduce waste and cut the cost of waste processing, we achieved our targets in four areas: recycling of metals, plastics and paper; distillation and reuse of cleaning fluids; reuse of hazardous waste; and zero emissions of landfill waste.

Education and Training the Main Force in Reducing Environmental Impact

The main force that drives our activities is education and training. Although the idea of separating waste was a novel idea in Hungarian factories, by carrying out inspections throughout the year to check how well separating waste was understood and being handled, the supervisors made the significance apparent to employees and raised the level of awareness. Soon employees were coming up with their own ideas. In two and half years, as a result of ideas such as the collection and reuse of cutting oil, conversion of waste oil to fuel oil, digestion of sludge by bacteria in the soil, composting of cafeteria waste, waste was cut by 75%. The cost of processing waste was reduced to one fortieth, dropping from 147,000 euros to 40,000 euros. Then, in March 2003, DMHU became the first overseas base of DENSO to achieve zero emissions. Our efforts were applied across the spectrum of environmental activities, and other good results were also achieved, including a 35% reduction in CO_2 emissions in fiscal 2003, a 40%reduction in water usage, and 30% reduction in the reuse of packing materials.

Meeting Expectations as a DENSO Core Facility

In Europe, the diesel engine is viewed as environmentally friendly and is popular. In the production of this main product, DMHU aims to act as a company that places emphasis on social, economic, and environmental issues. Especially with regard to the environment, as a core facility of DENSO in Europe, we are determined to go forward by reducing social costs and increasing environmental value.

Yukimasa Ooka, President
DENSO Manufacturing Hungry

Achieved high evaluation in fiscal 2004 sustainability report

Topics

High Evaluation from EU for Our Handling of Environmental Issues

To give society the benefit of the expertise and experience of the employees of DMHU, on a monthly basis, Safety, Environment and Health delegates are sent to high schools and universities to present our activities as part of the environmental education curriculum. In addition, we actively publicize our environmental activities by annually producing a sustainability report. Our efforts were recognized in fiscal 2003 with awards: Hungary Environmental Prize (sponsored by Hungary Business Leader Forum) and Central Europe Environmental Report Prize (same sponsor, endowed by Deloitte Touche LLP). On top of that, in June 2004 we were presented with a European Business Award for the Environment (management section) from the European Commission. This prize recognizes, among all the companies in the EU, remarkable contributions to economic and social development that do not cause environmental damage. It was the first such award to a company from the automotive sector.

European Business Award for the Environment Award ceremony (June 2004)

Central Europe Environmental Report Prize ceremony (October 2003)

Committed to Protecting Water and Land in Tennessee

Determined to contribute as an enterprise rooted in the local community, the company strives to minimize environmental impact.

In fiscal 2003, we achieved the most rigorous anti-pollution targets requested by the State of Tennessee.

DMTN
DENSO MANUFACTURING TENNESSEE,INC

Main products: Electrical components, automotive electronic parts
Established: 1988. No. Employees: 2,161. Ratio of ownership: 100%

DMAT
DENSO MANUFACTURING ATHENS TENNESSEE,INC

Main products: Injectors, oxygen sensors, stick coils
Established: 2003. No. Employees: 895. Ratio of ownership: 100%

Sludge, collected and stored in the plant, is efficiently processed

■Results of Activities at DNMT and DMAT

Major item	Results
Water consumption, wastewater	Annual usage reduced to 30 million liters
Power consumption	Annual consumption reduced to 1.4 million kW
Waste	Annual amount reduced to 588 t (hazardous waste, wastewater and sludge, cardboard, etc.)

Actively participating in local environmental protection activity (Received award from Little River Valley Association)

Based on EcoVision 2005 - Preventing Pollution of Water and Soil

Based on EcoVision 2005 and implementing an environmental management system, DMTN and DMAT are promoting reuse and recycling and have made prevention of pollution and control of emissions top priorities. We have taken particular care in the preservation soil and water quality. For example, when the new DMAT plant was built, we constructed a new regulating reservoir to prevent rapid wastewater outflow and maintain natural water-holding capacity. In fiscal 2003, as well as purifying 81 tons of wastewater, we also fitted monitoring equipment to optimize the amount of water used for washing cold forged parts.

Large Reduction in Landfill Waste

Because landfill disposal is comparatively inexpensive and the generation of dioxin during incineration is a sensitive issue in the United States, much waste ends up in landfills. DMTN and DMAT, however, are actively working toward reducing landfill waste. Although the manufacturing plants for alternators and starters initially used landfill disposal for sludge, including iron and zinc, in 2002 metal separation technology was adopted. This annually saves 223.4 tons of landfill waste. Meanwhile, the plants that make fuel-injection devices formerly used oil distillates for cleaning parts, which formerly accounted for 70% (6.5 t) of waste generated. In 2002, the plants started using a substitute cleaning liquid that, while reducing waste, contains no harmful substances.

Rationalization of Logistics Leads to Radical Reduction in Exhaust Gases

Growing awareness of issues surrounding nitrogen oxides (NOx) and carbon dioxide (CO_2) led us to completely rethink logistics. As a result of progress made in consolidating the bases for distribution, the journey mileage of our trucks has been reduced by 10 million miles, thus enabling an annual reduction of 77 tons of NOx and 66 tons of CO_2. Meanwhile, at the plants there are many compressors in use. By preventing air leaks and other measures, annual power consumption has been reduced by 1.4 million kW.

These measures have enabled the plants to achieve the highest environmental performance standards set by the State of Tennessee and, moreover, merited recognition as top-honored performer in the TP3 (Tennessee Pollution Prevention Partnership), a recognition scheme for overall environmental performance.

