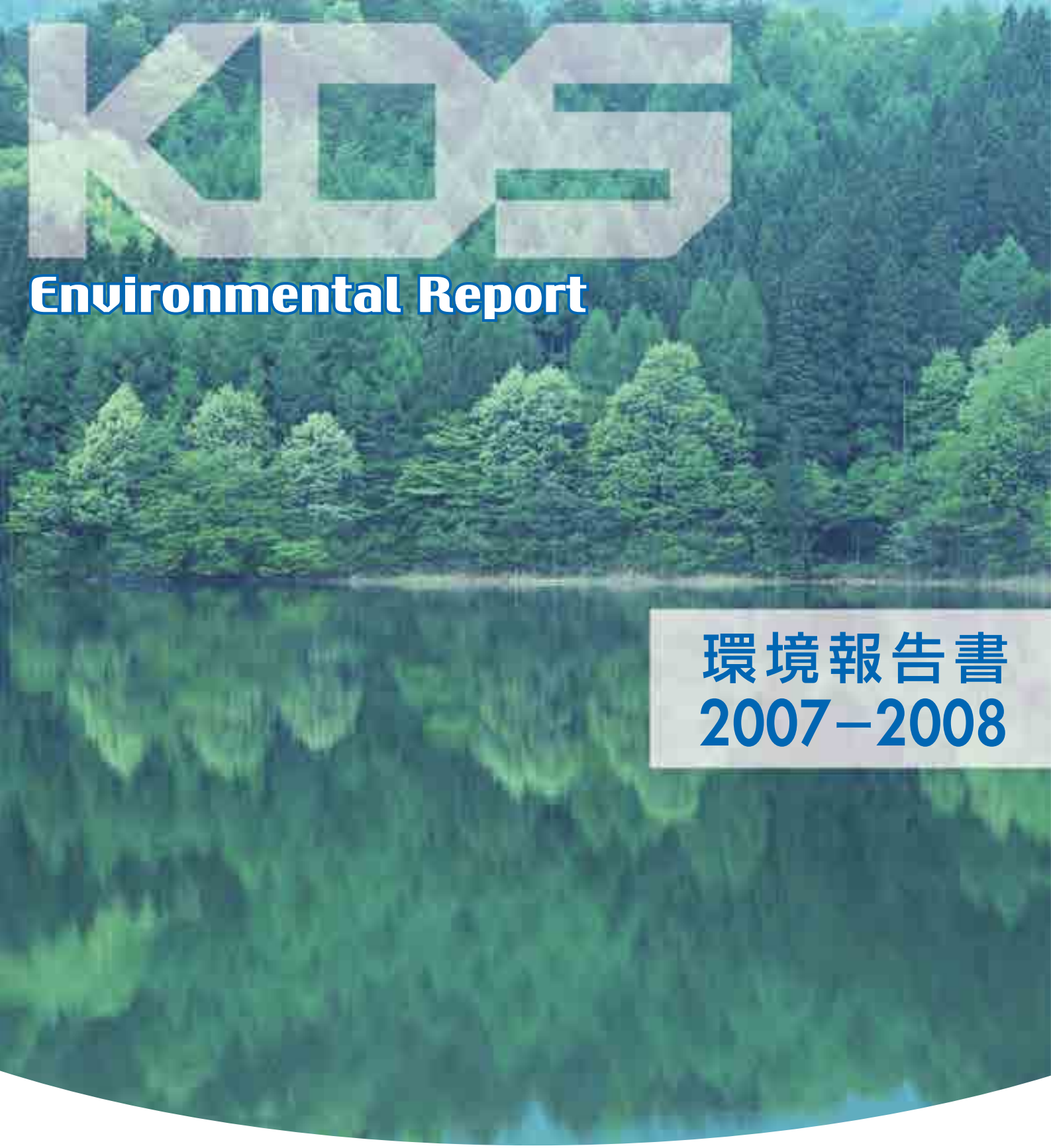


Environmental Report

環境報告書 2007−2008

株式会社 大真空

DAISHINKU CORP.

目次／会社概要　Contents/Company Profile

目次／Contents

会社概要／Company Profile

商　　号	：	株式会社　大真空 DAISHINKU CORP.
商　　標	：	KDS
本　　社	：	兵庫県加古川市平岡町新在家1389
業　　種	：	電子部品及び電子機器の製造販売
創　　業	：	昭和34年11月3日(1959年)
代 表 者	：	代表取締役社長　長谷川　宗平
資 本 金	：	193億44百万
従業員数	：	798名(2008年3月末現在)

Corporate Name	：	DAISHINKU CORP.
Logo	：	KDS
Head Office	：	1389 Shinzaike, Hiraoka-cho, Kakogawa, Hyogo, Japan
Type of Business	：	Manufacture and sales of electronic components and electronic equipment
Date of Foundation	：	November 3, 1959
Representative	：	President Sohei Hasegawa
Capital	：	19,344 million yen
Number of Employees	：	798 (as of end-March, 2008)

対象範囲／Scope of this report

株式会社　大真空
　本社　鳥取事業所　徳島事業所
　西脇工場　神崎工場　中央研究所
　物流センター
株式会社　九州大真空
天津大真空有限公司
PT. KDS INDONESIA

DAISHINKU CORP.
　Head office
　Tottori Production Division
　Tokushima Production Division
　Nishiwaki Plant
　Kanzaki Plant
　Central Laboratory
　Distribution Center
KYUSHU DAISHINKU CORP.
TIANJIN KDS CORP.(China)
PT. KDS INDONESIA(Indonesia)

対象期間／Period

2006年4月～2008年3月の活動実績を中心に作成しています。

This Environmental Report mainly covers environmental activities and achievements during the period from April 2006 to March 2008.

対象期間内の事業上の変更／Operational change during the period

2007年4月：黒田庄工場を西脇工場に名称変更
　　光学事業所を神崎工場に名称変更

April 2007: Kurodasho Plant was renamed Nishiwaki Plant.
　　Optical Quartz Production Division was renamed Kanzaki Plant.

