

This chapter presents FDK production site and Group company activities.



\*\*The base unit index shown in the CO<sub>2</sub> emissions graph is based on the figures for FY2002. The CO<sub>2</sub>-equivalent figures shown for domestic sites in previous reports have been revised due to the fact that, starting from this edition, the coefficient of electric energy-CO<sub>2</sub> conversion is assumed to be 0.555t-CO<sub>2</sub>/MWh.

FDK Social & Environmental Report 2008

### FDK MODULE SYSTEM TECHNOLOGY CORPORATION, IWAKI PLANT Employees 418 Started operation in April 2008 (when the IWAKI PLANT became independent. The former IWAKI ELECTRONICS was founded in 1966.) Address 1 Kamanomae, Joban-kamiyunagaya-machi, Iwaki City, Fukushima Prefecture 972-8322 Phone +81-246-43-4161 Business activities The design, manufacturing, and sales of electronic module system products

Becoming independent from FDK in April of 2008, FDK MODULE SYSTEM TECHNOL-OGY is now an autonomous company that designs, manufactures, and markets module systems. Situated in the southeast corner of Fukushima Prefecture and facing the Pacific to the east, the IWAKI PLANT is blessed with a mild climate that has relatively small differences between highs and lows throughout the year. Our major environmental activities in FY2007 included:

- 1. Promoting environmental management: To promote environmental activities directly linked to our main operations, we enhanced our educational program by, for example, holding briefing sessions. As far as internal environmental audits are concerned, we held monthly study meetings to raise the knowledge and skills of our internal audit staff.
- 2. Energy savings: We introduced new energy-saving air-conditioning and lighting. As far as the main operations are concerned,the Toyota Production System was developed further for energy savings within the framework of the business reform initiative. Reviewing production

lines and increasing space efficiency reduced our overall power consumption. In addition, an increase in productivity resulted in a reduction in power consumption per product.

3. Reducing the use of hazardous chemicals: Our VOC (volatile organic compound) emissions were reduced by some 74% between FY2000 and FY2007. The washing process, a process that includes VOCs, was improved to reduce use and emissions of these chemicals.

We also develop risk management activities such as earthquake drills.





Improvements Achieved under

the Business Reform Initiative



Waste

Recycled Resources

(t)

205

Recycling Ratio

(%)

96

Organizational Structure

Management and

Environmental Activities

3 Report

Site Repor

Waste Emissions

(t)

214



# FDK ENERGY CO., LTD.

Started operation in August 2002 (with the spin-off of the battery manufacturing function from FDK. The former WASHIZU PLANT was founded in February 1950.) Employees 168 Address 614 Washizu, Kosai City, Shizuoka Prefecture 431-0431

+81-53-576-2111 Phone

Business activities The manufacture and sales of alkaline and lithium batteries

FDK ENERGY is the FDK Group center for the development and manufacture of alkaline and lithium batteries. In FY2007, we focused on environmental conservation in three areas:

1. Energy-saving measures to reduce CO2 emissions

These measures included shortening the use of the air-conditioning system and introducing energy-saving air-conditioners. In addition, the heat radiation from steam lines was reduced to save heavy oil. As a result, our overall CO2 emissions were 3% lower than in FY2006.

- 2. Reducing waste emissions A pallet recycling stock yard was reserved within the company to promote the effective use of unwanted pallets. Finer sorting in the recycling process made it possible to reuse more waste metal as a valuable resource. These measures reduced our waste emissions by 27% compared with FY2006.
- 3 Reducing the use of VOCs (volatile organic components)

We have started a project aimed at reducing

methyl ethyl ketone use by considering the possibility of improvement by redesigning the relevant processes. The study is still under way.

As part of our efforts to strengthen communication with the local community, we conduct plant tours for elementary school pupils in the city. Engineers show and explain the dry battery production processes and answer questions from the children in the hope

of helping them to better understand the company and its dry battery technology.