Company operations are rooted in consideration for environment protection, social contribution means a lot to us.

In its overseas operations Denso places high priority on meeting community expectations by learning from the local people, and blending in. In Tennessee, our social commitment involves protecting the beautiful natural environment while making an economic contribution. Our recent TP3 citation has let us know that our thinking is on the right track and we are delighted to receive this recognition of our efforts.

Kunitaka Ozeki CEO (then current), DENSO MANUFACTURING TENNESSEE, INC.

Conditions for TP3 Tennessee Pollution Prevention Partnership Citation

1. Successful completion of all five pollution prevention projects dealing with specified issues
2. Publication of information about the content of the activities
3. Participation in community environmental protection activities
4. Provide success stories of use to others considering participation in TP3
5. Maintenance of stipulated environmental protection system after receipt of ISO 14001

Second company in the state to be recognized as honored performer in Tennessee Pollution Prevention Partnership (December 2003)

Data

Management

Companies Covered by Consolidated Environmental Management (As of March 31, 2004)

P. 1

Domestic -- Consolidated subsidiaries (excluding 40 indirect subsidiaries) ○indicates ISO 14001 certification

Domestic (40)	Manufacturing companies (18)		○ASMO CO., LTD.	○SANKYO RADIATOR CO., LTD.
			○ANDEN CO., LTD.	○DENSO ELECS CO., LTD.
			○GAC CORP.	○DENSO AIRS CORP.
			○HAMANAKODENSO CO., LTD.	○JECO CO., LTD.
			○KYOSANDENKI CO., LTD.	○TECHMA CORP.
			○DAISHINSEIKI CO., LTD.	○DENSOTRIM CO., LTD.
			○DENSO TAIYO CO., LTD.	○NIHON PAKKIN CO., LTD.
			○DENSO KIKO CO., LTD.	○DENSO PREAS CO., LTD.
			○DENSO KATSUYAMA CO., LTD.	○DENSO REMANI CORP.
	Non-manufacturing companies (22)	Sales companies (8)	DENSO HOKKAIDO CORP.	DENSO KANSAI CORP.
			DENSO TOHOKU CORP.	DENSO CHUGOKU CORP.
			DENSO TOKYO CORP.	DENSO SHIKOKU CORP.
			○DENSO CHUBU CORP.	DENSO KYUSHU CORP.
		Other companies (14)	DENSO E&TS TRAINING CENTER CORP.	DENSO LOGITEM CORP.
			DENSO KYUYO SERVICE CORP.	DENSO YUSEN TRAVEL CORP.
			DENSO FINANCE & ACCOUNTING CENTER CO., LTD.	IPICS CORP.
			DENSO ISM CORP.	DENSO INFORMATION TECHNOLOGY CORP.
			DENSO WAVE INC.	DENSO MTEC CORP.
			DENSO WELL CORP.	DENSO SQUARE CORP.
			DENSO UNITY SERVICE CORP.	EMC ENGINEERING SERVICE CORP.

Overseas -- The 50 top overseas consolidated subsidiaries (excluding indirect subsidiaries)
○indicates ISO 14001 certification

Europe (13)	Manufacturing companies (6)		○DNMN (UK)	○DMIT (Italy)
			○DMUK (UK)	○DNTS (Italy)
			○DNBA (Spain)	○DMHU (Hungary)
	Non-manufacturing companies (7)		○DNEU (Netherlands)	DSFR (France)
			DSUK (UK)	DSSE (Sweden)
			DNDE (Germany)	DSBE (Belgium)
			DSIT (Italy)	
Australia and Asia (23)	Manufacturing companies (14)		○AAA (Australia)	○DNHA (India)
			○DNTH (Thailand)	○DNKI (India)
			○DNIA (Indonesia)	○DNTW (Taiwan)
			○DNPE (Korea)	○CQD (China)
			○DNPS (Korea)	○TDE (China)
			○DNMY (Malaysia)	○TDA (China)
			○DNIN (India)	○PAC (Philippines)
	Non-manufacturing companies (9)		DISP (Singapore)	DICH (China)
			DIAS (Singapore)	DSKR (Korea)
			DSIU (Indonesia)	DSIN (India)
			DTTH (Thailand)	DIAU (Australia)
			DITH (Thailand)	
The Americas (14)	Manufacturing companies (12)		○DMMI (US)	○DMAT (US)
			○AIMS (US)	○DMCN (Canada)
			○DMTN (US)	○DNMX (Mexico)
			○TBDN (US)	○DNBR (Brazil)
			○AFCO (US)	○DNAZ (Brazil)
			○DWAM (US)	DNAR (Argentina)
	Non-manufacturing companies (2)		○DIAM (US)	○DSCA (US)

Social Report

Social Contribution Activities in Fiscal 2003

P. 29-30

■Support for the Physically Challenged

Operation of DENSO Taiyo (page 24)	Annual production of combination meters for light motor vehicles and related parts generate 4.5 billion yen in sales.
Six entrants in the Oita International Wheelchair Marathon.	Cooperation in running of event, company volunteers sent to perform duties, support for training.
Support for facilities for the physically challenged in the area of the business location	Subcontracting of work, support for sales of confectionery made at vocational facilities, etc.

■Nurtuting Youth

Support for the Young Inventors' Club	We sent presenters to and sponsored a special lecture at a local invention club attended by 64 elementary school children and a total of twelve presenters and instructors.
Display of mechanical objects	Thirteen works submitted to "Mulan," DENSO's idea contest, were put on display at events in four regions.
Family open-house day	Children of parents who work at DENSO were invited to come and see the workplace.