参考ガイドライン／Referenced guidelines

環境報告書ガイドライン2007:環境省

Environmental Report Guidelines 2007, published by the Ministry of the Environment, Japan

ごあいさつ　Message from the President

未来のための環境保全

当社は水晶デバイス設計と、その生産・販売における環境保全活動を通じて、社会の持続的発展に貢献していきたいと考えております。

人類は、繁栄の名のもとに限りある資源の消費を続け、地球に負荷を与え続けてきました。その結果、現在、温暖化に代表される歪みが生まれ、国際的な政治課題として浮き彫りとなっております。豊かなエレクトロニクス社会創造への貢献を標榜する当社と致しましても、全ての事業活動の過程におきまして地球環境へ負荷を与えていることは否めません。

環境問題を取り上げたサミットが各地で開催されるなど、世界的に環境問題への意識が高まっております。当社は、高い技術力によって世界中からの信頼を勝ち取って参りました。また、グローバルに事業を展開するメーカーのひとつとして、エレクトロニクス社会と自然が共に栄える真に豊かな未来のために環境に配慮した「ものづくり」を心がけております。これらの環境保全活動を通じて、次の世代の子供たちへこの美しい母なる地球を引き継いでいきたいと考えております。

本環境報告書が皆様方の当社の環境保全活動に対するご理解への一助となれば幸いです。

代表取締役社長　長谷川　宗平
President　Sohei Hasegawa

Environmental conservation for the future

We at Daishinku always hope to contribute to the sustainable development of society by incorporating environmental conservation in our design, production and sales of crystal devices.

Humans have continuously consumed the earth's limited resources for the sake of prosperity and in the process imposed burdens on the earth. As a result, various problems including global warming have arisen, which are now highlighted as an international issue. While boasting of its contributions to creating a prosperous electronics society, we must admit that our company has undeniably added burdens on the global environment in the course of our business activities.

Recent summit meetings have focused on environmental issues, showing increasing awareness of environmental problems worldwide. Daishinku has won international trust through its high technological capabilities. At the same time, as a global manufacturer, we are always pursuing environmentally friendly monozukuri, or manufacturing, for a prosperous future that will allow both an electronics-oriented society and nature to thrive together. Through our environmental conservation activities, we hope to ensure that our beautiful earth will be passed on to future generations.

We hope this Environmental Report will help your understanding of our environmental conservation activities.

大真空グループ環境方針

― 環　境　理　念 ―

大真空グループは環境保全活動を重要な経営方針の一つと捉え、環境と調和する企業活動を通して、持続的に発展可能な社会の創造に貢献します。

― 方　　針 ―

大真空グループは、水晶応用製品の開発、製造及び販売等にかかわる企業活動全ての領域において、地球環境保全に対する取り組みを推進します。

1. 環境負荷物質の適正管理と削減に取り組み、環境に配慮した商品を提供します。
2. 地球環境保全のため、廃棄物の抑制及びリサイクルをはじめ、環境への影響の低減に取り組みます。
3. 地球温暖化防止のため、省エネルギー活動に取り組み・推進します。
4. 環境に関する法律、基準、協定及び当社が同意したその他の要求事項を順守します。
5. この環境方針に基づき環境目的及び目標を設定し、活動を推進するとともに定期的な見直しを行ない、環境マネジメントシステムの継続的改善を図ります。
6. 環境方針を全従業員及び当グループの活動に従事する全ての人に周知し、教育訓練や啓蒙活動を通じて環境保全に対する自覚と意識の向上に取り組みます。
7. 環境保全活動に関する情報を公開します。

DAISHINKU GROUP ENVIRONMENTAL POLICY

― Environment Philosophy ―

Daishinku Group recognizes the environmental conservation activities as an important business challenge, and contributes to creating the society that is possible to develop continually, through activities which are harmonious with the environment.

― Policy ―

Daishinku Group promotes to preserve the global environment at each stage of our business activities, including the development, production and sales of our crystal-applied products.

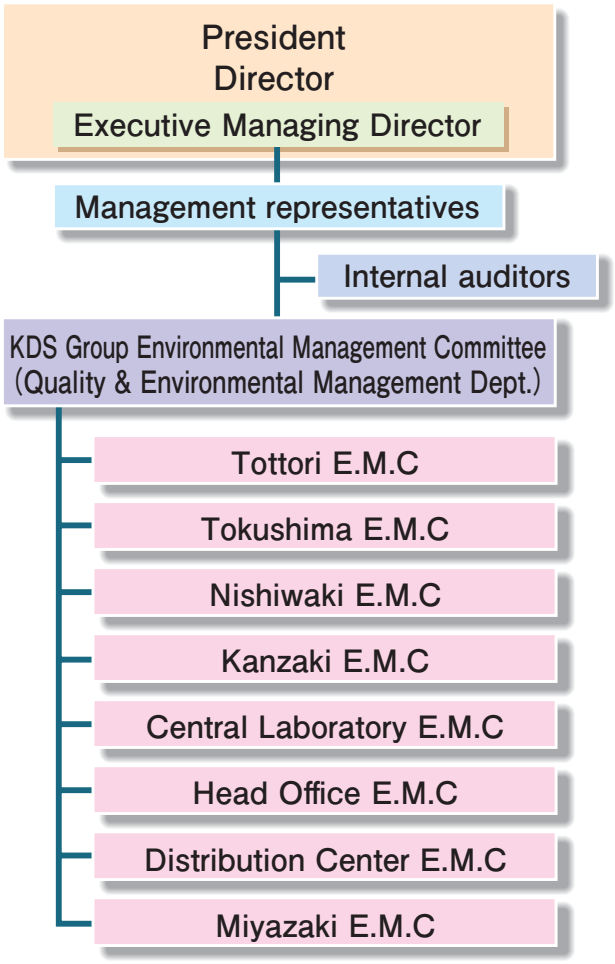
To achieve the above aim, Daishinku Group will:

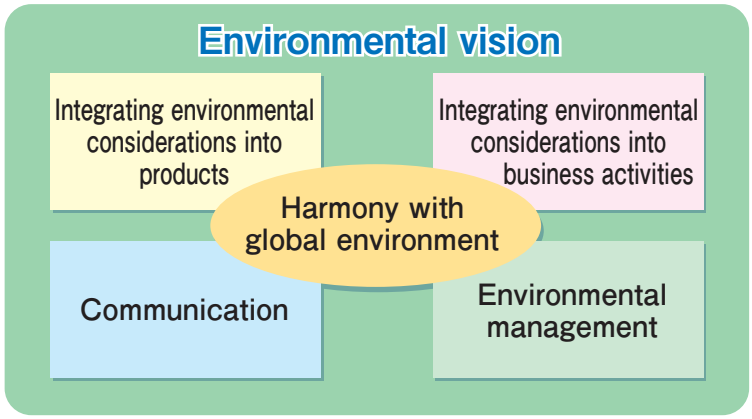
1) Offer the environmentally friendly products by properly controlling the substances with environmental impact and reducing the use of them.
2) Preserve the global environment by reducing environmental impacts, including reduction and recycling of wastes.
3) Prevent the global warming by carrying out and promoting energy conservation activities.
4) Observe relevant environmental laws, standards, agreements and any other requirements to which the company subscribes.
5) Set the environmental objectives and targets based on this Environmental Policy and promote the activities, and also review them regularly for the continuous improvement in our environmental management system.
6) Notify all employees and those who work for our group of environmental policies and raise their consciousness and awareness about environmental conservation through the education and awareness-raising activities.
7) Ensure that our information on environmental conservation activities is available to the public.