Isamu Hikida, Senior Managing Director





The Pallet Recycling Stock Yard Elementary School Pupils on a Tour of the Plant



Waste

(t)

Waste Emissions

(t)

Purchased Electricity

(MWh)

10.397

666



our social contribution through monozukuri (see footnote on page 3). In FY2008, we will build a new plant and ensure that we can supply our products in a more stable fashion. The aim is to meet our customers' needs and expectations.

10.1

In environmental activities, we focus on two areas. Our "Design for Environment" measures include reducing the power consumption of the equipment we produce, eliminating the use of PVC and lead solder, and downsizing. The "Green factory" initiative is aimed at

world-class operators.

### Kazuhiko Hironaka, President



Visit to the Skill Olympics

CO<sub>2</sub> Emissions

2002 2003 2004 2005 2006 2007(FY)

Base Unit Index (CO<sub>2</sub>/Production)

(t-CO2)

400

300

200

100

0

Unit

2.0

1.5

1.0

0.5

0.0

	FDK LIFETEC CORPORATION					
	Started operation in	May 1, 1971	Employees	63		
	Address	2281 Washizu, Kosai City, Shizuoka Prefecture 431-0431				
	Phone	+81-53-576-3121				
	Business activities	Welfare activities for FDK Group employees, life insurance, and sales of green tea and other p	roducts			

Initially founded as an outsourcing company responsible for welfare activities concerning the employees of FDK CORPORATION, FDK LIFETEC operates at three offices; the Headquarters in Kosai City, Shizuoka Prefecture, the IWAKI OFFICE and the Sanyo Office.

As a member of the FDK Group, we implement our environmental activities within the framework of ISO 14001 environmental management. In FY2007, each workplace held eco-driving training sessions.

In terms of social contribution, the installation of a vending machine that features a donation function at the IWAKI OFFICE was followed by the installation of another charitable vending machine at the KOSAI PLANT. The nonprofit Heartful Welfare Fund-raising organization donates the collected funds to various institutions for the purchase of wheelchairs and mobile bathtubs.

At the company dormitory canteen, as one of our employee welfare activities, nutritionists develop healthy low-salt recipes for residents. To raise resident awareness about energy saving, a graph comparing monthly power consumption for the current and previous year is posted in the dormitory. In addition, the dormitory manager performs energy-saving checks in and around the building.

In the Kosai region, "Bits of Knowledge" plaques showing useful knowledge about diet and health are posted to help employees maintain good health. As part of our social con-

tribution activities, we will continue providing comprehensive lifestyle services covering the areas of health care, welfare, environmental protection, and culture.







Cooking Food in the Kitchen of the Fuvo Employee Dormitory

The data on waste, energy consumption, and CO<sub>2</sub> emissions for the Headquarters, Sanyo Office, and the IWAKI OFFICE are included, respectively, in the data for the KOSAI PLANT, the SANYO PLANT, and FDK MODULE SYSTEM TECHNOL-OGY CORPORATION, IWAKI PLANT

Performance Data

FDK LIFETEC's unique technology has made it possible to develop these products by powdering tealeaves produced in Shizuoka Prefecture.



### The "Run-Run Sabo" Series

Employees 815

# FUCHI ELECTRONICS CO., LTD. (Taiwan)

Established in January 1981

Address No.355, Section 2, Nankan Road, Rutsu Shan, Tao Yuan, Taiwan +886 3 322 2124 Phone Business activities The manufacture and sales of signal processing modules for LDC displays and backlight units

FUCHI ELECTRONICS started designing and developing LCD backlight inverter modules in FY2006 and initiated mass production in FY2007. We perform a lifecycle assessment of these products in the design phase. Evaluating their environmental impact helps us create designs that reduce the product energy and resource consumption. Our environmental conservation activities for FY2007 include:

1. Promoting resource recycling by reducing waste

The ratio of recycled packaging materials was increased to 85%.

- 2. Product lifecycle assessment for the development of eco-friendly products An example of one such eco-friendly product is a redesigned two-in-one inverter substrate that was introduced to reduce the use of product materials
- 3. Halogen-free products Following our decision to replace all solder and subsidiary materials by halogen-free alternatives in June 2008, we held a briefing session for relevant business partners.