■Environmental Protection

Preservation of Kakitsubata Habitat (Kariya City, Aichi Prefecture)	Since 1996 company volunteers (89 in fiscal 2003) have been cutting vegetation around, and looking after viewing facilities for, the wild irises of the Kakitsubata Colony, designated a national natural treasure.
Preservation of the habitat of the Genji firefly (Nishio City, Aichi Prefecture)	Since 1995, in joint effort with the local preservation society, company volunteers (123 in fiscal 2003) have been cutting vegetation and tending the habitat of this endangered firefly.
Collection of used clothing	Working with an NPO, company volunteers (280 in fiscal 2003) have been collecting, sorting, and packing used clothing to send to recipients in Asia, Africa and South America. Clothing was picked up from 1,611 donators and funds of 2.31 million yen were raised.

■Social Contribution Activities at Overseas Bases in Fiscal 2003

Overseas base	Start year	Type of activity	Fiscal 2003 results
DMMI (USA)	1991	Campaign to raise funds for polio medication	About 100 volunteers raised $1,500
	1993	Providing basic education in business to local children	30 volunteers took part
	1994	Participation in food drive	500 volunteers distributed food
	1997	Providing toys for children	150 distributed toys
DMTN (US)	1990	Fundraising for social welfare group	$250,000 raised
	2002	Providing gift of 5 t of preserved food to local people	13 volunteers took part
DSCA (US)	1995	Making repairs to houses of less fortunate families (largest volunteer activity in the US)	25 volunteers took part
	1998	Campaign to raise funds for AIDS medication	25 volunteers took part and raised contribution of $2,000
	1996	Participation in Thanksgiving Day food drive	250 volunteers took part(in fiscal 2002)

Environmental Report

Fiscal 2003 Environmental Plan

P. 39

Cost of Environmental Protection

Of costs totaling approximately ¥24.7 billion, DENSO accounted for 88 percent (¥21.8 billion) and group companies for 12 percent (¥2.9 billion), an overall decrease of 13 percent from the previous term. The decrease was due to increased stability in operations by the domestic group, and reduced facilities spending.

Unit: 100 million yen

Item			DENSO		DENSO Group (domestic)		DENSO Group (overseas)	
Category and action item			Investment (captial equipment)	Expense	Investment (captial equipment)	Expense	Investment (captial equipment)	Expense
1.In business area	Reducing environmental impact from production and service activities	(1)Pollution prevention	0.42	0.12	1.85	2.12	1.65	0.76
		(2)Global environment	33.57		2.99	1.19	0.46	0.03
		(3)Resource recycling	4.27	10.44	0.28	2.47	0.23	3.65
2.Upstream and downstream production activities	Reducing up/downstream environmental impact from production and service activities		14.35	0.07	0.52	1.27	1.38	0.09
3.Management activities [environmental protection cost in management operations]				0.44		3.99	0.03	0.87
4.R&D			6.00	144.84	0.44	1.85		
5.Community activities				0.56		0.45		0.05
6.Environmental compensation costs			1.22	1.77		0.02		
7.Other costs						0.28		0.02
Total			59.83	158.24	6.08	13.64	3.75	5.47

Environmental Protection Effect

A total of approximately ¥6 billion was recorded as environmental effects with DENSO accounting for ¥3.6 billion (60 percent) and group companies for the remaining ¥2.4 billion (40 percent). The actual benefits, accruing from the promotion of zero emissions, were proceeds from the sale of recycled material wastes while presumed effects included increased public-relations effectiveness, website accesses and distribution of environment reports.

Unit: 100 million yen

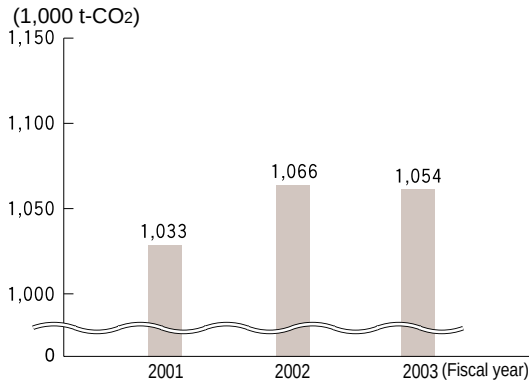
Category and action item			DENSO		DENSO Group (domestic)		DENSO Group (overseas)	
			Volume	Value of effect	Volume	Value of effect	Volume	Value of effect
Actual benefits	Revenues from business activities	Tonnage and value of recycled materials and wastes sold	65,003.30	18.46	49,380.60	12.58	17,816.90	7.41
	Reduced costs	Tonnage and value of CO_2 emission reductions through reduced energy consumption and conservation		16.25		1.61		0.78
		Reduction in tonnage of processed waste,through waste generation	81.6	0.13		0.31	2,190.60	0.07
		Reduction in paper consumption and purchasing cost; reduction in consumption of packaging and water through Eco Packaging and new packaging designs	79.6	0.40		0.34		0.10
		Difference in cost for virgin mateials due to use of recycled materials, etc.		0.03		0.08	68.1	0.03
Expense savings	Public relations, contribution to value-added content, etc.	Newspaper advertisements, website accesses, distribution of environmental reports, etc.		0.92		0.90		0.16
Total			—	36.19	—	15.82	—	8.55

Global Environmental Data

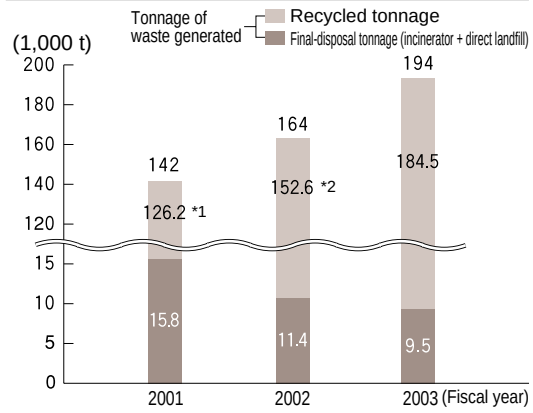
Consolidated (DENSO, domestic and overseas group companies)

URL For more data concerning each of the sites of business and information which subsidiaries are included in consolidated environmental accounting, please visit our website.