Environmental Management System

Organizational Structures

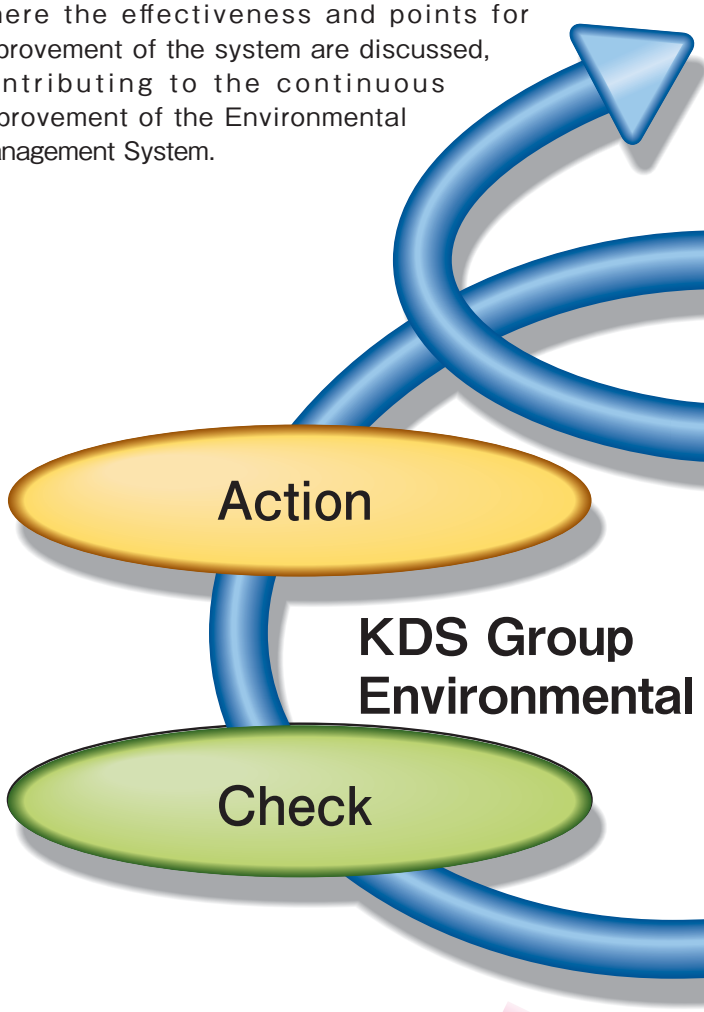
As part of implementing our Environmental Management System, an Environmental Management Committee has been set up at each of our business bases, and a KDS Group Environmental Management Committee has been established to supervise the entire company. The KDS Group Environmental Management Committee determines the goals of the environmental activities of the KDS Group, examines the results of the activities, makes effective use of the PDCA cycle, and works for continuous improvement of environmental performance.





Environmental Audit

To ensure efficient operation of the Environmental Management System, it is important to check whether the environmental management is being properly implemented and to correct any problems found.
The KDS Group conducts an internal environmental audit once a year to check the status of its management system and corrects any problems found.
The results of the internal environmental audit is reported to the management in the management review, where the effectiveness and points for improvement of the system are discussed, contributing to the continuous improvement of the Environmental Management System.



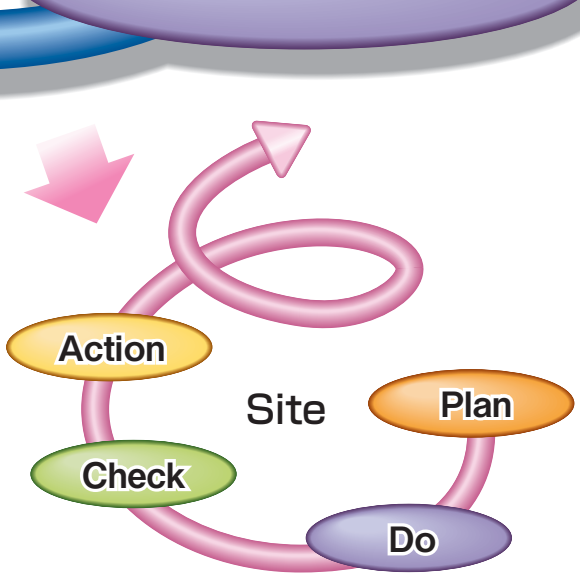
Education for internal auditors

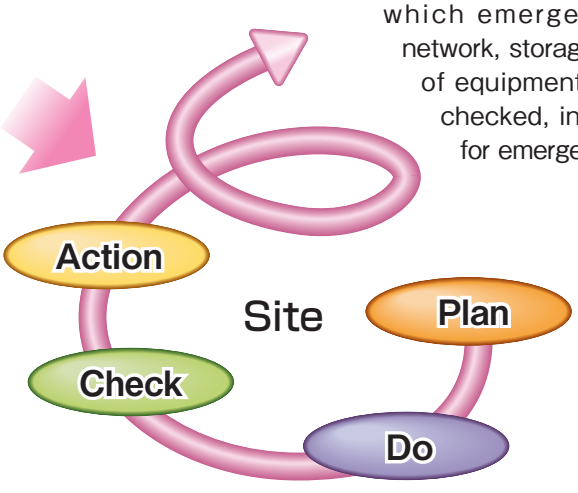
ISO14001 Certification Status

The KDS Group has acquired ISO 14001 certification, an international environmental management standard. All of our domestic offices/plants acquired the certification in 2000, aiming at implementation of an integrated management system. We will continue to work for environmental conservation by implementing an environmental management system consistent with ISO 14001.
TIANJIN KDS CORP. and PT. KDS INDONESIA, our overseas production bases, have also acquired ISO 14001 certification and are equally committed to environmental conservation.

Emergency Response

Each plant/office has an "Emergency Response Program" in place that specifies the procedures for dealing with possible emergencies and accidents to minimize impacts on surrounding neighborhoods.
To verify the effectiveness of the Emergency Response Program, emergency response training is provided in June, our Environment Month, in which emergency communication network, storage locations/quantities of equipment to be used, etc. are checked, in order to be prepared for emergencies.