We have introduced a unique Green Partner system to promote green procurement and shift to halogen-free products in collaboration with our business partners. In regard to safety and health, we have introduced the OHSAS 18001 system to provide a pleasant and safe working environment.

FUCHI ELECTRONICS commits itself to providing products that meet the requirements of its

customers and to fulfilling its corporate responsibility for the sake of its employees and their family members as well as for future generations.



Education and Training in Environmental Protection and Occupational Safety



Atsushi Suzuki, President



Inverter Substrate



CO<sub>2</sub> Emissions

## PT FDK INDONESIA (Indonesia)

Established in August 1989

Address Kawasan Industri MM2100, Blok MM-1 Jatiwangi Cikarang Barat, Bekasi 17520 Jawa Barat, Indonesia Phone +62 21 89982111

Phone

10

Business activities The manufacture and sales of alkaline and lithium batteries

Since receiving ISO 14001 certification in June of 2003, PT FDK INDONESIA has proactively developed environmental conservation activities to reduce various aspects of its operations that have an environmental impact. In August of 2007, we revised our environmental policy to further strengthen our environmental activities. Since then, we have followed this new environmental policy to promote various projects aimed at making us an eco-friendly company. We place particular emphasis on activity in six areas:

- Reducing waste and promoting recycling
  Proper control and reduction of hazardous chemicals
- Improving energy efficiency and promoting energy savings (with a focus on reducing power consumption)
- Împroving the standard of control for drainage from the plant and establishing more stringent internal drainage control standards
- 5. Increasing the greenery in and around the plant
- 6. Preventing pollution

In FY2007, we revised our voluntary internal environmental limits for more stringent control. These included limits on noise in the work area, gas emitted from the dust collecting equipment and outlet ducts, odor of organic solvents, and exhaust emissions from folk lifts. Regarding drainage water from the plant, we follow the standards stipulated by the industrial complex and address 31 parameters.

As far as education is concerned, we ask for assistance in environmental conservation from not only our employees, but outsiders as well. To this end, we communicate our internal environmental rules to visitors to help prevent environmental pollution and en-

sure safety at work. Aiming to become a true eco-friendly company, PT FDK INDONESIA will continue to develop its environmental conservation activities.

Air Measurement and Control



Kuniyoshi Nishida, President

Firefighting Training under the Instruction of the Local Fire Department



of resources recycled by outside specialists is not documented. The CO<sub>2</sub> emissions are calculated using the conversion factor used in Japan.

Waste

Waste Emissions | Recycled Resources | Recycling Ratio

Employees 995

\*The recycled resources cell is empty because the and



Employees 1,825

# FDK LANKA (PVT) LTD. (Sri Lanka)

Established in November 1990

Address Ring Road 3, Phase II E. P. Z. Katunayake, Sri Lanka Phone +94 11 225 3492

Business activities The manufacture and sales of optical devices and rotary transformers

After becoming ISO 14001 compliant in 2003, FDK LANKA successfully completed the transfer to ISO 14001: 2004 in February of 2006. We promoted the following activities to achieve targets defined in our two-year plan from April 2006 to March 2008:

- Reducing CO<sub>2</sub> emissions per product by 5%
  Reducing waste emissions per product by
- 5%3. Reducing the use of chemical substances per product by 5%
- 4. Reducing water consumption by promoting

the reuse and recycling of plant drainage In addition to the traditional reduction of power consumption for air-conditioning, the energysaving measures for FY2007 included using efficient fluorescent ballast, installing reflector panels on fluorescent lamps, replacing outside lighting by more efficient products, and making effective use of cool air by directing them to Fan Filter Unit instead of directing them open space over the ceiling.

In reducing waste emissions, we focused on reducing raw material input, for example by increasing yield. Another project aimed at increasing the use of electronic data to reduce the consumption of paper. In reducing the use of chemicals, we considered the feasibility of eliminating the processes that use them. Activities for water reuse and recycling included the introduction of a water treatment system.