CO_2 Emissions

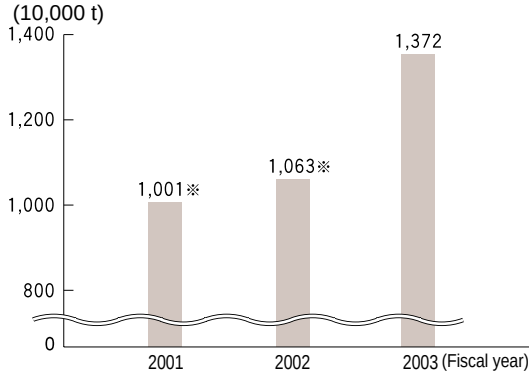


Waste



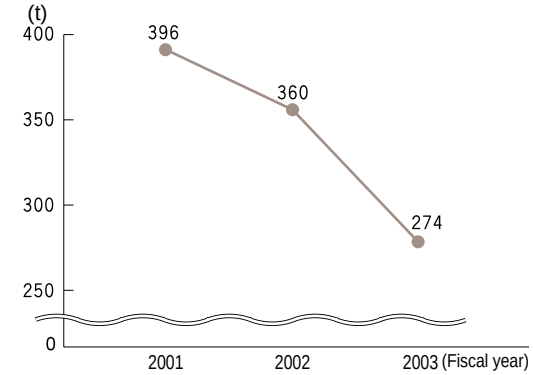
*1 Overseas group not included in recycled tonnage
*2 Some overseas group companies included in recycled tonnage

Water Consumption



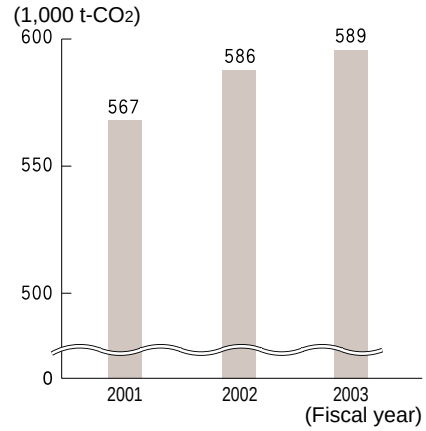
* Data does not include some overseas group companies

Tonnage Chemical Substance Emissions (total for toluene and xylene)

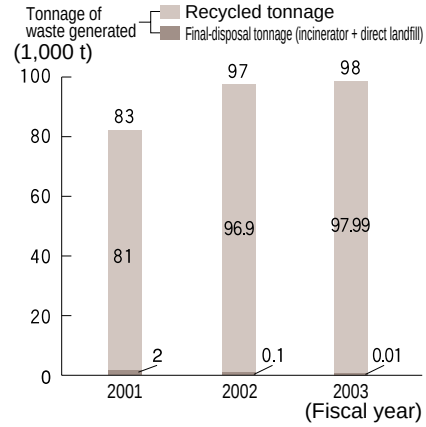


DENSO

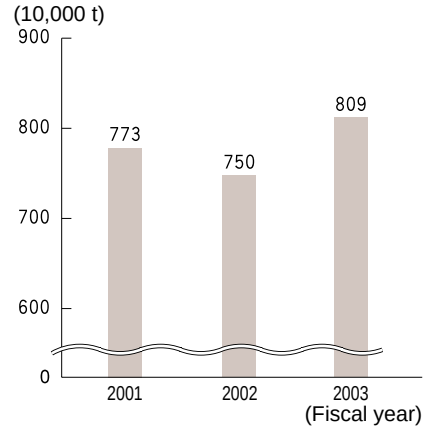
CO_2 Emissions



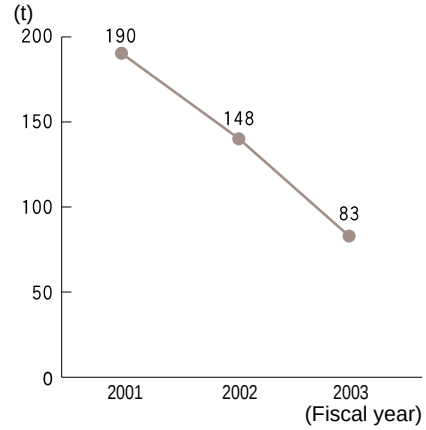
Waste



Water Consumption

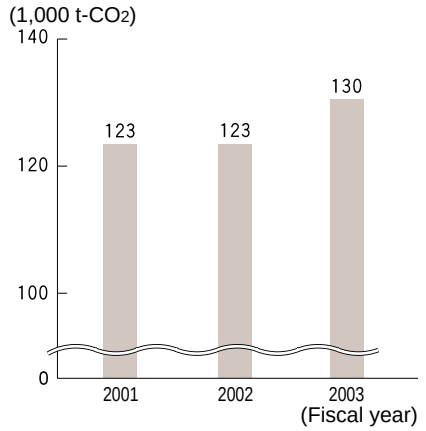


Tonnage Chemical Substance Emissions (total for toluene and xylene)