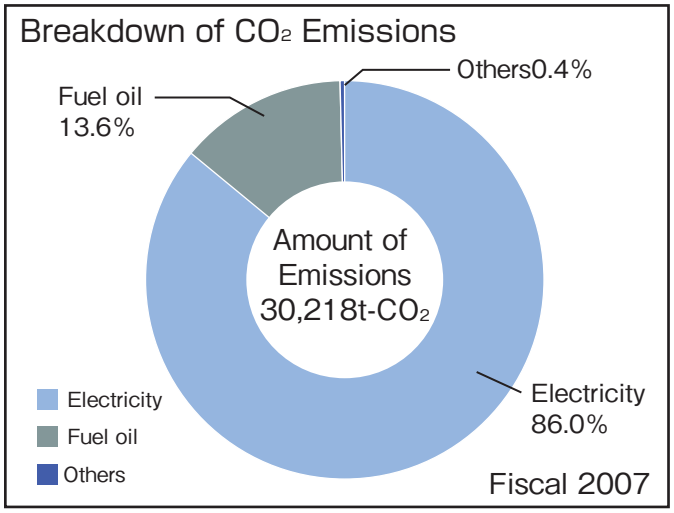


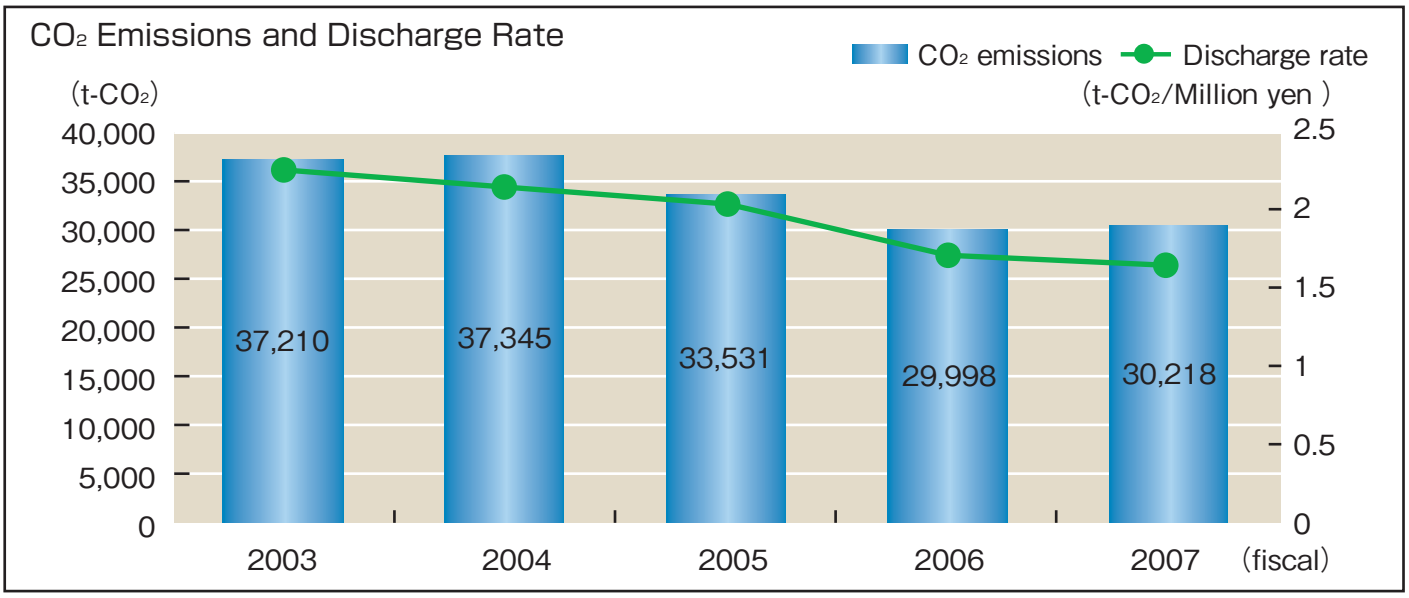


Environmental Performance

Prevention against Global Warming

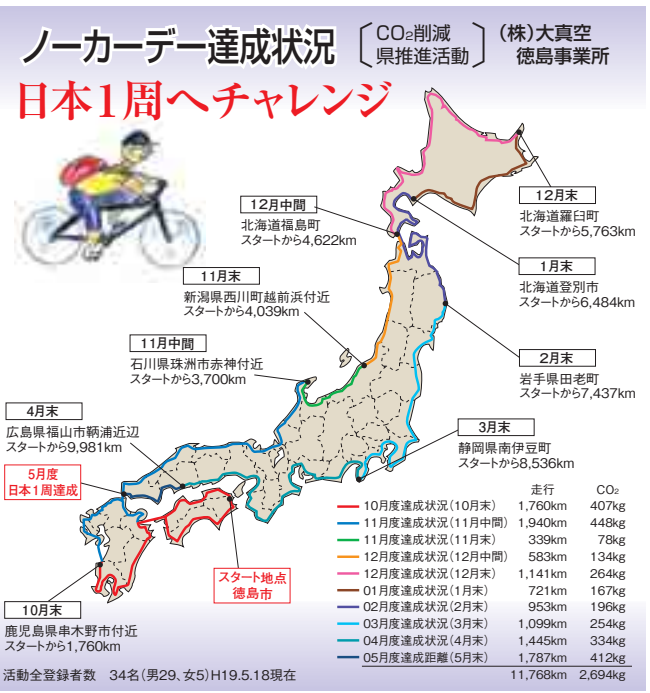
Most of the KDS Group's emissions of greenhouse gases such as carbon dioxide (CO_2) come from electricity use. We are promoting efficient use of electricity in order to reduce CO_2 emissions.
We also engage in various energy-saving activities, including facility-related efforts such as introduction of inverter lighting apparatus and modification of air-conditioning equipment, as well as activities aimed at raising employees' environmental awareness such as setting moderate air-conditioning temperatures and promoting "No Car Days."