As a result, we were able to achieve all of our targets.

With the slogan, "FDK Group Loves Nature for the Future of the Earth," FDK LANKA will

continue its environmental activities to ensure that the beautiful land of Sri Lanka will remain intact for future generations and that the company will achieve sustainable growth.



Norio Takaba, President



Reflector Panel on a Fluorescent Lamp Energy-Saving Duct for the Firing Furnace



37

XIAMEN FDK CORPORATION (China)					
Established in	March 1994	Employees 2,801			
Address	No.16, Malong Road, Huli District, Xiamen, Fujian, China				
Phone	+86 592 603 0576				
Business activities	The manufacture and sales of LCD backlight inverter modules, switching power supplie	es, and stepper motors			

ing all of its employees, XIAMEN FDK received ISO 14001 certification in December 1988. We contribute to preserving the global environment by following the relevant laws and regulations and by implementing our environmental policy. Our major activities for FY2007 included the following:

- 1. We strengthened our control and management of hazardous chemicals in products. A new database was built and a website on the control of hazardous chemicals contained in products was opened in order to share and efficiently use information about such chemicals, relevant laws and regulations, and customer requirements.
- 2. To ensure continual improvement, every year we hold educational sessions on chemicals, waste, energy savings, and hazardous chemicals in products. New employees are provided with a handbook to help them better understand the environmental management system. In April of every year, which is the company-designated "Environmental Month," illuminative sessions and other activities are conducted for all employees to raise their environmental
- 3. Every year, we conduct social contribution activities such as cleaning and weeding mountainforests. As part of our social contribution activities for FY2007, volunteers from XIAMEN FDK provided road safety instructions on thestreet.

XIAMEN FDK won the "Xiamen High-Tech Zone Award for Advanced Safety Production Control 2007." At the same time, Huang Huang, Director

of the Administration Department, was honored with the "Individual of Advanced Safety Manufacturing Practice" Award.









Employees 1,822

Waste Emissions

(t)

141

Purchased Electricity

(MWh)

5.025

Waste

Recycled Resources

(t)

Energy Consumption

64

Recycling Ratio

(%)

CO2 ea.

(t-CO<sub>2</sub>)

4.940

45

# SHANGHAI FDK CORPORATION (China)

Established in August 1995

Address 499 Dong Qu Road, Songjiang Industrial Zone, Shanghai, China +86 21 5774 2028 Phone Business activities The manufacture and sales of signal processing modules for LCD display and coil devices

With a business philosophy of "contributing to society through corporate development and an action guideline of *monozukuri* (see footnote on page 3) in a symbiotic relation-ship with nature. SHANGHAI FDK unites the efforts of all its employees to implement the three pillars of the environmental policy: "compliance with laws and regulations," prevention of pollution and protection of the environment," and "provision of green products." Our major activities for FY2007 included the following:

- 1. In controlling hazardous chemical substances, we continued to audit our suppliers to verify that they have an appropriate system for the control of any such substances contained in their products. An X-ray fluorescence instrument was introduced to check the solder used in the company for lead content.
- 2. In reducing energy and water consumption, we have continued our efforts in employee education. CO2 emissions have been significantly reduced since ferrite produc tion was transferred to NANJING FDK in October of 2004.
- 3. As part of our social safety activities, we provide a monthly educational session for the in-house fire fighters and training on the use of fire-fighting equipment. We also

audit the 5S activities (Sort, Straighten, Shine, Standardize, and Sustain) of our workplaces and develop measures for improvement. In FY2007, we worked with the Songjiang Transport Bureau and the Songjiang Industrial Zone to provide road safety instructions for people commuting to companies in the industrial zone

4. Special activities take place on the annual company-designated Environment Day. In FY2007, we cleaned up the area around

the company SHANGHAI FDK will

continue to develop its environmental activities further to help preserve the environment of our planet.