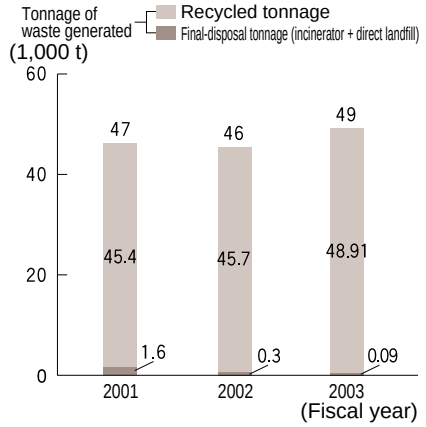


Domestic Group

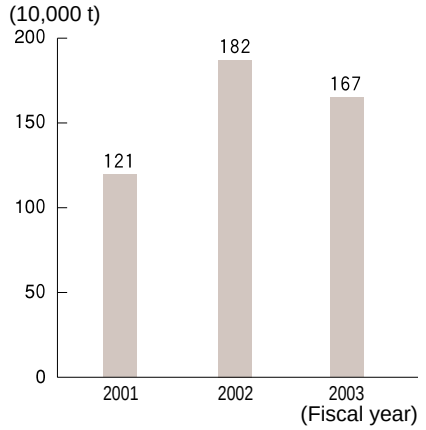
CO_2 Emissions



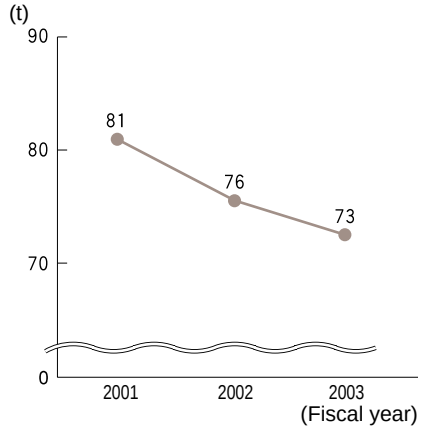
Waste



Water Consumption

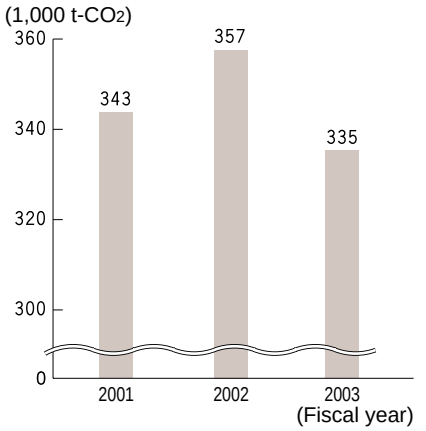


Tonnage Chemical Substance Emissions (total for toluene and xylene)

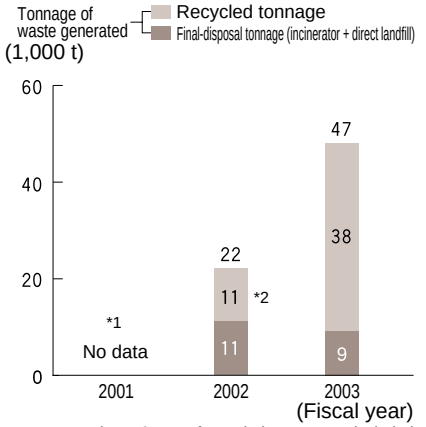


Overseas Group

CO_2 Emissions

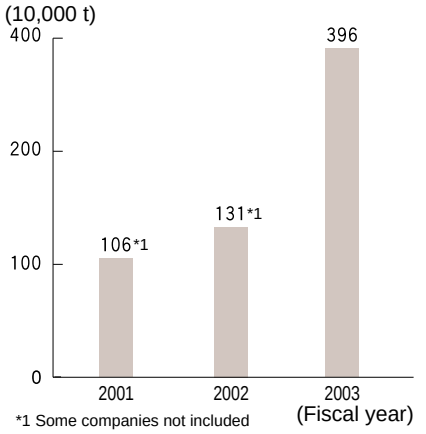


Waste



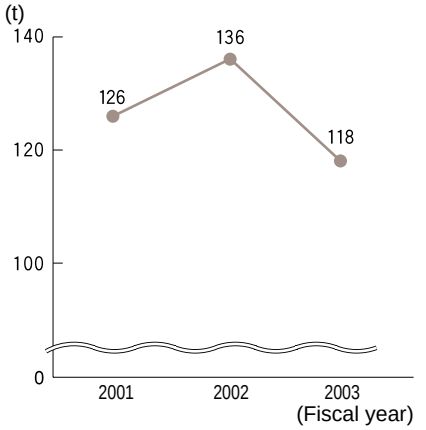
*1 No data *2 Part of recycled amount not included

Water Consumption



*1 Some companies not included

Tonnage Chemical Substance Emissions (total for toluene and xylene)



Stakeholder Opinions and DENSO's Response

We appreciate the valuable and helpful comments and suggestions that so many stakeholders took the trouble to provide in fiscal 2003, via such channels as third party comment, Open House 2003, and the Environmental and Social Report survey. We are taking the opportunity of the publication of the current report to show suggestions for improvement and how we intend to act on them. We still have a long way to go to deal with all points or to completely resolve every issue. Each managerial level and each division will continue to work in concert to reflect suggested improvements in our actions.