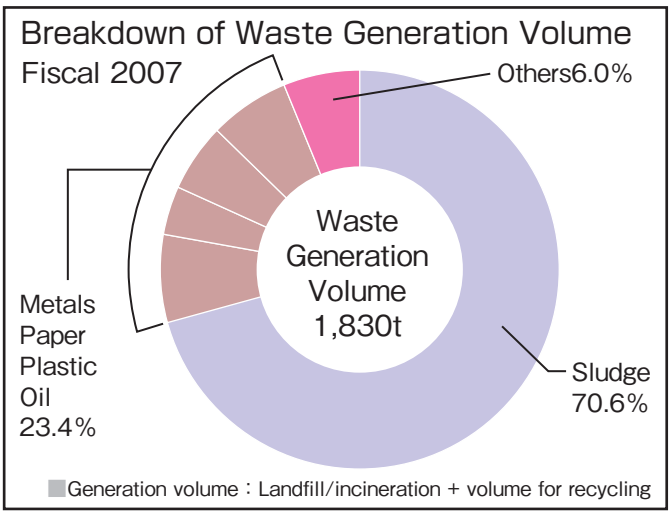
TOPICS No Car Days campaign

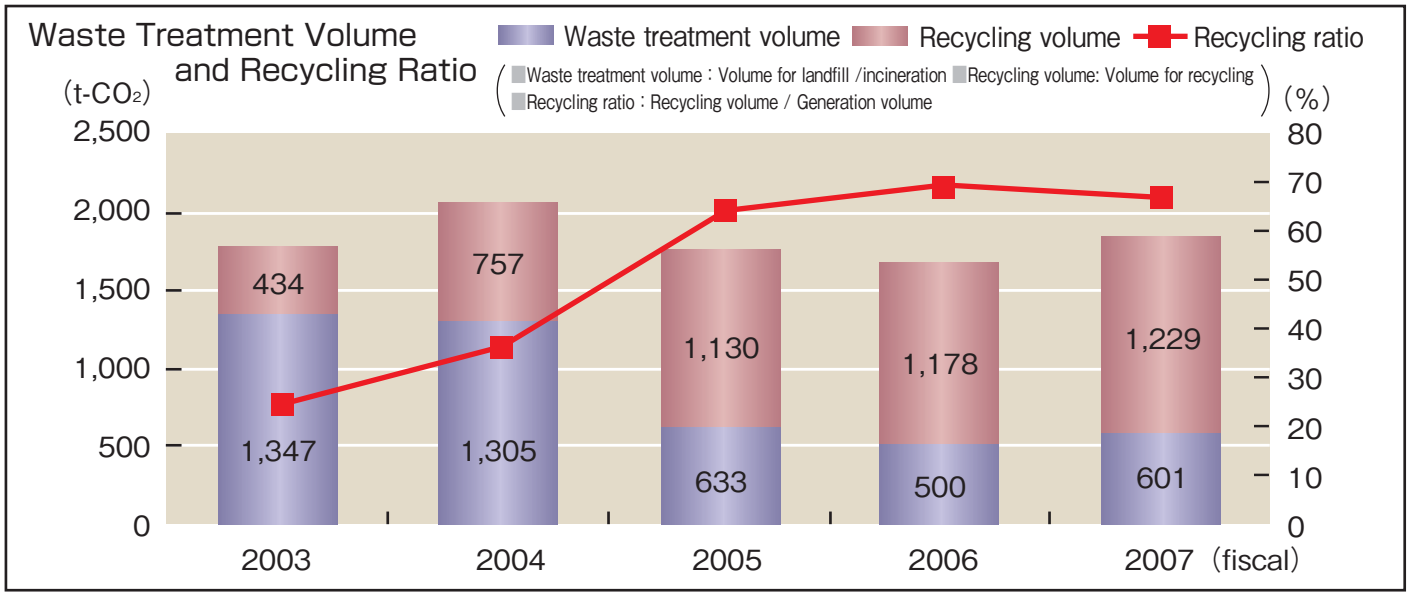
The Tokushima Production Division participates in the No Car Days campaign, a program that encourages commuters to switch from driving cars to bicycling or walking, promoted by Tokushima Prefecture to reduce CO_2 emissions as a way of preventing global warming.
The program started in September 2006 under the slogan of promoting "sustainable, enjoyable and comfortable" participation, and has attracted an increasing number of participants.
To raise the motivation of participants, we record the total no-car commuting distance of participants each month and encourage them to reach an accumulated distance equivalent to a trip around Japan. Having achieved the goal of traveling around Japan, we are now attempting to complete a Shikoku 88 temples pilgrimage, known as the trail followed by Kukai. Various information concerning the holy temples along the route and the pilgrimage culture is provided to enhance the project's attractiveness. The uniqueness of projects that convert travel distances and amount of CO_2 reduced into various trips has been highly appreciated both inside and outside our company.



Resource Recycling

The KDS Group has been working to reduce the amount of waste for landfill and incineration. Since sludge accounts for the largest volume of waste generated by the KDS Group, recycling of sludge waste is a crucial issue for the future.
Other types of waste (waste metals, waste plastics, waste liquids, etc.) are strictly separated and collected, to promote recycling. We will continuously make efforts to reduce wastes and improve our recycling ratio.





Chemicals Management

The KDS Group handles 354 restricted chemicals specified by the PRTR Law.
In fiscal 2007, we were able to reduce about 10% more PRTR-specified chemicals than in fiscal 2006.

Number specified in Cabinet Order	Substance	FY 2006	FY 2007
283	Hydrogen fluoride and its water-soluble salts	17,405	14,652
231	Nickel	800	1,800
64	Silver and its water-soluble compounds	642	869
232	Nickel compounds	375	642
25	Antimony and its compounds	1,031	472
	Others	907	680
	Total	21,160	19,114

(Unit : kg)

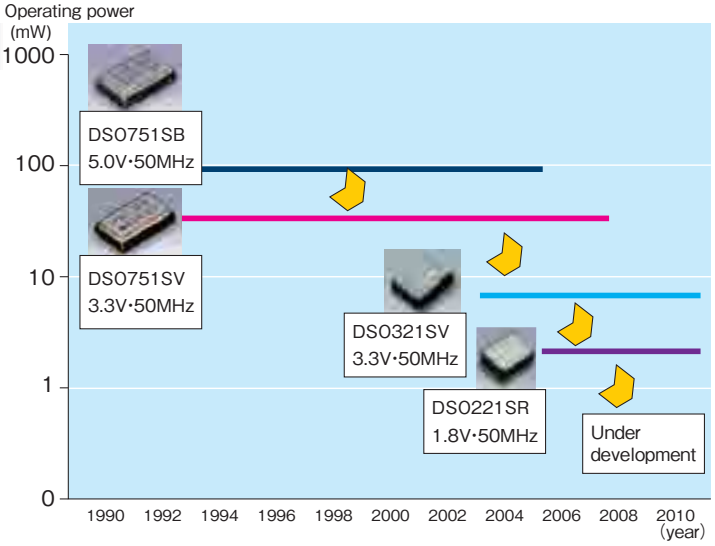
PCB storage conditions

PCB (polychlorinated biphenyl) is highly toxic to living organisms. The Law Concerning Special Measures Against PCB Waste requires proper disposal of PCB waste.
The KDS Group properly stores/controls PCB waste and has completed registration for a PCB disposal facility.