Providing Road Safety Instructions for Commuters



Atsunori Matsumoto, President



Cleaning Activity on Environment Day

Environmental Activities

3 Report

Organizational Structure

Management and

Social Activities

### SUZHOU FDK CO., LTD. (China) Established in June 2001 Employees 1,650 Address 43 Building Fengqiao Industrial Park 158-88 Huashan Road, Suzhou New District Jiangsu, China Phone +86 512 66619392 Business activities The manufacture and sales of signal processing modules for LCD displays SUZHOU FDK, which gained ISO 14001 certifica-3. In education, we hold evacuation and fire drills tion in December of 2004, develops environon a regular basis. Additional projects included mental conservation activities involving all its educational sessions on laws and regulations. employees. In January of 2008, we introduced other requirements, the classification of hazard-Waste OHSAS 18001, the international occupational ous materials and waste, resources/energy Waste Emissions Recycled Resources Recycling Ratio saving, and basics about chemicals. health and safety assessment standards, in (t) (t) (%) Our social contribution and exchange programs our operations to control and improve employee 222 50 112 health and safety. Our major activities for include an exchange with the Social Welfare Institution in Suzhou City and fund-raising activity to pro-FY2007 included the following: Energy Consumption 1. We strengthened our survey and control vide support for phys-Purchased Electricity CO2 eq. of hazardous chemicals in products to better ically handicapped indi-(MWh) (t-CO2) enable our company to supply green viduals. 7.531 7.095 SUZHOU FDK will products. Following the elimination of lead from all processes in the previous year, continue its environ-Performance Data for FY2007 we promoted measures to make our producmental conservation activities by offering envition halogen-free. C02 CO<sub>2</sub> Emissions Base 2. We have set numerical targets for reductions ronment-friendly Unit Base Unit Index (CO2/Production) (t-CO2) Index in the consumption of resources and energy. products Tatsuo Nakano, President 10,000 2.0 Despite our efforts to reduce air-conditioner 8.000 power consumption, we ended up in increas-1.5 6,000 ing power consumption and waste emissions 1.0 compared with the previous year due to an 4.000 increase in production. The use of paper was 0.5 2.000 successfully reduced from the previous 0 0.0 year by promoting the use of alternative 2002 2003 2004 2005 2006 2007(FY) media. Disaster and Fire Prevention Education Fire Drill CO<sub>2</sub> Emissions

## FDK (THAILAND) CO., LTD. (Thailand)

### Established in December 2001

10.1

Employees 606

Address 60/118 [Navanakorn Industrial Estate Zone 3] Moo 19, Phaholyothin Road, Tambon Klongnung, Amphur Klongluang, Pathumthani 12120, Thailand +66 2529 4930 Phone

Business activities The manufacture and sales of stepper motors

FDK (THAILAND) celebrated its seventh anniversary engaged in the manufacture and sales of stepper motors for office automation and automotive equipment. In reality, however, the company has been in business for 19 years, operating as FUJITSU (THAILAND) before evolving into its present form. We maintain the following environmental policy:

- 1 We abide by the environmental laws and regulations of the Kingdom of Thailand and in the countries where our customers are headquartered.
- 2. We continually improve our systems, prevent pollution arising from our business activities, and minimize the impact of our operations on water, soil, and air by the effective use of waste.
- 3. We utilize resources effectively and promote activities for protecting and saving energy resources
- 4. We improve the consciousness of all our employees about environmental protection.

In FY2007, our efforts to reduce energy consump-

tion included introducing energy-saving compressors, implementing heat insulation measures in equipment, and recycling used fluorescent lamps. For the control of hazardous chemical substances contained in products, we audited our suppliers as we did in the previous year in order to ensure proper control in the production of materials and components and comply with the RoHS directive. Aiming to achieve sustainable growth, FDK

(THAILAND) will continue to act as a single unit to continually reduce its environmental impact and provide earthfriendly products.

Energy-Saving Heat Insulation for the Equipment



Yasunobu Nakagiri, President



Containers for Collecting Used Fluorescent Lamps