Area	Suggestions and opinions	DENSO's response	Relevant page
Community	Although I think it's an improvement change the title of the report from "Environmental" to "Environmental and Social," why not expand the vision to deal with corporate social responsibility (CSR)?	In 2002, we set up a CSR working group and are continuing activities such as inviting lecturers from outside and studying case studies of action taken at other companies.	2 11-13
	To increase the number of women and local employees from overseas companies in managerial and executive positions, you should do more than just give equal opportunities. It is also necessary to actively cultivate conditions for advancement.	We are going forward according to Active 21, a program to reform our personnel system. We recognize these points as important issues that have to be dealt with on an ongoing basis, and continuously seek ways to improve the system, awareness, and the work environment.	15 21-23
	With costs incurred by Open House 2003, do you think it was really worthwhile to elicit opinions from the outside?	We believe that frank and candid opinions expressed from the outside reveal things that are not apparent to us in-house and provide power for improvement.	29-30
	In the local discussion meetings held at individual plants, is anything besides environmental issues discussed?	Ways of easing traffic congestion during commuting are one example. In the city of Kariya, for example, we have been dealing with such matters as ensuring that our employees do not use streets which are used by school students, and for 20 years we have been carrying out adjustments, including staggering the timing of visits to neighboring companies.	30
Environment	Aren't there problems in the calculation procedures and application of the Eco Indicator (EI)?	On page 17 of the Environmental and Social Report 2003 we explained the details of calculation. We recognize that calculation accuracy is an ongoing issue.	39
	What about the aggregation methods and the state of application?	We follow the aggregation methods stipulated in the Environmental Accounting Guidelines set out by the Japanese Ministry of the Environment. In application, although we have confirmed the management effect of zero emissions, the results of calculations are not yet accurately reflected in management because estimations and suppositions are included in the calculation of effects.	39
	In the reports, the information for DENSO and group companies appears to be mixed in some places.	In fiscal 2003, we applied the principle of consolidated reporting. Although there are some exceptions, we began to deal overall with DENSO, the domestic group and the overseas group.	Individual articles
	Although there are various overseas environmental standards for consolidated group environmental management, why do you focus on ISO?	Although many enterprises in Europe have adopted EMAS, ISO is still currently mainstream and our company has adopted its procedures.	39-41
	I noticed a number of items for which there were no target values set in DENSO EcoVision 2005.	As we work towards drawing up our next vision, we are looking into this issue and intend to include as many items as we can feasibly give numerical targets to.	40
	We would like to know how plants are concretely (specific points) handling issues by disclosure of plant data.	In special articles and columns in this report, we have presented examples from domestic and overseas.	36.57.58
	What are your development targets for the general diffusion of CO2 car air conditioning?	We have reported on its development for fuel cell vehicles, but utilization and mass production for general vehicles is still at the stage of research and development.	—
	In life cycle assessment (LCA), which stage of product lifestyle has the greatest environmental impact, and what does the company spend on LCA, including research and development?	As a representative company of the Japan Auto Parts Industries Association, we have so far carried out LCA evaluation of 13 manufacturing products. We do not, however, have access to detailed data for assembly, use and disposal, because products are delivered to automobile makers. For the future, we are investigating the best way to aggregate our data with LCA data provided by the Japan Automobile Manufacturers Association.	47-48
	We would like to know where the environmental friendly parts are used. This would be easier to comprehend if a standard that consumers could understand were shown: for example, "You can reduce exhaust emissions by this much."	This is related to the LCA issues mentioned above. Because many auto parts are integrated with other parts and function in systems with other parts, it is difficult to calculate accurately how individual DENSO products ultimately contribute to exhaust emissions results. In some instances, however, such as in the Toyota Intelligent idling-stop system, it is possible to disclose reference data.	4.44
	In each product group, I would like you to continuously develop and launch products that have environmental performance (environmental best practice) indicated by a logo.	In fiscal 2003, the company developed and launched new products which have superior environmental performance, including ejector-cycle refrigeration and lithium ion batteries.	7-8 34 43-48
	Could you report in detail about those items that have not yet achieved set targets, including CO_2 reduction?	We have announced our newly established energy conserving production lines and the additional introduction of co-generation facilities.	49-50
	Were administrators and related staff able to get together to deal actively with reduction of CO_2 emissions, even in the face of increased volume of production?	The whole company has been wholeheartedly behind achieving the reduction targets for 2010, and are moving forward with the plan and introducing reinforcement measures.	36 49-50
	You say that you have achieved zero emissions, but how can you be sure that data is properly collected?	We strictly control the measurement of amounts processed and the selection of processing companies.	39.51-52
	Could you promote reuse and recycling by taking a broader view of the whole supply chain, not just zero landfill emissions, by getting back the packaging materials you use for protecting parts and products?	Along with making requests to suppliers, we have been working with them promoting continuous improvement, including joint development of recycling.	27.55
	When it comes to dealing with environmental issues, we would like to know how your company compares with other companies in the same industry and other enterprises in Europe.	We pay attention to trends in other companies that are the same line of business. We do not, however, carry out comparisons and use these in reports. Instead, we use this information for reference, and we at DENSO report our activities independently.	Individual articles
Overall	Even though the point of the report was to describe clearly the overall targets and results in such a way that they could be evaluated, in many places the content was difficult to understand, and the overall impression of information that was difficult to absorb.	In this report we have tried to address this issue by using easier expressions in more reader-friendly sentences. We have also used more pictures and charts. In the special items, we have tried to present information in a livelier style and from a different perspective.	Individual articles
	Rather than using technical data, wouldn't it be easier to understand DENSO's connection to society in the first half?	In the report, we have moved the social content to the first half.	—
	We would like to have more detailed instructions about how to access the website.	In this report, we improved the information to make access easier.	Individual articles
	Why don't you explain the technical terms in a glossary the end of the report?	We have provided brief explanations as "Glossary" items in the margin of relevant pages.	Individual articles

A Third Party Comment from an Environmental and Social Expert

This report not only introduces the company's commitment to the environment in detail, but also deals with its commitment to social responsibility and contributions to society. The company can be commended for reporting to a wide range of members of society.