Environmental Consideration for Products

Environmental Care through Energy-Saving Design

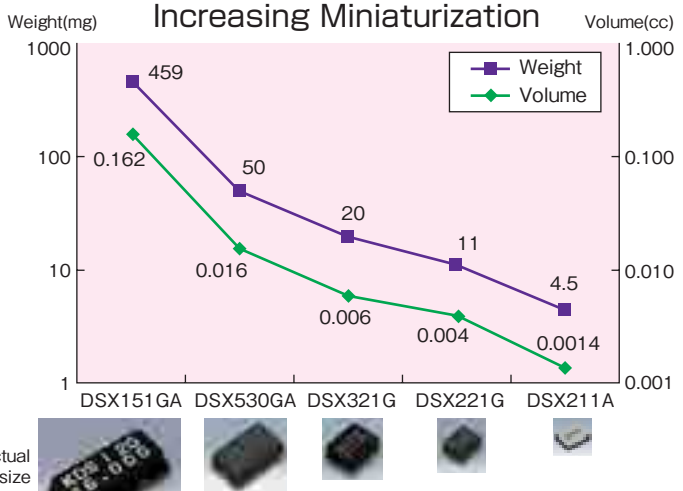
Power consumption of electronic devices such as PCs, cell phones and flat-screen televisions can be lowered by reducing the power consumption of crystal products used in these devices. Efforts to promote energy-efficient products helps reduce the amount of energy—such as petroleum and coals—used for power generation, as well as CO_2 emissions, a major cause of global warming.
Our DSO221SR crystal oscillator, for example, has achieved a driving voltage of 1.8 V, about one-third that of the DSO751SB, and has reduced electric power consumption to less than 1/35, from 75 mW to just 2.1 mW. We will continue our efforts to develop products with lower driving voltage.



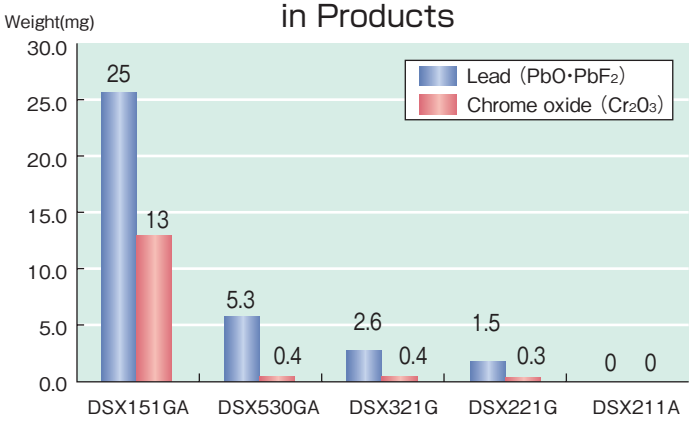
Miniaturization of Products

Downsizing crystal products will reduce the materials used in our products. Reducing material usage will then lead to a reduction of environmentally hazardous substances remaining in the materials. Our DSX211A crystal resonator for example, is just 1/100 the weight and 1/115 the volume of the DSX151GA, with substantially reduced usage of lead and chromium.

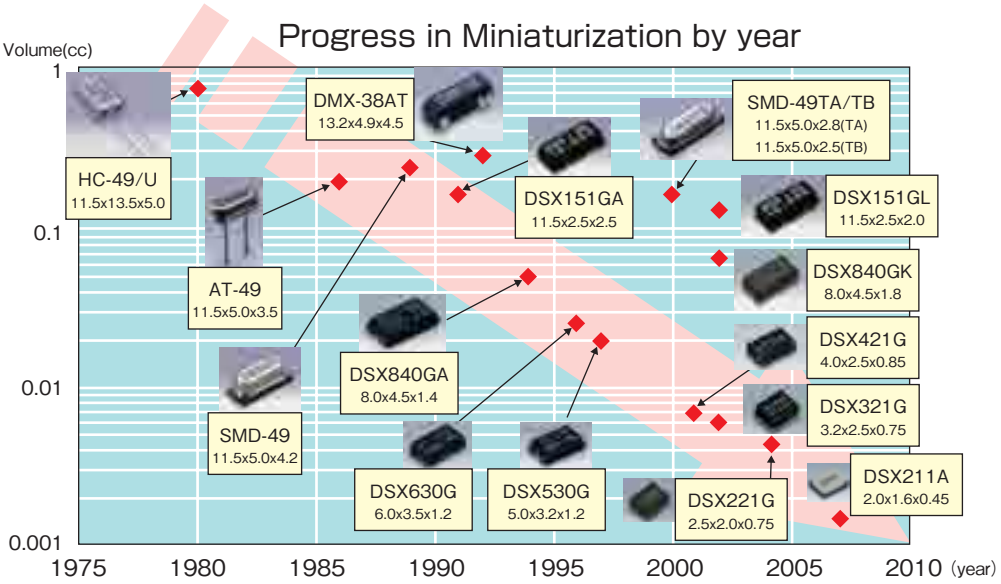
Changes in Volume and Weight with Increasing Miniaturization



Amount of Hazardous Substances in Products

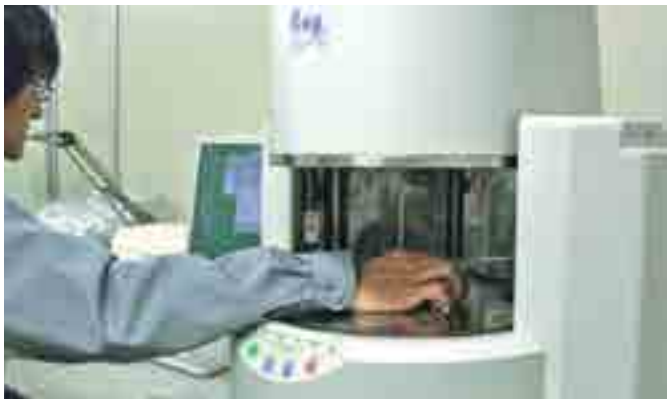


Progress in Miniaturization by year



Chemicals Management at Design Stage

For each crystal product, we examine its impact on the environment in the design stage to ensure no hazardous substances are contained in the materials. We also evaluate chemicals used in the product before starting factory production using in-house analyzers.