Points to be valued

- The company constantly strives to improve the environmental performance of existing technology and products, for example, by improving the energy efficiency of refrigeration systems with an ejector cycle and improving the common-rail system by applying piezo technology.
- The company has made groupwide progress in dealing with zero emissions, and has achieved zero emissions in the domestic companies two years earlier than planned, while four overseas companies, including those in Hungary and India, where sorting is not commonly practiced.
- Along with energy conservation diagnosis and guidance for improvement with experts by DENSO MTEC Corp., energy efficiency has been improved by ECOFIT, which clarifies issues through a "Visualizing" system that acquires data from small process units.
- In reporting on personnel, rather than sticking to an explanation of the system, the company candidly presents actual results and issues. In particular, they have made concrete improvements with regard to the reduction of work load in the plants.
- he company has actively created opportunities for dialog by opening sites of business the general public, including hosting Open House 2003 meetings with local communities at each business location.

Further efforts desired on following points

- Continuing on from the last year, the company should work to further reduce carbon-dioxide emissions, and management and others involved should commit to reducing emissions in such a way as to accomplish "carbon-dioxide reduction that stays ahead of expanding production."
- As well as continuing the company's publicity effort through shops and mass media, by combining your technologies and skills to develop and introduce in each product group, I would like you to continuously develop and launch products that have environmental performance (environmental best practice) indicated by a mark.
- As an enterprise that will be active on a global scale even after 10 years from now, to increase the number of women and local employees from overseas companies in managerial and executive positions, you should do more than just give equal opportunities, it is also necessary to actively cultivate conditions for advancement.
- So that each person involved in handling materials, parts and products for the company, from the place gathering raw materials to maintenance plants, can continue to work under appropriate work conditions and in a sanitary environment, the company should actively deal with the improvement of human rights by taking into view entire supply chains.

Hideto DeDe Kawakita
CEO, International Institute for Human, Organization and Earth (IIHOE)

IIHOE was founded in 1994, for the democratic and balanced development for all the lives on the Earth. It supports non-profit organizations (NPOs) and corporate management oriented toward social responsibility.

From DENSO on the Evaluation

Continuing from last year, we requested an evaluation from an outside organization.
For four items, it has been recommended that we strive for improvement. As outlined on page 62, we will endeavor to respond to each of these issues and do our best to improve.
This year, we provided a broad view of the extent of our commitment, including an interview with CEO Koichi Fukaya and an inspection tour of the Anjo Plant.
We take these suggestions and recommendations very seriously, and will endeavor to reflect them in our activities in the future.

Evaluations and Awards

High Evaluations: Environment and the Community

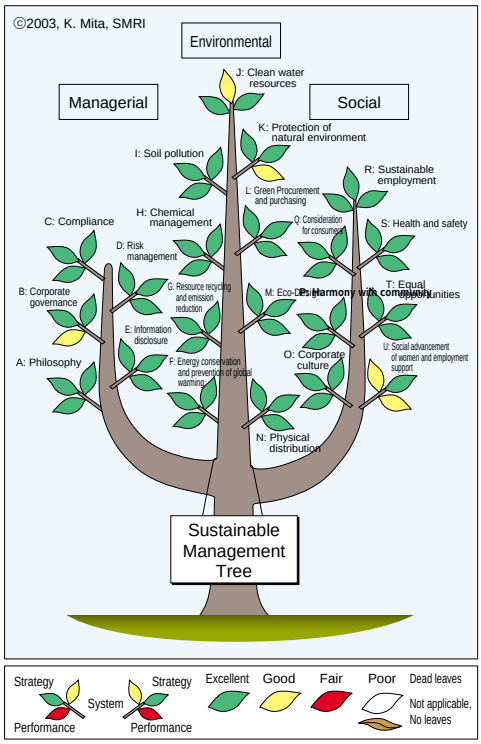
In recent years, there have been increasing occasions for evaluation by outside institutions such as socially responsible investment (SRI) bodies, which include environmental and social factors in their investment recommendation indexes, and other organizations that rank the progress of environmental management according to standard formulas. DENSO uses such evaluations as motivation to improve activities.

In fiscal 2003, we again qualified for inclusion on the international Dow Jones Sustainability Index (DJSI), which is highly regarded for rating companies according to a triple bottom line (how they deal with the three fields of environment, economy and society).

In Japan, we were included on the second survey of the recently Sustainability Management Rating Institute,* which is a recently formed body for ranking environmental management: according to the Institute, DENSO "Was, in management, environment and society, able to respond well overall." (See figure at right: Sustainable Management Tree). We also made it on the list of 67 Green Top Runner companies. Meanwhile, we continued getting high marks in longstanding rating systems, including being ranked ninth overall of 418 companies in the "13th Enterprise Social Responsibility Survey" (Asahi Shimbun Foundation).Furthermore, in June 2004, the company was made a member of ESI (ETHIBEL Sustainability Indexes), a Belgian-based SRI evaluation organization. ETHIBEL and its affiliate, Stock at Stake, specialize in the evaluation of SRI and corporate social responsibility (CSR).

* Sustainability Management Rating Institute
Institute for assessing sustainability management that was established by university and corporate researchers.

[THE SOURCE FOR THESE TRANSLATIONS WAS ON THE WEB.THIS TREE IS USED FOR MANY COMPANIES.]



Tree that shows, by leaf color, evaluation results in the three fieldsof environment (environmental protection), management (economic prosperity), and society (social contribution, fairness).

■List of Major Awards

	Date of Award	Name of Facility	Name of Award-Implementing	Organization
Japan	Apr 2004	DENSO	7th Environmental Report Award	Toyo Keizai Shinposha Green Reporting Forum
	Apr 2004	DENSO	The Japan Society of Mechanical Engineers 2003 Technology Prize (for natural refrigerant heat- pump type hot-water heaters)	The Japan Society of Mechanical Engineers
	Feb 2004	DENSO	JMF Award of Excellence for Energy Conserving Machinery, Natural Resources and Energy Agency Director-General's Award (for ejector cycle refrigerator)	Japan Machinery Federation
	Feb 2004	DENSO	2004 Energy Conservation Grand Prize, Energy Conservation Center Director-General's Award (for CO_2 refrigerant heat-pump unit for Eco-Cute)	Energy Conservation Center
	Jan 2004	Ikeda Plant	2004 Energy Conservation Prize, Energy Conservation Center, Center Director General's Award	Energy Conservation Center
	Jan 2004	DENSO	2004 (46th) Ten Major New Products Award (for ejector-cycle refrigeration system for truck refrigeration)	Nikkan Kogyo Shimbun newspaper
	Jan 2004	DENSO	17th Chunichi Industrial Technology Award, Special Incentive Prize (for non-fluorocarbon air conditioner)	Chunichi Shimbun newspaper
	Dec 2003	DENSO	6th Nikkei Annual Report Awards	Nihon Keizai Shimbun Inc.
	Dec 2003	DENSO	13th Environmental Advertising Contest (Magazine Section)	NPO Regional Exchange Center, Nihon Keizai Shimbun Inc.
	Dec 2003	DENSO	Chubu Architecture Award (D-Square)	Chubu Architecture Award Council
	Dec 2003	DENSO	Ministry of the Environment Minister's 2003 Award for Global Environmental Protection (for water heater with natural coolant heat pump)	Ministry of the Environment
	Oct 2003	Ignition Manufacturing Division	Measure / Improvements / Activities Case Study Contest Gold Prize	Chubu Industrial Accident Prevention Council
	Oct 2003	DENSO	Technology Prize (closed loop manufacturing methods)	The Japan Society for Precision Engineering
	Sep 2003	DENSO	6th Ozone Layer Protection and Global Warming Prevention Grand Prize and Award of Excellence (for water heater with natural coolant heat pump)	Nikkan Kogyo Shimbun newspaper
	Aug 2003	DENSO	Nagoya Chamber of Commerce and Industry's President's Award (for lead-free brush) Science and Technology Foundation Chairman's Award (for nylon composite recycling)	Closed Loop Recycling Production System Research Committee
	Jul 2003	DENSO	13th Degree of Corporate Social Contribution Survey (Prize for Employment of Handicapped Persons)	Nikkan Kogyo Shimbun newspaper
	Jun 2003	DENSO	Technology Prize (for hardening process analysis technology for cast epoxy resin items)	Adhesion Society of Japan
	May 2003	DENSO	Society of Automotive Engineers of Japan Technical Development Prize (for laminate oxygen sensor)	Society of Automotive Engineers of Japan
	May 2003	DENSO	Technology Prize (for ultrathin textile evaporator for vehicle car conditioning)	Heat Transfer Society of Japan
	May 2003	DENSO	Technology Incentive Prize (for laminate planar oxygen sensor)	Ceramics Society of Japan
Overseas	Jun 2004	DMHU	European Business Award for the Environment (management section)	European Commission
	Mar 2004	DENSO	10th Automotive News PACE Award (for new common-rail system)	Automotive News
	Dec 2003	DNPS	Medal of Merit (for contribution to manufacturing by the introduction of advanced technology)	Government of Korea
	Dec 2003	DMTN	TP3, Tennessee Pollution Prevention Partnership Top-Honored Performer Award	State of Tennessee
	Oct 2003	DMHU	Central Europe Environmental Report Prize	Hungary Business Leader Forum
	May 2004	DNTH	Prime Minister of Thailand's Prize (Productivity Section)	Prime Minister of Thailand
	Apr 2004	DMHU	Hungary Environment Prize	Hungary Business Leader Forum

■List of Major External Environmental and Social Assessments

Name of assessment	Conducted by	DENSO ranking
7th Survey of Environmental Level Business	Nihon Keizai Shimbun Inc.	12th of 599 companies (manufacturing industry)
Environmental Image Ranking (fiscal 2003)	Nihon Keizai Shimbun Inc.	37th of 1,097 companies
2nd Environmental Management Classification	Environmental Management Classification Organization	Chose as a 'Green Top Runner' (67 companies)
Dow Jones Sustainability Index (DJSI) 2003	SAM Research Inc. (Switzerland)	Included for four consecutive years (35 Japanese companies)
ETHIBEL Sustainability Index	ETHIBEL (Belgium)	Included (33 Japanese companies)
13th Survey of Level of Corporate Social Contribution	The Asahi Shimbun Foundation	9th of 418 companies
2003 Survey of Social Orientation of Companies	Public Resource Center	Selected for inscription in roll of top 150

Expo 2005 Aichi Japan, the first 21st century Expo, will take place in Aichi Prefecture. As member of the Toyota Group, DENSO will have a pavilion display.

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This entire report can also be viewed online at our web site.

http://www.globaldenso.com/en/environment/

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900109-018

Printed in Japan 4Z-25A