X-ray fluorescence analyzer

Environmentally Friendly Products

◆Lead-free

Our efforts to reduce the use of lead, a substance with serious impacts on the ecosystem, started in 2002. Products with lead terminals such as AT-49, SMD-49 and HC-49/U are now completely lead-free except for some special products. DT-26/38/261/381, used for clocks, etc., are now produced using lead-free external plating and internal solder.

◆Halogen-free

Halides such as chlorine, bromine and fluorine generate dioxins and other highly toxic substances into the air when incinerated. Paying attention to the hazards of halides on the environment, we have been examining and assessing potential alternative materials.

Lead-free products

Compliance with Laws and Regulations

Environmental laws and regulations, established mainly in Europe, have been increasingly enhanced for electrical/electronic devices and automobiles. China, a country called the world's factory, implemented the China RoHS in 2007, demonstrating its strong commitment to environmental conservation. Because our crystal products are largely used in various electrical/ electronic devices as well as in automobiles, which are being increasingly computerized, we are actively promoting compliance with these laws and regulations.

◆ WEEE (Waste Electrical and Electronic Equipment) Directive

A directive concerning disposal and recycling of electrical and electronic equipment (EEE). Indications shall be provided for target products to be collected and recycled, in order to promote reduction of impacts on the environment.

◆ RoHS (Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) Directive

This directive aims to ensure that lead, mercury, hexavalent chromium, cadmium, brominated flame retardants (PBB, PBDE) are not contained in electrical and electronic equipment. Though there are some exceptions, it inhibits the use of these substances in order to promote reduction of environmentally hazardous substances.

◆ELV (End-of-Life Vehicle) Directive

A directive concerning disposal and recycling of automobiles. Automobile components should not contain lead, mercury, hexavalent chromium and cadmium.

◆ China RoHS (Management Methods on the Prevention and Control of Pollution Caused by Electronic Information Products)

Substances specified by the Chinese government are added to the restricted substances under the RoHS Directive. After announcement of the specified substances to be restricted in the first stage, a compulsory registration system was adopted. The world now awaits the second stage implementation.

Environmental Impact

In the course of its manufacturing and sales activities, the KDS Group generates various burdens on the environment as a result of its use of energy, waste/chemicals management, use of water resources, etc.
We will promote conservation of the global environment by making efforts to reduce the environmental burdens caused by our business activities.

INPUT

Energy	Electric power	('06)	67,776 kWh
		('07)	68,726 kWh
	Fuel oil	('06)	1,569 kL
		('07)	1,522 kL
	City gas	('06)	15,828 m^3
		('07)	15,412 m^3
	Kerosene	('06)	15 kL
		('07)	13 kL
	LPG	('06)	18,899 m^3
		('07)	16,762 m^3
Water	Tap water	('06)	153 km^3
		('07)	144 km^3
	Ground-water	('06)	193 km^3
		('07)	212 km^3

Chemicals	('06)	21,160 kg
	('07)	19,114 kg

Raw Materials
Crystal raw material
Abrasive
Alcohol
Component
Others

OUTPUT

Gas	CO_2	('06)	29,998 $t\text{-}CO_2$
		('07)	30,218 $t\text{-}CO_2$
Water Quality	Wastewater	('06)	223 km^3
		('07)	238 km^3
	Chemical oxygen demand (COD)	('06)	399 kg
		('07)	401 kg
	Biochemical oxygen demand (BOD)	('06)	233 kg
		('07)	328 kg
Waste	Waste generation volume	('06)	1,678 t
		('07)	1,830 t
	Waste treatment volume	('06)	500 t
		('07)	601 t
	Recycling volume	('06)	1,178 t
		('07)	1,229 t

Products
Crystal resonators
Crystal oscillators
Monolithic crystal filters
Optical quartz products

Observance of Laws and Regulations

Observance of laws and regulations is a key factor for a company when implementing its business activities. The KDS Group tries hard to prevent violation of laws and regulations from occurring, by making effective use of the Environmental Management System.
Unfortunately, a case of exceeding a standard value set by law and another case of exceeding an internally-set standard value were found in water quality control in 2007.
We took appropriate measures to correct the violation and have confirmed in measurements conducted later that there are no longer any violations.

Water Quality

Tokushima Production Division (First effluent)

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.8~8.6	5.9~8.4	7.5	5.7	6.6
BOD	20	18	1.1	<0.5	0.8
COD	20	18	3.8	0.6	1.9
SS	30	27	5.0	<1.0	2.4
N-hexane	5	4.5	<1.0	<1.0	<1.0
Nitrogen content	40	36	27	4.1	17
Phosphorus content	2.5	2.25	1.5	<0.06	0.5
Fluorine content	5	4.5	4.3	<0.2	2.5

Tokushima Production Division (Second effluent)

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.8~8.6	5.9~8.4	7.0	6.0	6.5
BOD	40	18	0.6	<0.5	0.6
COD	40	18	4.1	1.2	2.1
SS	30	27	8.0	<1.0	3.9
N-hexane	3	2.7	<1.0	<1.0	<1.0
Nitrogen content	40	36	27	12	19
Phosphorus content	2.5	2.25	1.7	0.08	0.5
Fluorine content	5	4.6	4.9	1.9	3.0

Tottori Production Division

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.0~9.0	5.2~8.8	7.4	6.5	7.0
BOD	600	540	4.5	<0.5	2.4
SS	600	540	9.2	<1.0	4.0
N-hexane	5	4.5	1.1	<0.5	1.1
Nitrogen content	380	342	96	6.2	51
Phosphorus content	32	28.8	0.1	0.01	0.03
Fluorine content	8	7.2	5.4	0.3	2.8
Chromium content	2	1.8	<0.2	<0.2	<0.2
Lead	0.1	0.09	<0.01	<0.01	<0.01

Nishiwaki Plant

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.8~8.6	5.9~8.4	7.5	6.7	7.2
BOD	40	20	1.7	<0.5	1.0
COD	40	20	8.0	3.0	5.0
SS	50	30	6.0	<1.0	2.1
N-hexane	5	4.5	<0.5	<0.5	<0.5

Kanzaki Plant

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.8~8.6	5.9~8.4	7.7	6.6	7.2
BOD	40	18	18	1.1	4.3
COD	40	18	15	1.5	5.2
SS	50	20	1.6	<0.5	1.1
N-hexane	1	0.9	<0.5	<0.5	<0.5
Nitrogen content	120	60	14	1.9	6.0
Phosphorus content	8	5	0.03	<0.01	0.02

Miyazaki Plant (south side gutter)

Items	Reg.V.	Self-reg.V.	Msd.V.		
			Max	Min	Ave
Hydrogen-ion concentration	5.8~8.6	5.9~8.4	8.1	6.1	7.4
BOD	160	144	24	1.9	8.7
COD	160	144	10	0.7	5.5
SS	200	180	15	<1.0	4.0
N-hexane	5	4.5	<0.5	<0.5	<0.5
Nitrogen content	120	108	55	2.9	15
Fluorine content	8	7.2	3.0	0.1	0.8

(Unit
Hydrogen-ion concentration : pH
Others : mg/ℓ)

Gas

Tokushima Production Division

Items	Unit	Reg.V.	Self-reg.V.	Msd.V.	
				Max	Ave
NOx	cm^3/m^3	260	234	110	71.2
SOx	m^3N/h	K= 17.5	K=15.75	4.67	2.3
Soot and dust	g/m^3N	0.308	0.278	0.056	0.015

Tottori Production Division

Items	Unit	Reg.V.	Self-reg.V.	Msd.V.	
				Max	Ave
NOx	cm^3/m^3	150	135	100.8	82.3
SOx	m^3N/h	K= 17.5	K=15.75	1.4	0.6
Soot and dust	g/m^3N	0.25	0.225	0.064	0.016

※Listed measurement values are based on results measured from April 2006 through March 2008

Overseas Activities

The KDS Group carries out production activities in China and Indonesia. Each production base has acquired ISO 14001 certification and set up an Environmental Management Committee to implement environmental activities. An internal environmental audit is conducted for each overseas office once a year by internal auditors from Japan, with the aim of improving environmental activities of the entire KDS Group.

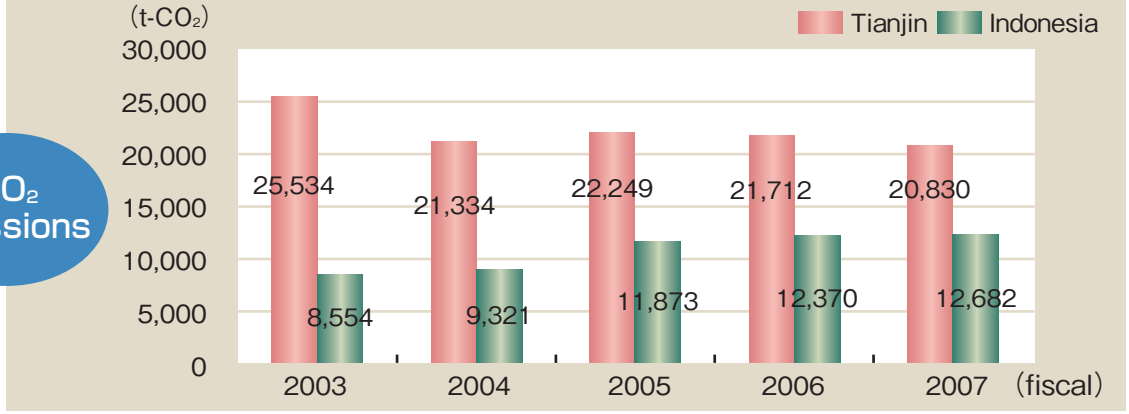
Outline of TIANJIN KDS CORP.

Location	China／Tianjin
Business activity	Manufacture of tuning fork crystal resonators, crystal resonators, and crystal-applied products
Number of employees	2,218
Site area	45,000m²
Floor space	42,050m²

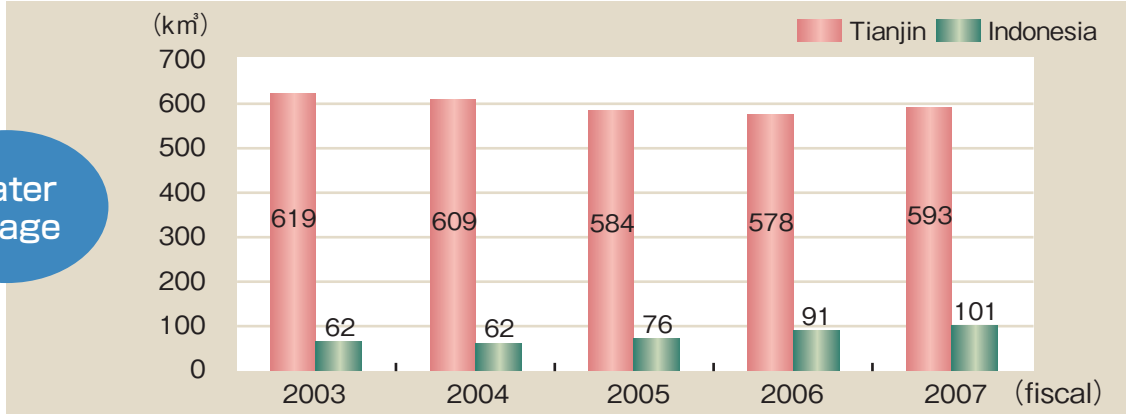
Outline of PT. KDS INDONESIA

Location	Indonesia／Jacarta
Business activity	Manufacture of crystal resonators
Number of employees	1,565
Site area	33,000m²
Floor space	29,000m²

CO_2 Emissions



Water Usage



Communication

Contribution activities in local communities

Each office/plant of the KDS Group holds a cleanup campaign for its neighborhood at least once a year.
The Tottori Production Division has participated in the “Tottori Sand Dunes Cleanup” program organized in spring and autumn each year by the Tottori municipal government since 2001. We will continue our participation.

Factory training(Internships)

The Kanzaki Plant offers an internship program for students to provide them with trial working experience. Along with practical work training, environmental education concerning the relationship between corporate activities and the environment is also provided.

For the Harmonious Environment

Issues concerning the global environment such as global warming, depletion of natural resources, and ongoing food crises are becoming increasingly important year by year.
Admitting that our Group’s business activities have a significant impact on the global environment, we believe it is our social responsibility to contribute to conservation of the environment. In addition to the energy-saving and recycling efforts we have already made, in 2006 we began working to ensure compliance with EU and other environmental regulations by launching enhanced controls on chemical substances and by introducing X-ray fluorescence analyzers both in Japan and overseas.
From fiscal 2008, we will promote environmentally friendly corporate management under a renewed mid-and-long-term plan.

Executive Managing Director
Director Kenji Nakazawa

This Report summarizes our activities in 2006 and 2007. We encourage you to read through this report and give us your frank opinions. We sincerely ask for your continued support.

The Environmental Report 2007-2008 can be downloaded from Daishinku's website.

http://www.kds.info/index_en.htm

In addition to the environmental report, our website offers other information.

DAISHINKU CORP.

http://www.kds.info/

本報告書についてのご意見やご質問は下記までご連絡下さい。
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